

IN FUTURE: UNAXIS

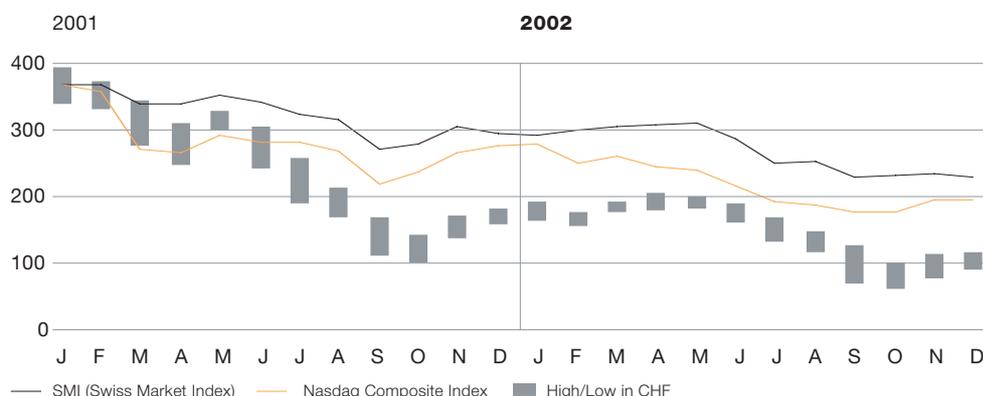
2002 was a year of tremendous challenge for Unaxis. The weak economic environment and lack of recovery in the IT industry burdened the company's business activities to a significant extent. On the other hand, 2002 was a year in which Unaxis worked intensively to further improve its capabilities and business processes – by placing even more emphasis on customer needs, increasing the company's competitiveness, and fostering the personal development of its employees. For Unaxis, 2002 was a year marked by investments in the future.

> KEY FIGURES

Total Group	2002	2001	2002	in million
	CHF	CHF	EUR	
Orders received	1 494	1 572	1 016	
Sales	1 490	2 127	1 013	
Operating result before depreciation and amortization (EBITDA)	71	182	48	
Operating result (EBIT)	-83	-211	-57	
- in % of sales	-6%	-10%	-6%	
Net income/(loss) for the period	-39	111	-26	
- in % of sales	-3%	5%	-3%	
- in % of shareholders' equity	-3%	7%	-3%	¹ Net assets include
Net funds from operations	-41	264	-28	all operating current and
Capital expenditures in property, plant and equipment	74	186	50	non-current assets
Total assets	2 525	3 016	1 742	(excluding cash and cash
Shareholders' equity	1 476	1 667	1 018	equivalents and financial
- in % of total assets	58%	55%	58%	assets), less operating
Net liquidity	686	768	473	liabilities (excluding finan-
- in % of shareholders' equity	47%	46%	47%	cial debts, provisions for
Net assets ¹	1 075	1 202	741	post-employment benefits
- Operating result as % of net assets (RONA)	-8%	-18%	-8%	and for taxes and other
Number of employees at year-end	6 544	7 241	6 544	provisions not charged
				against operating result).
Key figures per share²				
Share price				² Average number
highest	207	393	143	of shares with voting
lowest	66	103	46	and dividend rights
at year-end	93	179	64	
Operating result (EBIT)	-6.40	-16.02	-4.36	
Net income/(loss) for the period	-3.00	8.53	-2.04	
Net cash flow	-9.54	22.55	-6.49	
Shareholders' equity	113.74	126.57	78.44	
Dividends ³	2.00	2.00	1.36	³ Dividend 2002: proposal
				of the Board of Directors

> SHARE PRICE DEVELOPMENT

Unaxis N relative to Swiss Market Index (SMI) and Nasdaq Composite Index



> PROFILE

Unaxis is a globally leading provider of production systems, components and services to select sectors of the information technology market as well as for use in highly demanding industrial applications. The business activities of Unaxis are conducted through its three organizational segments: Information Technology (semiconductors, flat panel displays, data storage devices and optical components), Surface Technology (coating of tools and mechanical components), and Components and Special Systems (vacuum technology and aerospace technology). On the basis of its core capabilities in thin-coating, vacuum and precision technology, Unaxis creates integrated solutions that offer tremendous customer benefits.

Unaxis employs approximately 6500 individuals. Its global infrastructure comprises competence centers for research, development and production in Europe, Asia and the USA, as well as 90 corporate subsidiaries located in 25 countries.

Holding	Unaxis Holding Inc.							
Segments	Information Technology					Surface Technology	Components and Special Systems	
Divisionen	Semi-conductors Back End (ESEC)	Semi-conductors Front End	Displays	Data Storage	Optics	Balzers	Leybold Vacuum	Contraves Space
Core competencies	thin film technology							
	vacuum technology							
	precision technology							

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Dr. Willy Kissling, Chairman of the Board of Directors, and Heinz Kundert, CEO.

> REPORT OF THE CHAIRMAN OF THE BOARD OF DIRECTORS AND THE CEO

Persistent weakness in the IT industry in the 2002 financial year led to a decline in sales as well as a loss at the operating earnings level. Orders received, however, experienced a change in trend. Measures aimed at increasing operating flexibility and reducing costs showed results. Unaxis resolutely continued its investments in the expansion of the company's market presence and development of new products.

Dear Shareholders

The ongoing global recession and slack demand in the information technology (IT) markets left their mark on the course of business at Unaxis during the 2002 financial year: on a comparable basis¹, company-wide sales fell by 21 percent. By way of contrast however, orders received grew by 7 percent. Hurt most by this decline in sales was the Information Technology segment, which primarily focuses on production systems and components for the IT industry. In particular, the chip-related Semiconductors Back End (ESEC) and Semiconductors Front End divisions achieved only modest sales due to the increasingly harsh environment in the semiconductor industry in 2002. Following the 35 percent decline in demand for chip-production systems witnessed in 2001, another 24 percent drop ensued during the past financial year. Both of those divisions nevertheless managed to conclude several significant sales of technology, thereby confirming the competitiveness of their products. Sales of production systems by the Displays division also experienced a sharp, market-related decline in 2002. Data Storage recorded sales that were essentially unchanged from prior-year levels, while Optics experienced a 13 percent decline in revenues versus the prior year.

A more favorable development was to be seen in the gratifying increase in orders received by the company, an achievement that is attributed exclusively to the Information Technology segment. The Semiconductors Back End (ESEC) and Displays divisions enjoyed a significant increase in orders in comparison to the previous year. The Data Storage division even managed to double the amount of orders it received, mainly thanks to demand for coating systems used in the production of rewritable discs. The Semiconductors Front End division was the only IT-related unit to witness a marked decline in orders.

A better showing was made by the non-IT-related Surface Technology segment (Balzers) and Components and Special Systems segment (Leybold Vacuum, Contraves Space), where sales came in slightly below the levels achieved in the previous year. Although Leybold Vacuum also felt the impact of the IT market collapse, it was nevertheless able to keep the sales loss within reasonable limits. As was the case in 2001, the non-IT-related segments made a positive contribution to the company's operating results; however, they were not able to compensate for the considerable operating loss incurred by the IT segment. Despite that fact, the more industrially oriented components and service-related businesses of Unaxis proved to be comparatively resilient and profitable even in the face of a difficult market environment.

¹ On a comparable basis, i.e. excluding the Materials activities sold in 2002, as well as business segments sold in 2001: Leybold Optics, Decorative Coating, Hapsite and Contraves Inc. USA.

Cost-reduction measures show results

Unaxis initiated steps last year in anticipation of a phase of prolonged market weakness – a broad range of measures aimed at increasing its operating efficiency. For example, various corporate activities were merged and Unaxis' Group portfolio of products was streamlined. In the year under review, overhead costs were reduced by CHF 160 million. Of that amount, CHF 60 million was attributable to the altered structure of the company. On a comparable basis, Unaxis lowered those costs by CHF 100 million. Additional programs aimed at lowering the company's break-even level over the long term were implemented, among them a reduction of development time, improved procurement management, utilization of standardized product platforms, and increased use of outsourcing.

Those measures have shown results, as evidenced by the fact that operating earnings for the second half of 2002 were only slightly in the red. For the entire financial year, Unaxis recorded an operating loss (EBIT) of CHF –83 million. Owing to the low level of interest rates, as well as weakness in the major currencies versus the Swiss franc, the company's financial result for 2002 of a negative CHF –11 million stood below the prior-year level. In the year under review, Unaxis divested the businesses related to its former Materials division, concluding a number of smaller asset sales. Together with the elimination of reserves for guarantees associated with previous divestitures, these transactions resulted in "other income" totaling CHF 47 million. Overall, the company realized a net loss of CHF –39 million in its 2002 financial year.

At year-end, the company had net working capital of CHF 686 million (year-end 2001: CHF 768 million) and the shareholders' equity ratio increased to 58 percent (2001: 55 percent). As a consequence, Unaxis continues to have a high level of liquidity, particularly when compared to the industry as a whole, as well as a very solid shareholders' equity base. Thus, the financial stability necessary for a company involved in cyclical markets continues to be present at Unaxis.

Expansion of the company's market presence and investments in new products continue unabated

As a means of ensuring the company's long-term competitiveness, Unaxis continued to expand its market presence over the 2002 financial year, resolutely pursuing the development of new technologies and products:

- > To offer our customers an even higher level of support, we invested sizable amounts in the expansion of our technical support centers and in new, customer-proximate production facilities. From that point of view, the opening of our regional headquarters in Shanghai represents a milestone. Shanghai is a gateway for Unaxis into the strongly growing Chinese marketplace. Going forward, the company's sales activities and support efforts for China will be coordinated out of Shanghai. Moreover, in December 2002, the Optics division commenced operation of a new production plant in Shanghai that will manufacture optical components for the Asian market.
- > In 2002, Semiconductors Front End achieved a breakthrough in the field of silicon-germanium (SiGe) technology. Thanks to the speedier data transmission and reduced electrical power consumption afforded by this semiconductor material, chips can be produced that have a particularly high performance level. Unaxis' manufacturing process enables SiGe chips to be produced for the first time at competitive costs, thus creating the conditions necessary for high-volume production. With the launch of its new "Starline" system, developed for advanced packaging applications, Semiconductors Front End has managed to solidify its leading position in this market segment.
- > A breakthrough in wire bonding technology was heralded by ESEC's introduction of its new "Tsunami" wire bonder. Thanks to unparalleled price/performance, Tsunami affords customers a tremendous leap in productivity and thus a significant competitive advantage. This new system will be delivered to the first customer in the second quarter of 2003.
- > The Data Storage division has successfully completed the necessary work for its transition from a producer of modules into a provider of integrated total solutions for data storage devices. Its first machines for DVD-9 applications will be delivered in the first quarter of 2003. Additional formats are slated to follow during the course of the year. The division's leading position in metallization systems for the

> 2002 IN REVIEW

Unaxis opens its new Shanghai regional headquarters for "Greater China." The Shanghai facility will manufacture optical components for the Optics division, and provide sales and service support to all company divisions.



Unaxis introduces a revolutionary production solution for silicon-germanium (SiGe) technology. This patented method shortens the time involved in producing SiGe layers, which in turn leads to significant cost advantages for customers.

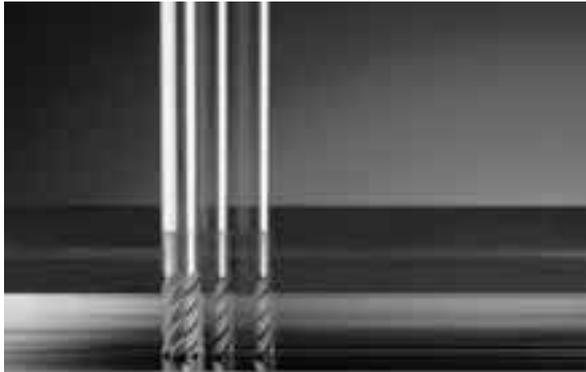


With "Tsunami", ESEC achieves an important innovation in wire bonding technology. Tsunami affords a quantum leap in speed, and this at a level of precision that equals or even exceeds that of conventional methods.



Data Storage launches its new fully integrated replication line for prerecorded DVDs (DVD-9). "Matrix" achieves the lowest cost-per-disc in the entire industry.





With the opening of new sites in Germany, France and the USA, together with its new domestic subsidiary in Poland, Surface Technology (Balzers) has a network of 51 coating centers in 19 countries as of early 2003.



Leybold Vacuum launches "ScrewLine," the first dry-operating fore-vacuum pump, which has been specially designed to meet the needs of traditional industrial manufacturing.



Upon the successful separation attempt conducted in July, Contraves Space concludes the qualification of the payload fairing for America's new Atlas V-500 launch vehicle.



Unaxis moves into its new head offices at Pfäffikon/SZ. In addition to group-level management, roughly 50 members of the company's Corporate Services unit will now be working at the Pfäffikon facility.

production of DVD+RW, DVD-RAM and other rewritable formats has once again been expanded. In addition, Data Storage has attracted renowned partners such as Philips to participate in the co-development of future production technologies.

> With the opening of new coating centers in Germany, France and the USA, together with its new domestic subsidiary in Poland, Surface Technology (Balzers) has a network of 51 coating centers in 19 countries. In 2002, eight new high-performance coatings were introduced, each of which are closely tailored to the needs of customers in various market segments.

> With its "ScrewLine", Leybold Vacuum has introduced a high-tech vacuum pump for applications in industrial manufacturing. These units offer customers significant competitive advantages and also have convincing environmentally-friendly attributes.

> Contraves Space has successfully completed development of the payload fairing for America's new Atlas-V-500 launch vehicle. As a result, the conditions are ripe for Contraves Space to assume a leading position in the payload fairings market not only in Europe, but in North America too.

Changes in the Board of Directors and group-level management

Now that the company has been successfully restructured, Prof. Dr. h.c. Lothar Späth has decided to step down from his position as member of the Board of Directors. Particularly during the company's restructuring phase, Unaxis was able to benefit from his broad business and political experience. We would like to express our sincere gratitude to Prof. Dr. h.c. Späth for his dedicated efforts and commitment on behalf of the company. The Board of Directors proposes the election of Dr. h.c. Harald Eggers as his successor. As the Chief Executive Officer of the Memory Products Group, Infineon Technologies AG, Munich (D), Dr. Eggers will supplement the Board with his experience in the semiconductor industry.

On January 1, 2003, Kaspar W. Kelterborn assumed his new position as Chief Financial Officer (CFO) of Unaxis. Mr. Kelterborn has gained many years of comprehensive, international experience in various fields of financial management. He will succeed Paul E. Otth, who resigned at his own request from his duties as CFO and Executive Board member of Unaxis. Mr. Otth joined Unaxis in June 2000 during the course of the company's strategic reorientation. He accompanied its transition into a highly focused technology enterprise, and played a decisive role especially in terms of the legal and financial restructuring of Unaxis and several of the company's acquisitions and divestitures. In the future, Paul E. Otth will contribute his experience to the boards of various companies, including several in which Unaxis holds an equity interest. It pleases us that he will therefore continue to be associated with our company. On behalf of the Board of Directors of Unaxis, we would like to express our gratitude to Paul E. Otth for his tremendous personal commitment and significant contribution towards creating today's Unaxis, and we wish him all the very best in his future endeavors. As of March 1, 2003, group-level management will be reinforced by the inclusion of Asuri S. Raghavan, an internationally prominent expert in the semiconductor industry. At Unaxis, he will bear responsibility for further development of the company's semiconductor business.

Motions for presentation at the annual general meeting of shareholders

The Board of Directors will propose a dividend payment of CHF 2.- per share at the annual general meeting of shareholders on May 20, 2003. In addition, a motion will be made to elect Dr. h.c. Harald Eggers as a new member of the Unaxis Holding Inc. Board of Directors, replacing Prof. Dr. h.c. Lothar Späth. Also, the Board of Directors will move for the re-election of Dr. Markus Rauh to an additional three-year term of office. As auditors and Group Auditors for a term of one year, the Board of Directors moves to elect KPMG Fides Peat, Zurich.

Challenges and outlook for 2003

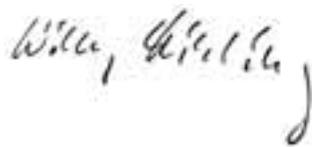
With an eye towards the opportunities and challenges of the future, we will remain committed to spurring the development of Unaxis Corporation in 2003. In so doing, we will focus primarily on three specific areas: priority in this regard will be given to exploiting the growth potential within the company's overall portfolio of holdings. In order to expand Unaxis' position in all of its business fields, we will strengthen the company's market presence and invest further in product innovations. Secondly, we will make every

effort to increase the operating efficiency of the company to an even higher degree. And thirdly, our objective is to prepare for a rapid increase in production capabilities that will enable Unaxis to benefit from the emergence of a market recovery.

From today's vantage point, it is difficult to assess the future development of the company's specific markets. We are working on the assumption that demand in the IT Segment – in particular for semiconductor production equipment – will not pick up before the second half of 2003. In the non-IT-related Segments, a modest improvement can be expected, depending of course on the general trend of the global economy. Although we anticipate that 2003 will once again be a difficult year, we are nevertheless convinced that the innovative power of Unaxis, along with the efficiency-enhancing measures that have been introduced, will exert a positive influence on the course of our business activities. Given those circumstances, we expect to return to a profitable level of operating earnings in the 2003 financial year.

Acknowledgements

A demanding year lies behind us and, on behalf of the Board of Directors and Executive Board, we would like to thank all of those who have provided their support during that period – our employees, for their global commitment to making Unaxis more flexible, customer-oriented and responsive; our customers, who reward our efforts with their trust; and you, our valued shareholders, for your loyalty. We will make every effort to justify your allegiance by being able to report good corporate progress in one year's time.



Dr. Willy Kissling

Chairman of the Board



Heinz Kundert

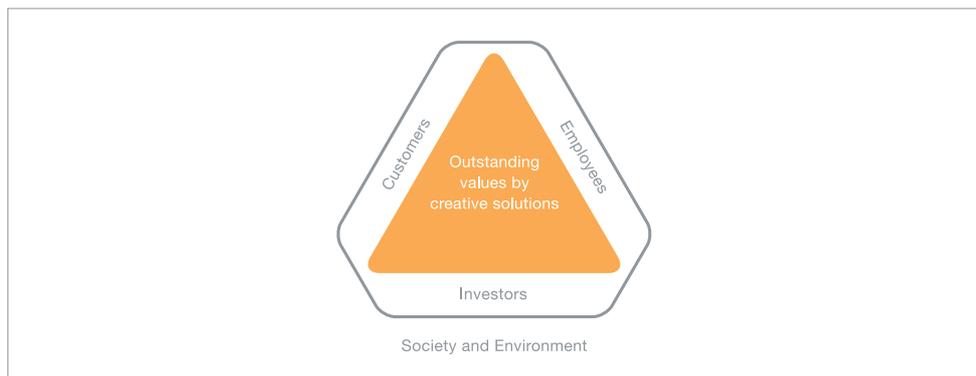
Chief Executive Officer

BUILDING
THE FUTURE –
FOUNDED ON
SOLID VALUES.

> INVESTMENTS IN THE FUTURE

For a high-tech company like Unaxis, the future shapes the present on a daily basis. Because those who develop technologies for microchips, flat panel displays, DVDs, video projectors, state-of-the-art diesel engines or satellites are actively shaping the world of tomorrow. In order to do so successfully, Unaxis must focus intensively on the trends of the future. Anticipating tomorrow's market needs and translating those needs into optimal technological solutions – and doing that better, faster and at less expense than others – is the company's primary task. As customers of Unaxis, the world's leading information technology, industrial and aerospace firms build upon that expertise.

Added value for all stakeholders



Unaxis bears an obligation towards its customers, employees and shareholders in equal measure. The company takes a long-term view that adheres to the principles of sustainability.

- > Unaxis creates outstanding benefit for its customers.
- > Sustainable growth and above-average profitability are central to the company's ability to strengthen its position in the marketplace as well as to invest in new products and applications.
- > Unaxis fosters a corporate culture that encourages entrepreneurial thinking, team spirit and personal growth of each employee.
- > Unaxis acknowledges its responsibility to society as a whole and contributes towards treating the environment in a considerate manner.

Market leadership as an objective

For its own future, Unaxis has established the goal of ranking among the market leaders in select business segments. Unaxis wants to grow further, build on its leading technological position, and develop its corporate divisions into leaders in their respective markets.

Strategic balance between growth and stability

Unaxis has oriented its strategy towards business activities in the high-technology markets. Unaxis' portfolio of holdings is built upon two pillars, each of which contributes roughly half of the company's total revenues. This two-pillar approach ensures a good balance between rapid yet highly volatile growth on the one hand, and stability on the other:

- > The first pillar is formed by the IT segment with its Semiconductors Back End (ESEC), Semiconductors Front End, Displays, Data Storage and Optics divisions. All IT divisions are active in markets that demonstrate above-average long-term growth. However, because the related technological advances come in fits and starts, these markets are subject to recurring cyclical fluctuations.
- > The second pillar is represented by the company's industry-oriented, high-tech Surface Technology segment and Leybold Vacuum and Contraves Space divisions. These entities are market leaders in their respective fields of enterprise and generate stable profits, thereby acting as a counterbalance to the cyclical IT business.

2002 marked by significant investments in the future

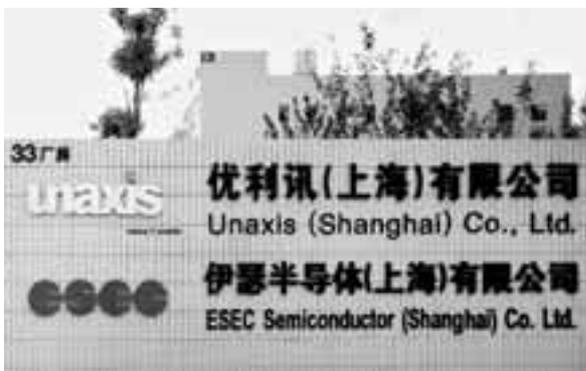
Unaxis has used the past four years to carry out a fundamental restructuring of the entire company. A resolutely focused high-tech enterprise evolved from what was formerly a broadly diversified conglomerate. To date, Unaxis has only been able to benefit from this reorientation in the year 2000, because the weak economic environment and collapse in IT markets witnessed over the past two years have placed a significant burden on the company's business activities. Unaxis has nevertheless used this phase to work intensively on key issues of the future. In its 2002 financial year, the company redoubled its customer orientation, spurred innovative efforts, increased its competitiveness and invested in its employees' personal development. Simultaneously, Unaxis has charted a course for corporate leadership that is committed to comprehensive sustainability. Despite the current difficult market circumstances, Unaxis today stands strong and tall – ready to meet the challenges and exploit the opportunities that the future holds.



Unaxis Corporate Headquarters, Pfäffikon/SZ, Switzerland



Unaxis Semiconductors Front End, St. Petersburg, FL, USA



Unaxis Shanghai, Shanghai, China



Unaxis Data Storage, Balzers, Liechtenstein

> CUSTOMER ORIENTATION



> OUR PRODUCTS ARE THE RESULT OF GLOBAL COLLABORATION

Unaxis comprises subsidiaries located in Europe, the USA and Asia. Unaxis specifically commits these various regional strengths for the benefit of customers:

1 In the USA, Unaxis commands specialized know-how in the areas of research and innovation as well as in semiconductor technology.

2 The company's units in Europe, particularly in Switzerland, are leaders in precision technology as well as the development and assembly of complex production systems.

3 In Asia, one of the world's most important high-tech markets, Unaxis has an especially high degree of competency in product qualification, as well as sales and customer support.

Throughout the entire value chain associated with a given product – from research and development through sales and customer support – all of the requisite competencies are brought to bear.

We want to create competitive advantages for our customers. Only by so doing can Unaxis strengthen its own position in the marketplace.

An approach based on partnership between customer and supplier is of mutual interest in the high-tech industry. It is the customers who determine the market success of Unaxis' products and, by logical extension, the future of the company. On the other hand, systems and components supplied by Unaxis represent key elements in its customers' production processes and core components of their products. In the harsh competitive environment and ceaseless technological evolution of high-tech industry, it is those who have the latest, most cost-efficient means of production who gain supremacy. For Unaxis, customer orientation primarily means offering companies production systems and components that afford them a competitive advantage. Thus, a mutual partnership evolves at an early stage in the joint development of a new product generation, and it extends through the entire value chain – from production, to quality assurance and installation, right through to after-sales service and employee training.

Group-wide key account management reinforced

With its technologies, Unaxis serves markets in which the lion's share of volume is attributable to a mere handful of major players. This makes it all the more important to forge close personal relationships with these key customers. Based on that consideration, Unaxis strengthened its Group-wide Key Account organization during the course of the 2002 financial year. For each division, a designated team stands ready to approach those customers, ensure that they are catered to on a global scale, and determine their future technological needs through regular contacts. In 2002, the Key Account organization already achieved measurable results. By way of example, ESEC was able to increase the proportion of its sales generated by key customers from 19 to 31 percent.

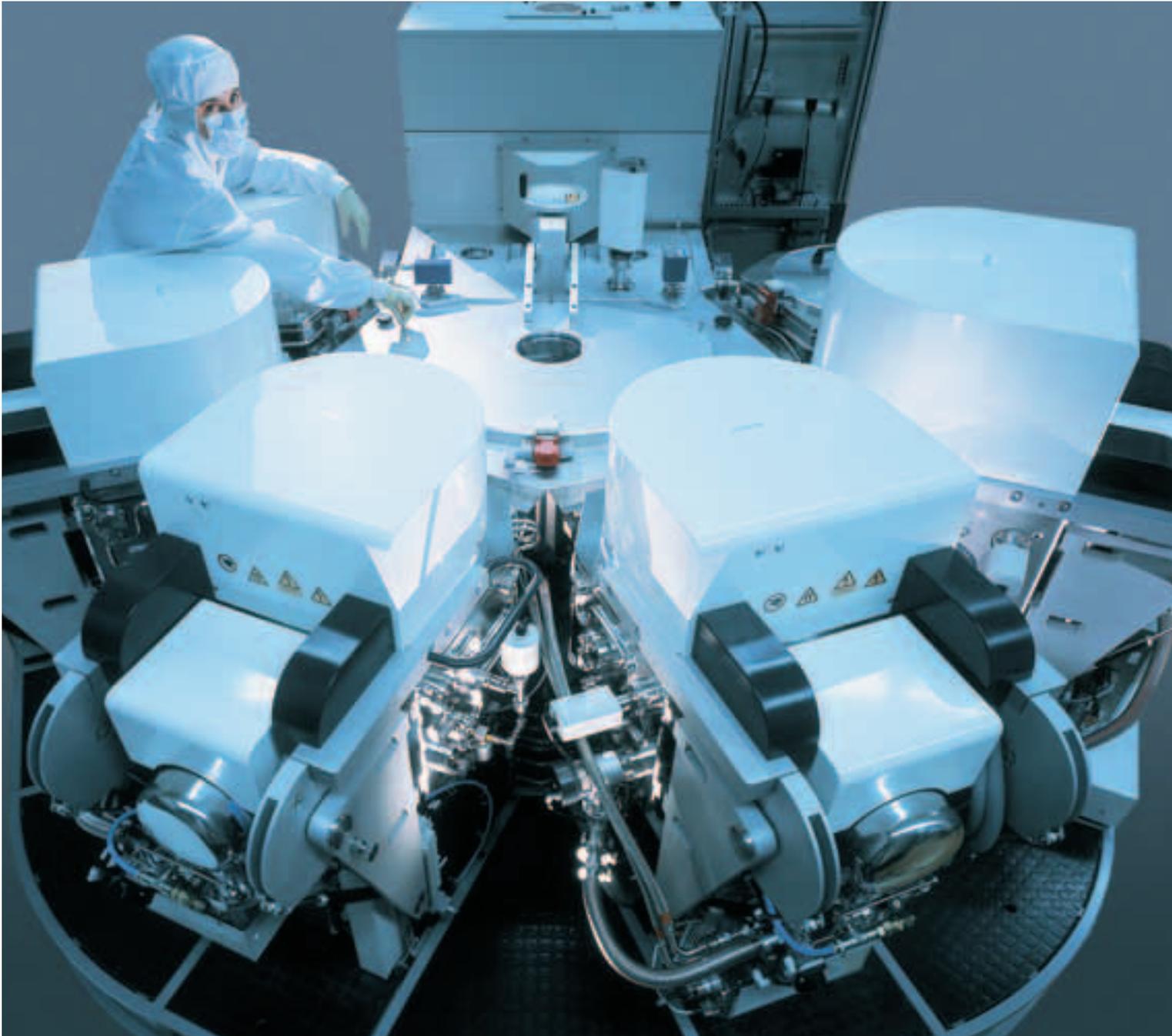
Service orientation improved dramatically

Unaxis conducted a worldwide customer survey in September 2001. On one hand, the results confirmed a number of strengths – the tremendous innovative power of Unaxis and its understanding for the technological needs of customers earned particular accolades. Brought to light on the other hand were various weak points in customer service, complaint management and the availability of replacement parts for often extremely complex high-tech products. In 2002, an in-house Customer Care Task Force conducted several Group-wide projects in an effort to achieve the most rapid and effective improvements in those specific areas. The reactions of key customers confirm that the measures implemented have paid off and led to a clearly identifiable improvement in customer satisfaction. In particular, the reaction time for addressing customer concerns was shortened by a wide margin. In order to achieve a similar level of service on a company-wide scale, Unaxis is resolutely pursuing the efforts already initiated.

Exploiting the growth potential of Greater China

Service orientation also demands that Unaxis is present wherever customers may have their production facilities. In various segments of high-tech industry, where a new manufacturing plant represents an enormous investment that nevertheless must be amortized within a short period of time, a machine breakdown can be extremely costly. Aside from reliable production equipment, seamless service support is of equal importance to the customer. In 2002, Unaxis significantly expanded its global presence. For example, ESEC broadened its sales and service network in Asia through independent locations in Taiwan, the Philippines and China, while Surface Technology is now able to improve its service to the Eastern European market via a new domestic subsidiary in Poland. However, the opening of Unaxis' regional headquarters for Greater China represented the most meaningful step in this regard. As a result, the company has gained access to the world's fastest-growing market. Situated at the Shanghai facility are marketing and service teams for the Semiconductors Front End, Displays and Data Storage divisions, subsidiaries of ESEC and Leybold Vacuum, as well as a production plant for components utilized by the Optics division. By the end of 2003, the number of employees at Unaxis Shanghai is scheduled to increase from the current total of 80 to roughly 200.

> COMPETITIVENESS



“Unified Platform” – customer-specific systems assembled from standard modules. The Semiconductors Front End CLUSTERLINE® exemplifies the “Unified Platform” concept. First, the customer defines the process needed and the wafer size – 200 or 300 mm. Unaxis engineers then configure the system by selecting the appropriate handling system and process modules. Next, Unaxis assembles and tests the system and adds optional modules like additional user interfaces. After the Factory Acceptance Test, the system is set up ready-to-go at the customer’s site.

As a globally active company, Unaxis must measure up against the best companies in the world.

Over the past two years, certain Unaxis key markets experienced a decline in business activity; the IT industry was especially hard-hit by this development. Looking ahead, an increase in such cyclical fluctuations in demand seems likely, thus making Unaxis' business all the more demanding. That presents the company with new challenges. In order to be successful in cyclical markets, a company must maintain a high degree of operational flexibility so that capacity can be adapted to changes in demand. Also decisive in this regard is an efficient cost structure and, by logical extension, a commensurately low break-even point. Moreover, global competition in the high-tech marketplace necessitates that a company safeguard its intellectual capital. In the 2002 financial year, Unaxis oriented its business processes towards all of those requirements.

Reduced complexity thanks to standardized product platforms

One of the company's major initiatives is represented by its new platform strategy. In the ESEC, Semiconductors Front End, Displays and Data Storage equipment divisions, Unaxis will in future be producing various systems on the basis of standardized, division-specific product platforms. The advantages of this concept are obvious: reduced component diversity accelerates the development, manufacturing and market introduction of new products. As a consequence, product innovation is spurred and the risks associated with development reduced. Manufacturing throughput times are being shortened so that Unaxis can react more rapidly to an increase in demand. For example, thanks to its "Unified Platform" program, Semiconductors Front End managed to reduce its range of components by more than 65 percent and nearly halve delivery times. On the customer side of the equation, utilization of standardized platforms eases configuration and lessens the time involved in putting a system into operation. By the same token, employee training, service and maintenance are also simplified. On the whole, this new platform strategy leads to a higher degree of flexibility and, most importantly, to lower costs.

Dedicated commitment to outsourcing increases operating flexibility

Closely linked with the company's new platform strategy is a resolute approach to managing the value chain. Be it with regard to production systems or components, Unaxis focuses primarily on its own specialized know-how and manufactures only those key components that center on its core capabilities in thin film coating, vacuum and precision technology. All other components and complete modules are, to the greatest extent possible, procured from outside suppliers. As a result, an increasing number of standardized solutions for equipment control systems are being utilized. By way of example, ESEC significantly increased the proportion of standard components that have been integrated into its new Tsunami wire bonder. Based on defined requirements, Unaxis reduced the number of its suppliers by roughly half during the course of the 2002 financial year.

Safeguarding intellectual capital

Protecting intellectual capital through patents represents a key competitive factor for a high-tech enterprise, and the significance of doing so will increase even more in the years to come. With each new generation of products, the proportion of proprietary know-how – the system concept, process technology, product specifications, software, etc. – represents an ever greater proportion of overall product value. A strong portfolio of patents not only secures the company's competitive position, but also strengthens its negotiating stance in discussions surrounding development partnerships and licensing agreements. In 2002, management adopted a set of specific measures aimed at enhancing the protection of Unaxis' intellectual capital – each corporate division has created an Intellectual Property Committee charged with analyzing its own patent status and comparing that with the position of competitors. Wherever necessary, steps have been initiated to increase the company's patent protection, and gratifying progress has already been achieved – heightened sensitivity to patent protection throughout the enterprise has led to a marked increase in patent applications.

> EMPLOYEE DEVELOPMENT



Teruki Oitome, Displays, Japan



Joseph A. Huesler, Contraves Space, Switzerland



Monika Kuhn, Leybold Vacuum, Germany



Christophe Laurent, Data Storage, Liechtenstein



David Wu, Optics, China



Rita Becker, Surface Technology (Balzers), Liechtenstein



Daniel Simonin, Semiconductors Back End (ESEC), Switzerland



Peter Ignacio, Semiconductors Front End, USA

Unaxis underway for the benefit of customers. In keeping with the multicultural and interdisciplinary character of today's Unaxis, customer value journey teams are deliberately comprised of employees from all divisions, regions and functional levels.

Our employees shape the future of Unaxis.

Unaxis must win its customers' trust anew each and every day by providing outstanding performance – and it is the company's employees who produce those achievements on a daily basis. Motivated and well-educated employees are therefore crucial to a company's long-term success. Decisive factors in employees' willingness to perform at their very best are aspects such as job satisfaction, corporate culture in general, internal communication, as well as training and continuing education. For that reason, Unaxis conducted a broad-based employee survey in 2001. The findings highlighted the need for action mainly in two specific areas. First, a certain percentage of employees appeared to be insufficiently informed about the company's vision and strategy. Second, while the range of technical training opportunities at Unaxis was considered exemplary, there emerged an additional need for non-technical training, mainly to acquire additional management skills.

During the past financial year, Unaxis made extensive efforts to close those gaps. The level of commitment demonstrated by Group management was particularly high in this regard – in 2002, the CEO devoted a considerable proportion of his time to in-house communication and participating at continuing education courses for employees. A follow-up employee survey conducted at the end of 2002 made it clear that significant advances had been achieved, but that further room for improvement nevertheless still exists.

Strong commitment to enhancing internal communication

In-house communication that focuses on Unaxis' vision and strategy was considerably expanded in 2002. To that purpose, the company created additional instruments, in particular regular reports on strategic and operational topics at the Group, divisional and local levels. A key element from both an employee training and internal communication standpoint is the company's "Customer Value Journey." At this workshop, employees from all hierarchical levels and the farthest reaches of the entire Group, regardless of nationality, culture or language, discuss suggestions aimed at improving customer satisfaction.

Unaxis fosters and furthers the capabilities of its employees

Unaxis requires from its employees a continual willingness for personal improvement. Accordingly, the professional development of each employee has for years been resolutely fostered through in-house and external continuing education courses. The company maintains technical training centers at each divisional head office, the largest of which is located at the Trübbach facility in Switzerland, where each year roughly 100 employees gain a higher level of professional skills. In 2002, Unaxis expanded its range of learning opportunities through the addition of non-technical educational programs:

- > Basic training for the next generation of managers (NGM) is offered to all employees who wish to strive for a leadership position or broaden their management experience. In a number of courses held over the space of twelve months, participants receive practical training in the fundamentals of corporate and personnel management and are readied for the tasks that lie ahead of them.
- > The Balzers Outstanding Leadership Development program (BOLD) was developed and implemented by the Surface Technology division in collaboration with the University of St.Gallen. BOLD likewise consists of a number of learning modules spread over a twelve-month period and combines the basic elements of corporate management together with Unaxis-specific topics. There are plans for BOLD to be introduced at other Unaxis divisions in 2003.
- > In conjunction with Lausanne's Institute of Management Development, Unaxis developed the EXED (EXecutive EDucation) program, which was conducted for the first time in 2002. In addition to learning modules such as strategic management, financial management, organization and coping with cyclicity, this tailored management training course above all focuses on practical case studies and company-specific projects.
- > In 2002, existing trainee programs for university graduates were supplemented by the company's Strategic Capability Acquisition program (SCA). This 18-month course targets candidates with a technical and/or academic background and several years of professional experience, and embraces on-the-job training as well as first-hand experience in challenging projects at separate locations in the Group.

> THE LONG-TERM PERSPECTIVE



“club.unaxis.mobil” and “Taktolino” – award-winning mobility management at Unaxis. Encouraging as many employees as possible to switch to public transportation, while ensuring that the frequency of bus departures and arrivals is adapted to Unaxis' flexible working hours model – those were the Unaxis goals when it introduced the “Taktolino” business mobility concept at the Balzers and Trübbach facilities in 2001, and further developed it in 2002. The key measure was to reallocate the money Unaxis previously spent on transporting employees via private bus, contributing it instead towards expansion of the regional bus network. As a result, new bus routes could be created and rush-hour departure/arrival frequencies increased – a development that has also benefited the general public. Complementing Taktolino are in-house communications, supplemental club.unaxis.mobil offerings such as subsidized annual bus passes and free bicycle repairs, as well as a car-pooling service based on Mobility Schweiz vehicles that are also available to employees during their leisure time. Thanks to club.unaxis.mobil and Taktolino, more Unaxis employees than ever now get to and from work via public transportation or by bicycle. Unaxis' innovative mobility concept has also gained broad public recognition and received a number of awards. For example, Taktolino won first prize in the 2001 sustainability contest held by the “Internationalen Bodenseeagenda” and the public-choice award in the Innovation Prize competition sponsored by the Swiss Transportation Club (VCS/STC). In previous years, Unaxis has won the Touring Club of Switzerland's (TCS) environmental prize and been recognized as the “most bicycle-friendly company in Switzerland” by the Swiss Agency for the Environment, Forests and Landscape (SAEFL/BUWAL).

Unaxis desires to create sustained added value for all relevant interest groups.

Entrepreneurial activity is often at odds with various public interests. For Unaxis, this means taking seriously not only the needs of its customers, employees and shareholders, but also the justified concerns of the public with regard to environmental matters and society as a whole – and then incorporating those considerations into its business decisions. In recognition of this comprehensive concept of stakeholders' interests, Unaxis in 2002 established framework conditions that enable the company to generate not only economic but also ecological and social added value.

Resolutely value-oriented corporate leadership

Resolutely value-oriented corporate leadership is a key element in translating economic sustainability into reality. Unaxis stands squarely behind its systematic mission to increase enterprise value. Given the cyclical nature of the high-tech marketplace, however, that growth in value can only evolve over the long term – in phases of burgeoning market demand, above-average profits must be generated and reserves built in order to ensure that the necessary investments can also be made during times of weakness such as those witnessed over the past two years. The advances achieved in corporate development are continually monitored and measured by means of a strategic planning process based on the latest analytical methods (Balanced Scorecard). Also to be viewed as an aspect of economic sustainability is the systematic application of Business Excellence, which in 2002 was firmly anchored in all divisions of the company. In this discipline, Unaxis bases its practices on the leading model developed by the European Foundation for Quality Management (EFQM).

Group-wide risk management

Creating sustainable enterprise value is only possible if the risks associated with business activities are closely monitored. In the 2002 financial year, Unaxis introduced a uniform, company-wide method of risk management that creates the necessary conditions for systematic and comprehensive analysis, evaluation and presentation of all forms of risk relevant to the company. A broad-based risk profile is derived from this method and integrated into the company's strategic planning and budgeting processes, thus forming the basis for measures aimed at controlling as well as limiting risks.

On the path to excellence in environmental, health and safety matters

Unaxis technologies contribute to a reduction in the amount of resources consumed in the manufacture of high-tech products. Often, those technologies are instrumental to producing more environmentally friendly products in the first place – by way of example, the fuel-miserly three-liter automobile engine would be inconceivable were it not for coated components produced by the Surface Technology division. Inside the company, too, Unaxis has undertaken a variety of measures with regard to the environment and society as a whole. Examples of this are the award-winning "club.unaxis.mobil" mobility concept and the company's collaboration with the University of St. Gallen as part of the international Sustainability Balanced Scorecard research project aimed at integrating sustainability factors into the Balanced Scorecard model. Unaxis is currently working on a means of systematically integrating ecological and social sustainability into its business activities as a key factor of Business Excellence. On the basis of a multi-stage program that will run until 2004, the company is taking a targeted approach to expanding its activities and processes with regard to environmental, health and safety (EHS) matters. For example, Unaxis in 2002 formulated Group-wide guidelines pertaining to EHS and business ethics, and adopted forbidden-materials lists that are binding for all company divisions. The next step will be to subject all major research and production facilities to ISO 14001 environmental certification.



PERSPECTIVES
FOR THE FUTURE –
WE HAVE EIGHT.

> SUMMARY OF THE FINANCIAL YEAR 2002

Unaxis operates in three business segments – Information Technology, Surface Technology, and Components and Special Systems – which in turn are subdivided into a total of eight divisions. The revenue streams of individual divisions exhibit disparate development because of the differing growth dynamics in their respective markets. In particular, the semiconductor-related divisions – ESEC, Semiconductors Front End, Displays and Data Storage – are subject to extreme cyclical fluctuations in demand, whereas the other more industrially oriented divisions operate in more stable markets.

Information Technology segment

Semiconductors Back End (ESEC) is one of the world's preeminent suppliers of production systems for the back-end area of chip production, i.e. the assembly and electrical interconnection of semiconductor components.

Semiconductors Front End develops manufacturing equipment for the coating and etching processes that are crucial in the front-end area of semiconductor production, i.e. making the chips themselves.

Displays develops thin film coating processes used in the production of flat panel displays for laptop computers, televisions, mobile telephones and personal digital assistants.

Data Storage is the world's leading manufacturer of coating equipment for optical data storage devices like CDs and DVDs, as well as for magnetic memories such as computer hard disks. This division also offers complete system solutions for all related production steps – from mastering through to coating.

Optics produces sophisticated optical components that are used for data and video projection, optical instruments and sensors, lighting systems, as well as so-called BioChips for use in medical diagnostics.

Surface Technology segment

Surface Technology develops, produces and markets equipment and processes for coating tools and mechanical components under the "Balzers" brand name. The division also offers contract coating services at its 51 coating centers throughout the world.

Components and Special Systems segment

Leybold Vacuum produces vacuum systems and solutions for a broad spectrum of cutting-edge manufacturing and analytical processes, as well as for research purposes.

Contraves Space is the world's leading provider of payload fairings for space launch vehicles. It also develops and produces structures, instruments and precision mechanisms for use in satellites.

		2002	2001	Sales Q4/2002 through Q1/2001								in CHF million
				2002				2001				
				Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	
Total comparable basis¹	Orders received	1 428	1 334									536
	Sales	1 426	1 796									0
	Operating result (EBIT)	-86	-258									
	Employees	6 507	6 979									
Information Technology²	Orders received	684	536									294
	Sales	650	913									0
	Operating result (EBIT)	-146	-332									
	Employees	2 570	2 952									
Semiconductors Back End (ESEC)	Orders received	157	106									86
	Sales	150	189									0
	Employees	688	826									
Semiconductors Front End	Orders received	158	207									100
	Sales	170	328									0
	Employees	624	776									
Displays	Orders received	91	52									61
	Sales	68	134									0
	Employees	324	338									
Data Storage	Orders received	184	76									60
	Sales	171	157									0
	Employees	474	545									
Optics	Orders received	95	95									32
	Sales	91	105									0
	Employees	460	468									
Surface Technology³	Orders received	305	319									89
	Sales	306	326									0
	Operating result (EBIT)	42	50									
	Employees	1 837	1 782									
Components and Special Systems⁴	Orders received	439	479									153
	Sales	471	557									0
	Operating result (EBIT)	19	34									
	Employees	1 765	1 932									
Leybold Vacuum	Orders received	352	392									121
	Sales	358	438									0
	Employees	1 445	1 601									
Contraves Space	Orders received	86	87									49
	Sales	113	119									0
	Employees	321	330									

¹ excluding amounts related to the discontinuing segments in both years, so that the actual performance of the remaining operations is apparent.

² excluding the Materials activities sold in 2002

³ excluding the Decorative Coating business segment sold in 2001

⁴ excluding the Leybold Optics business segment sold in 2001



Higher speed combined with increased precision and quality – thanks to Tsunami, ESEC will exert a lasting impact on chip assembly. Tsunami is the name of the new and revolutionary wire bonder generation manufactured by ESEC. Wire bonding is a key process in semiconductor chip assembly: the fine gold wires used are the means by which microchips receive electrical power and connect with other components. With conventional wire bonders, the bondhead that positions and solders those wires moves front-to-back, left-to-right, as if guided by crosshairs. However, there are limits to the bonding speed achievable by this technological method. Thanks to a fundamentally new system design, ESEC has managed to overcome those limits – the heart of Tsunami is a rotating bondhead which, thanks to its lighter weight, requires much less braking and acceleration energy. As a result, Tsunami provides a quantum leap in bonding speed, at a level of precision equal or even superior to conventional technologies. For customers, this means higher throughput rates, improved yield and, not least of all, clearly reduced production costs. Added customer benefit was also a top priority with regard to other advances achieved in this new wire bonder generation. Development advances in air bearings mean that Tsunami operates practically wear-free. And thanks to its new graphical user interface, the machine can be operated like a PC – at the click of a mouse. Its ergonomically tailored dimensions and specially adapted keyboard provide additional benefit to Asian operators. Moreover, Tsunami requires less floor space, which results in a higher level of customer productivity per square meter.

> SEMICONDUCTORS BACK END (ESEC)

Activity ESEC is a leading provider of assembly equipment and system solutions for the back-end segment of the semiconductor industry. Its Die Bonders and wire bonders are the hallmark of ESEC, together with systems for new technologies such as flip chip-bonding. These machines are used to affix chips to substrate material, and establish the necessary electrical connections by means of gold or copper wire. The completed chips find uses in mobile telephones, personal digital assistants and PCs, as well as telecommunications microprocessors and automotive sensors.

Market Last year, the semiconductor industry was hard-hit by weak global economic activity and slack demand for IT end-products. A considerable level of overcapacity existed among ESEC's customers. Accordingly, investments in new equipment were postponed and, except in isolated cases, customers opted to buy technology rather than additional capacity. On the whole, the market for back-end equipment declined by 17 percent to a level of USD 640 million. ESEC maintained its market share in the Wire Bonding segment, and further extended its leading position in Die Attach. ESEC is the clear market leader for epoxy and soft-solder die bonders, and dominates in high-end applications for flip-chip bonders.

2002 Following a transient recovery in the second quarter of the year, the third and fourth quarters witnessed a renewed deterioration in market demand. In the 2002 financial year, ESEC recorded a 48 percent increase in orders received, reaching a level of CHF 157 million. Total sales declined to CHF 150 million, a 21 percent drop versus 2001. On the other hand, measures aimed at reducing the division's break-even point showed results: in comparison to the previous year, operating expense was reduced considerably.

Highlights The introduction of a Key Account organization at ESEC has proved extremely successful. Within the space of one year, the proportion of total sales attributable to key account customers has increased from 19 to 31 percent. In an effort to exploit synergies in R&D and marketing, two of the division's business units were merged. In addition, ESEC has strengthened its sales and service organization in Asia by upgrading facilities in China, Taiwan and Korea. Development of the new Tsunami wire bonder was completed on schedule and a number of successful beta tests have been conducted in collaboration with customers in Europe and Asia. ESEC has further increased its share of the die bonding market, and in early 2003 the division launched its new and improved Die Bonder 2008 hS (high Speed).

Sustainability In developing new machines, ESEC ensures that no environmentally harmful materials are used either in their manufacturing or operation. To that purpose, the division has created a "negative list" of harmful substances. ESEC achieved a breakthrough with its lead-free solder for use in chip assembly. Due to new legal requirements as well as increasing pressure on the part of consumers, the electronics industry has long demanded a suitable alternative to lead. In collaboration with one of its suppliers and the University of Darmstadt (D), ESEC successfully developed a non-toxic substitute with processing characteristics similar to those of lead.

➤ OUTLOOK

In contrast to the cautiously upbeat forecasts of leading market research institutes, ESEC is reckoning that 2003 will continue to witness a difficult market environment. Only when chip manufacturers' capacity utilization again reaches high levels will investments be made in new production systems. For that reason, it will likely be 2004 before the back-end equipment market once again resumes solid rates of growth. Thanks to its innovative new products, proven Key Account organization, streamlined structure and the ability to react rapidly to increasing demand, ESEC stands ready to exploit the recovery in the back-end semiconductor equipment market.



Silicon-germanium (SiGe) chips bring multimedia to future wireless communications. Thanks to Unaxis' innovative manufacturing processes, SiGe technology is paving the way to a significant market for the future. Whether it be for cell phones with multimedia capacity, high-speed data networks, supercomputers or interactive home entertainment systems – future demands for information technology require microchips with significantly enhanced performance. With today's silicon-based technology, however, the semiconductor manufacturing industry is reaching its limits. In order for those companies to offer the increased performance demanded by the market while simultaneously reducing production costs, a new technological advance is necessary. Experts agree that this leap in technology can be realized through the symbiosis of silicon and germanium. Through these means, significantly increased data transmission rates can be achieved at reduced electrical power consumption. The key to a successful move by SiGe technology into high-volume markets lies in the availability of cost-efficient manufacturing processes. With its revolutionary Low-Energy Plasma Processing (LEPP) technology, Unaxis has created precisely those conditions. This patented process significantly reduces the time required to produce the SiGe stratum, which in turn leads to considerably lower manufacturing costs. The fact that Unaxis' technology has been further developed to market maturity within the framework of two EU research programs, conducted in cooperation with leading semiconductor manufacturers such as STMicroelectronics, Motorola, Picogiga and Wacker, as well as renowned universities, highlights the importance of this innovation.

> SEMICONDUCTORS FRONT END

Activity Semiconductors Front End is a leading provider of production equipment for the coating and etching processes applied in semiconductor manufacturing. Its innovative processing solutions enable the production of smaller, more powerful chips that afford a higher packaging density and consume less energy. This division of Unaxis is active in three market segments – “Advanced Silicon,” which is devoted to silicon and silicon-germanium (SiGe) technology, applications for ultra-thin wafers and photomask etching technologies; “Advanced Packaging,” which specializes in metallization processes for wafer-based packaging technologies such as flip chip; and “Compound Semiconductors,” which focuses on high-frequency and optical applications. Thanks to longstanding collaboration with leading chip manufacturers and universities, Semiconductors Front End commands a strong position in production processes for the high-performance chips of the future.

Market The market for semiconductor-related equipment is characterized by a high level of demand, but being subject to severe cyclical fluctuations, this field of business activity is nevertheless an especially challenging one. Semiconductors Front End is the global leader in etching equipment for photolithographic masks and commands more than 80 percent market share in the area of advanced packaging. The division is also well positioned in its other market segments. With the evolution of new technologies such as SiGe, Semiconductors Front End aims to open up future high-volume markets.

2002 Given the persistently weak demand in the market for semiconductor-related equipment, Semiconductors Front End was unable to reach its profit targets for 2002. Orders received fell by 24 percent versus the previous year to a level of CHF 158 million, and total sales declined by 48 percent to CHF 170 million. Although the division recorded several meaningful sales of technology, there was a dearth of high-volume orders that would generate significant revenue. In particular, demand from Unaxis’ key telecommunications customers remained weak, a consequence of their over-investment during the boom years. This decline in revenues, coupled with the costs of planned market introduction of its new 300mm wafer equipment, meant that Semiconductors Front End incurred a loss at the operating level.

Highlights Despite the extremely difficult industry environment, Semiconductors Front End successfully launched its 300mm wafer technology. The new CLUSTERLINE® 300 equipment has already been delivered to advanced packaging customers in Europe, Asia and the USA. Within the scope of an EU development project focused on SiGe technology, Unaxis supplied STMicroelectronics with a beta version of the CLUSTERLINE® LEP for the production of SiGe wafers. Thanks to the introduction of standardized manufacturing platforms and a highly disciplined approach to procurement management, the division was able to improve its operating efficiency and simultaneously increase its ability to deal flexibly with cyclical market fluctuations.

Sustainability Semiconductors Front End technologies contribute to reduced resource consumption, both in the production and ultimate operation of electronic products. As a result, processes provided by Unaxis enable more efficient and hence more environmentally friendly use of gasses employed in manufacturing. Moreover, new technologies such as SiGe make chip production faster and more energy-efficient. During the course of the 2002 financial year, the division continued its work on an in-house environmental management system. In May 2003, the St. Petersburg (USA) facility will become the first divisional unit to undergo ISO 14001 environmental certification.

➤ OUTLOOK

Semiconductors Front End is operating under the assumption that the market for semiconductor manufacturing equipment will remain stagnant during the first half of 2003. The emergence of a sustainable recovery cannot be expected before the second half of the year. Against that backdrop, the division is anticipating a modest improvement in orders received and total sales. The Semiconductors Front End product range is oriented towards the most significant technological trends in the semiconductor industry, namely the transition to 300 mm wafers, and higher-performance materials like silicon-germanium (SiGe). Once a noticeable market recovery emerges, the division will profit from this positioning.



With its next-generation production technology, Unaxis enables a reliable, cost-efficient means of manufacturing large-format, flat panel displays – and thereby sets the stage for the breakthrough of flat screen televisions into the mass market. The market for flat panel displays stands at the threshold of a fundamental change. Soon, the cathode ray tube televisions that are omnipresent in homes throughout the world will be replaced by flat screen TV sets. The driving force behind that move is not only attributable to the larger image surface and reduced space requirements of flat screen TVs, but also to their enhanced picture quality, lower weight and increased energy efficiency. Furthermore, flat panel displays are ideally suited for digital and interactive television. Market estimates indicate that by 2005, flat panel TVs with a diagonal screen size of 40 to 42 inches will achieve broad-based predominance. A significant increase in the size of the glass substrate to approximately 4 m² is a prerequisite for cost-efficient production of these screen formats. Given a thickness of less than 1 mm, dimensions of that magnitude place tremendous demands on the related production technology. The main crucial factors in this regard are the ability to uniformly coat the entire glass surface, enlarged processing chambers, and advances in the means by which the glass is transported within the production equipment. From a customer viewpoint, maximum reliability and the highest possible throughput and yield are a must – and all this at the lowest possible cost. In the light of these requirements, Unaxis Displays is implementing a fundamentally new system concept in its next-generation manufacturing systems – fewer processing chambers, each with increased throughput. As a result, these new manufacturing systems provide enhanced reliability at a constant rate of production. Much emphasis has been placed on the environmental friendliness of this manufacturing process. Unaxis has set aside considerable resources for its new generation of systems. The associated development project is being driven concurrently by engineering teams at the company's Trübbach (CH) and Paris (F) sites. The initial prototypes of these systems will be available by the end of 2003, and market introduction is scheduled for the summer of 2004.

> DISPLAYS

Activity Unaxis Displays develops thin film coating processes used in the production of flat panel liquid crystal (LCD) displays. The division mainly utilizes thin film transistor (TFT) technology, in which each of the screen's individual pixels are controlled by an active semiconductor component, thus providing high-contrast, brilliant images. To date, flat panel displays have mostly been used in notebooks, PCs, mobile phones and PDAs. Thanks to increasingly cost-efficient manufacturing processes, they are now taking a steadily growing share of the TV market.

Market Measured on the basis of unit sales, the market for flat panel displays demonstrated robust growth in 2002, a trend that is primarily attributable to a marked decline in their cost per unit. That development calls for ever-cheaper production processes and will accordingly accelerate the move towards coating ever-larger glass substrates. While such glass surfaces currently measure around 1.3 m² (Generation 5), that area is set to grow to approximately 4 m² (Generation 7). PC monitors currently represent the major driving force for growth. The next wave will be attributable to flat screen TVs, which represent a potential demand of more than 100 million units per year. The market for production equipment that is relevant to Unaxis is worth approximately CHF 1.2 billion, although this figure is subject to distinct fluctuations. Displays is the world's second-largest provider of TFT production systems.

2002 With orders received in 2002 totaling CHF 91 million, the Displays division recorded a 75 percent increase in comparison to the previous year. However, total sales declined by 49 percent to CHF 68 million. This development is attributable to a cyclical tendency in the displays market – in 2001, a large amount of new production capacity was installed, which in turn led to a market consolidation in 2002. Also, Displays introduced its production systems for Generation 5 flat panel displays.

Highlights CPT, one of Taiwan's most important manufacturers of flat panel displays, placed a major order for Generation 4 PECVD production systems. Also, Displays succeeded in introducing its PVD systems at the facilities of two additional Taiwanese customers. As a result, the division has cemented its leading position in that country. Displays also received the first orders for its Generation 5 PECVD system. Customers confirm the overall outstanding "cost of ownership" afforded by the system. Development of Generation 6 and 7 equipment for the television market has been greatly accelerated.

Sustainability Thanks to a new process, Displays has managed to dramatically reduce emissions of the greenhouse gas sulfur hexafluoride (SF₆) that is used for cleaning PECVD systems. With its KAI 800 system, Displays has retrofitted a thermal process that eliminates SF₆-contaminated waste air by instead generating fluoridated wastewater that can be appropriately treated. In addition, Displays has initiated a project focused on the production of solar cells. This application is based on the division's existing technology, because the coating process used in manufacturing solar cells is essentially identical to that employed in the production of TFT LCD displays. A small test unit was delivered in the summer of 2002, and the first production systems are likely to become available by the end of 2003.

➤ OUTLOOK

The overall market forecast for TFT LCDs is very robust. Several large projects were initiated in 2002/2003 that will be launched at the end of 2003/2004. This could somewhat slow down the equipment market for 2004. Within the industry, start-up problems at several Generation 5 fabs have led to a postponement of the decision to go to Generation 6 or Generation 7, which means Generation 5 will have a longer life span. Nevertheless, we believe that Generation 6 and Generation 7 will come and we are making considerable investments to capture that development.



Two factors count most in the market for DVD equipment: low production costs and high processing reliability. In that regard, Unaxis' Matrix (DVD-9) represents the current state-of-the-art in production lines for prerecorded DVDs. The digital versatile disc (DVD) is on the way to becoming the most successful consumer electronics product of all time. According to industry data, more than 2 billion prerecorded DVDs were sold throughout the world in 2002 – almost double the number sold in the prior year. Having already established itself as the leading manufacturer of production-line equipment for rewritable formats thanks to its Paragon system, Data Storage is now entering the tremendously larger market for prerecorded DVDs. In early 2003, a newly integrated replication line named Matrix was launched for use in this segment. Manufacturing process reliability and cost efficiency were the top priorities in the development of Matrix. As a consequence, this system incorporates an array of future-oriented innovations. For example, Data Storage blazed new trails in bonding, i.e. gluing together both halves of the DVD. With Matrix, that process is accomplished in a vacuum, thus preventing the formation of air bubbles and minimizing the number of rejects. At the same time, Data Storage exploited its leading know-how in the field of coating equipment. Optimal utilization of the coating material reduces a further significant cost factor. As a result, Matrix affords the lowest cost per disc to be had in the entire industry. Owing to the Matrix system's tremendous reliability, Data Storage can also ensure customers that they will obtain a high yield of qualitatively flawless discs – convincing arguments that will help the division to gain a leading position also in the attractive market for prerecorded DVDs.

> DATA STORAGE

Activity The Data Storage division is the world's leading provider of metallizing, replication and mastering systems for the data storage device industry. Data Storage is the only company in the market with a comprehensive product range for all data formats. Its systems are used for the production of optical media like CDs and DVDs, as well as for magnetic data storage devices such as computer hard discs. In addition, the division offers integrated production lines that are distinguished by their ability to provide the highest throughput and lowest per-unit manufacturing costs. The Data Storage customer base comprises integrators on the one hand, and replicators, or manufacturers of the various data storage media, on the other.

Market The market for coating and mastering systems as well as integrated production lines for data storage media represents a total annual turnover of roughly CHF 1.4 billion. The average annual growth rate of this segment lies in the area of 12 percent; however, it is subject to marked cyclical fluctuations. In the aftermath of the previous year's market decline, 2002 witnessed a noticeable recovery. Data Storage plays a dominant role in the market for data storage equipment – worldwide, more than one-third of all hard drives, two-thirds of all CDs and CD-ROMs, and more than 80 percent of all rewritable CDs, DVDs and MiniDiscs™ are manufactured with this division's coating systems. Data Storage is also a leading provider of mastering equipment.

2002 Data Storage benefited in 2002 from the about-face in the market for data storage devices. In comparison to the previous year, the division recorded a 141 percent increase in orders received to a total of CHF 184 million, while sales grew by 9 percent to reach CHF 171 million. Data Storage has established itself as a provider of total solutions and has delivered its first fully integrated production lines. In this segment, a significant increase in orders was recorded in the fourth quarter. There was similarly strong growth in demand for coating equipment, and the division even managed to double sales of its mastering systems versus the prior year.

Highlights A milestone on the path to the production-line business was set by the successful launch of the division's new Matrix DVD-9 line. Initial deliveries are scheduled for the first quarter of 2003. In the area of rewritable data storage media, Data Storage was able to strengthen its leading position by a considerable margin – the Paragon line is being optimized for DVD+RW discs within the framework of an exclusive partnership with Philips. Technologically enhanced versions of the Pi and Universal Recorder mastering systems are enjoying a favorable reception in the marketplace. As a result, Pi has advanced to become one of the most widely sold production units of its kind in China, the world's most important mastering market.

Sustainability Thanks to the know-how it has gained from many years of involvement with thin coating technology, Data Storage's coating systems achieve the industry's most favorable level of material utilization. This helps customers to benefit not only from lower per-disc manufacturing costs, but also contributes to a reduction in the amount of expensive materials consumed during the production process. In 2002, Data Storage developed a new means of sputtering that provides an even higher level of material-consumption efficiency than its predecessor model. With an eye towards the systematic inclusion of environmental sustainability in Unaxis' business processes, Data Storage has set itself the goal of fulfilling the environmental requirements of ISO 14001 in 2003.

➤ OUTLOOK

For 2003, Data Storage is anticipating yet another improvement in its field of business. The uptrend in the market for data storage devices is likely to continue and, for Data Storage, the strategy change towards becoming a provider of production lines will pay off. Major investments are to be expected in the area of prerecorded DVD videos and, thanks to Matrix, Data Storage is well positioned to gain a larger share of this market. Rewritable and recordable formats are also likely to experience favorable trends thanks to lower prices and a new generation of PCs featuring integrated DVD recording drives. A move towards a uniform format standard for rewritable discs is emerging, and that will provide an added boost to developments in this market. The division's mastering business is likely to benefit from the growth impetus emanating primarily from Asia.



BioChips make it possible to gain a better understanding of the human body, thereby spurring the development of new medications and diagnostic procedures. With the substrates that it manufactures for BioChips, Unaxis Optics makes a meaningful contribution to progress in medicine. Biological microchips, commonly referred to as BioChips, open entirely new paths in pharmaceutical research. They permit extremely precise analyses of tissue specimens, blood and other biological matter, in much less time than is possible with other investigative methods. The Optics division's Bio Chip products are thin glass substrates with a fine nanostructure, the surfaces of which are coated with a highly refractive film. The clinician applies to these chips hundreds or even thousands of microscopically small dots that contain specific gene or protein molecules, depending on the objective of the research. Then, the tissue specimens to be analyzed are applied to the surface and their reaction with the molecules is measured by means of a laser beam. By way of example, the efficacy, toxicity and side effects of various medications can be assessed via this method. Other upcoming applications include human and veterinary diagnostics, verification of the quality of food products, and agricultural and environmental testing. The primary advantage of Unaxis' BioChip substrate is high sensitivity. Thanks to the waveguide coating on the substrate surface, measurements can be up to one hundred times more sensitive than competing products. Because sensitivity and quality are key elements in medical research and ultimately lead to lower development costs for new medications, these factors afford Unaxis Optics outstanding leverage in the marketplace. For a number of years now, the Optics division has pursued the development of BioChip technology in collaboration with research institutes and pharmaceutical companies. For example, it has worked closely with Novartis since 1997. In 2002, a leading biotechnology company (Qiagen) introduced a product platform based on Unaxis technology. The 2003 financial year will bring a marked increase in the Optics division's production capacity, to roughly one million BioChip substrates annually.

> OPTICS

Activity Unaxis Optics produces coated optical components and assemblies that are used in data and video projection, medical diagnostics, optical instruments and sensors, as well as in lighting systems. Creating highly precise coatings with outstanding spectral characteristics and durability represents the key competency of Optics. In addition, the division possesses comprehensive know-how in the area of glass processing, lithography and the production of complete opto-mechanical and opto-electronic assemblies. The Optics division is in a position to support customers throughout the product life cycle from the product-design level to high level volume production.

Market Unaxis Optics targets a market worth CHF 1 billion in annual revenues and is one of the leading providers in the industry. Roughly half of that revenue is attributable to optical components for data and video projection. Thanks to new applications in the field of rear-projection televisions, this segment is likely to achieve attractive future rates of growth. The start-up business with BioChip products is benefiting from strong growth forces brought on by increasing cost pressures in pharmaceutical research and the trend towards medical genomics. In the field of optical instruments and sensors, future growth potential is to be found in surface glasses for use in CCD sensors and MEMS.

2002 Following the marked decline in demand witnessed in the previous year, the business flow of the Optics division stabilized at low levels in 2002. Orders received were held at a level of CHF 95 million, and sales fell by 13 percent to CHF 91 million. While developments in the area of data and video projection exceeded expectations, instruments and lighting systems encountered economically related weakness. Sales of BioChip products rose by more than 50 percent, however at an overall low-volume level.

Highlights Following preparatory activities that were accomplished in record time, the new Unaxis Optics production facility in Shanghai commenced operation at the end of 2002. Because the market for data and video projection has steadily migrated to Asia, local manufacturing is of crucial strategic importance. It is the only way for the Optics division to be capable of producing the relevant components at competitive cost. In the projection segment, Optics also received significant orders from television manufacturers for rear-projection-TV optical components. With an eye towards furthering its know-how in the field of BioChips, Optics has signed cooperation agreements with two renowned European research institutes.

Sustainability In the first quarter of 2002, Unaxis Optics in Balzers received ISO 14001 certification for its environmental management system – one of the company's first operating units to do so. The same clear-cut methodology for evaluating environmental impact was also applied to the establishment of the Optics division's production plant in Shanghai. Thanks to this new system, the local authorities – who require stringent environmental standards of new industries that settle in their region – were provided with transparent information as a part of the approval process.

➤ OUTLOOK

Despite what will likely be a continuation of stagnant economic activity, Optics anticipates that 2003 will witness a noticeable recovery in its key markets. Demand for data and video projectors will benefit from the launch of new end-user equipment in the home-TV area. Optics will increase its Shanghai production capacity for projection components in step with market expansion. Demand for BioChips is expected to continue and Optics, in conjunction with highly competent partners, will strengthen its market position. On the whole, the Optics division anticipates improved order flow and sales.



Higher productivity, flexibility, reliability and user-friendliness – the new Rapid Coating System (RCS) and BALINIT®X.CEED coating from Balzers are prime examples of product developments that are solidly oriented towards providing customer benefit. 'What requirements must be met by the latest generation of tool-coating equipment?' That question represented the point of departure in the development of Balzers' new Rapid Coating System (RCS). The result is a machine that sets new standards in many respects: the RCS shortens throughput time by roughly 40 percent and thus offers considerable productivity enhancement for customers. At the same time, its modular system concept allows the RCS to be adapted precisely to a given customer's needs. The equipment can produce a wide variety of coatings using different materials and coating processes. Complex, application-specific coatings can thus be applied cost-efficiently and within short delivery times. One example of a high-performance coating produced in the RCS is BALINIT®X.CEED, which was launched in early 2002. Balzers developed this coating especially for cutting tools used to machine molds and dies – a promising future field. BALINIT®X.CEED revolutionizes mold making by enabling environmentally friendly, rapid and cost-efficient machining of hardened steel.

> SURFACE TECHNOLOGY (BALZERS)

Activity The Surface Technology segment, which does business under the name of “Balzers,” develops equipment and processes for coating tools and precision components. This technology is both sold directly to customers, and put to use in the company’s own worldwide network of coating centers. Systems supplied by Balzers can apply extremely hard coatings that are only a few thousandths of a millimeter thick. They not only increase tool productivity and service life, their use on components reduces friction and wear, thus providing a higher level of performance, load capacity and reliability.

Market The global market for coating services totals roughly CHF 1 billion annually and is showing an attractive rate of growth. Further to that, related equipment business is worth between CHF 100 and 200 million, depending on the state of economic activity. Growth in the coatings field is primarily influenced by increasing market penetration, and the trend in tool coating can be further accelerated through geographic expansion and the introduction of new products for specific applications. The demand for coated components is being driven, among other factors, by new diesel technology in the automotive industry. In addition, component coating for the machine industry also represents a growth area. With an approximate 35 percent share of the market, Balzers is clearly the global leader in this field, with most competition coming from small local firms.

2002 Given the difficult business environment, Balzers held up well in 2002. On a comparable basis¹, its total sales of CHF 306 million stood 6 percent below the prior-year level. That decline was primarily attributable to the 4 percent negative impact of foreign-currency translation. Expressed in local currency, revenues earned from contract coating services remained unchanged; however, clearly divergent trends were noticeable among the individual market segments. The weak global economy had a negative impact primarily on the coating of new tools. By way of contrast, demand increased in the other fields of tool coating. In local currency, component coating recorded a revenue increase of 16 percent. The equipment business, however, suffered under the general slack demand for investment goods.

Highlights In 2002, Balzers introduced eight new coatings, thereby broadening its product range considerably. All of these coatings are focused on fulfilling the needs of customers in the division’s various market segments. Mass production commenced in several high-volume component coating projects. In Poland, Balzers founded a new national subsidiary that will begin operation in the spring of 2003. With its new coating centers in Passau (D), Beauvais (F) and Indianapolis (USA), Balzers has a network of 51 centers in 19 countries as of early 2003. Particularly gratifying growth rates of between 20 and 50 percent were achieved by its still-young subsidiaries in Austria, Brazil, Mexico, India and Singapore.

Sustainability The processes developed by Balzers are extremely friendly to the environment. In contrast to conventional surface treatments such as electro-plating, none of the substances used are ecologically harmful. Moreover, coated tools burden the environment to a lower extent because they minimize or totally eliminate the use of cooling, lubricating and separating agents. In the automotive industry, coated precision parts reduce fuel consumption and noxious emissions, and prolong the life of engines. The fuel-saving technology of the three-liter engine can only be realized thanks to coated components. To date, Balzers has had two of its coating centers environmentally certified according to ISO 14001, and preparations are underway for certification of further centers.

¹ excluding the Decorative Coating business segment sold in 2001

➤ OUTLOOK

Despite the lackluster state of the global economy, Balzers is reckoning with a slightly higher level of sales in 2003. Growth impetus can be expected mainly from a higher degree of market penetration, and Balzers’ newly introduced coatings will play a central role in accomplishing that. During the current financial year, those products should already make a contribution to sales growth. In 2003, Balzers will also continue its geographic expansion and broaden its network of coating centers.



With its new ScrewLine fore-vacuum pump, Leybold Vacuum offers a high-tech solution for industrial manufacturing. The pressure to innovate is continually increasing, not least in traditional fields of industry. New products must always be better, more versatile – and attractively priced. Therefore, increasingly high-tech means of production are being utilized in industrial manufacturing processes – for example in metallurgical melting processes and the production of architectural glass with climate-specific characteristics. For reasons of purity or requirements associated with special manufacturing procedures, these processes must be conducted under vacuum conditions that, to date, have mainly been created by oil-sealed vacuum pumps. Leybold Vacuum has now introduced for the first time an oil-free fore-vacuum pump named "ScrewLine" that is specially tailored to the requirements of traditional industry. A key point in its development was ensuring a high level of reliability and robustness. Extremely durable components allow extended operating times, even in difficult industrial environments. Through "dry," i.e. oil-free operation, regular replacement of gear oil and expendable parts is minimized, which in turn sharply reduces downtime, service and maintenance costs. Thanks to air cooling, the ScrewLine also requires no cooling water and, in many processes, no auxiliary gases. With its ScrewLine, Leybold Vacuum offers a high-tech solution for low-tech industrial manufacturing, one that is convincing both in terms of its cost advantages and environmental friendliness.

> LEYBOLD VACUUM

Activity Leybold Vacuum produces vacuum pumps for use in a broad range of advanced manufacturing and analytical processes, as well as for research purposes. Leybold Vacuum's core capabilities center on application-specific solutions for the creation of vacuum and extraction of processing gases. Areas of application are to be found in the semiconductor and data storage device industries, analytics, as well as numerous areas of traditional industrial manufacturing. For example, CDs and optical glass can only be coated in a vacuum. In a similar vein, refrigerators can only be filled with refrigerants, and automobile brake systems can only be filled with brake fluid, after the ambient air has been eliminated by vacuum pumps.

Market In 2002, the market for vacuum-pump technology comprised a total annual volume of roughly CHF 2.2 billion. In comparison to the previous year, that represents a decline of around 30 percent, which can mainly be attributed to the collapse in the semiconductor market. A resurgence of demand in the latter area is not anticipated before the end of 2003. The industrially oriented market segments have developed more favorably, particularly with regard to the continuing growth experienced in the field of evacuating television picture tubes and flat panel displays. Leybold Vacuum clearly ranks among the leaders in its various market segments.

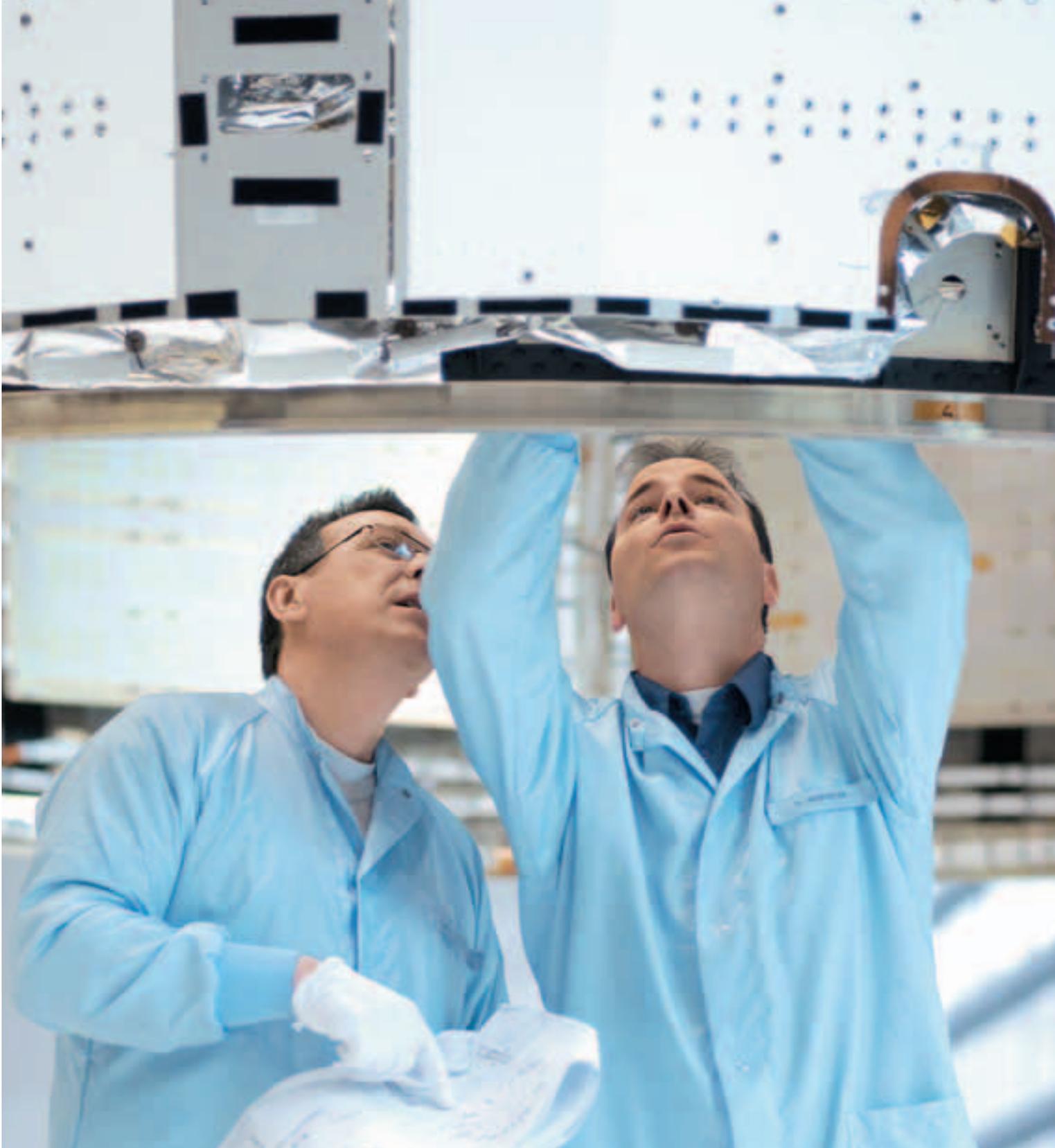
2002 Against the backdrop of overall market weakness and the negative impact of foreign-currency exchange rates, Leybold managed to hold up well in the 2002 financial year. Orders received declined by 10 percent to CHF 352 million, while sales dropped by 18 percent to CHF 358 million. The division's evenly balanced portfolio partially compensated for market weakness in the semiconductor segment. Moreover, the China region experienced unusually strong growth. The division's efficiency-enhancement program initiated in 2001 was pursued further and supplemented by additional measures – for example, through the merger of its business unit structure. As a result, Leybold Vacuum was able to reduce its break-even level by a significant amount.

Highlights A US-based company granted Leybold a substantial order for 850 rotary-vane pumps that are used in the detection of explosive materials, thus representing one of the first orders of its kind to be awarded in this new field of application. Leybold was also able to expand its customer base thanks to a project in China aimed at vacuum-equipping the machinery used for coating architectural glass. A key step in the still-young but strongly growing Chinese market is represented by the early-2003 opening of the division's service center in Shanghai, the third service center in China after Tianjin and Guangzhou. As a result of internal reorganization measures and improved operating processes, Leybold was able to achieve a considerable reduction in its inventory levels and delivery times.

Sustainability Leybold is working continually on optimizing the vacuum and gas processes of its customers' equipment. Aside from cost considerations, reduced environmental pollution also plays a central role in this regard. Both of those objectives can be achieved through the use of "dry" pumps, a technology characterized by its low cost of operation and reduced level of oil-related pollution. At the division's Cologne facility, Leybold has introduced a new industrial waste concept in collaboration with the local authorities. This approach focuses on precise sorting and appropriate disposal of production waste materials such as metal filings, oil and lubricants in keeping with the latest technical aspects of ecological responsibility.

➤ OUTLOOK

Due to the weak global economic trend, market growth for 2003 is likely to be modest. However, Leybold anticipates an increased flow of orders and revenues that should exceed the level of the general market. For 2003, the division has established four key focal points – the successful launch of its new ScrewLine "dry" fore-vacuum pump will take center stage in this regard. In January, the Cologne facility commenced construction of a new plant for the modern, material-flow-optimized production of high-vacuum products. In Asia, and particularly in the Chinese growth market, Leybold's infrastructure in the areas of production, sales and service will be further strengthened. Lastly, Leybold will generally expand its service business on behalf of customers.



The international space station ISS is one of the largest global research projects ever undertaken. Contraves Space is a major contributor towards that effort by supplying the structure subsystem for the European Automated Transfer Vehicle (ATV). Construction of the ISS is well advanced, with over 100 000 individuals from around the globe working for partner companies in the USA, Europe, Russia, Japan and Canada participating in this international joint project. Three times larger than the former Russian space station MIR and weighing in at roughly 450 tons, the ISS is a high-tech research laboratory that orbits the Earth at an altitude of close to 400 kilometers. Certain supplies for the ISS and its permanent crew of up to seven astronauts will be delivered by the European Space Agency (ESA) unmanned Automated Transfer Vehicle (ATV). The ATV is launched into Earth orbit by an Ariane 5 launch vehicle and then continues under its own power to the ISS, where it docks automatically. Once docked with the ISS, the ATV's on-board propulsion system allows it to perform altitude and course corrections in lockstep with the ISS. Contraves Space, together with both Swiss and international subcontractors, is responsible for the ATV structure subsystems. This structure comprises all of the load-bearing components of the propulsion system primary structure, the separation system for detaching the ATV from the Ariane 5 launch vehicle, as well as a shield to protect against micrometeorite impacts. In addition to the ATV structure, Contraves Space also supplies the storage racks that support a payload of up to 750 kg, as well as the unfolding mechanisms for the solar panels that supply the ATV with power. The ATV program is of particular interest to Contraves Space because it represents a long-term commitment with recurring orders. Eight years after having initiated the original studies, Contraves Space delivered the structure for the first ATV vehicle on schedule in June 2002. The initial qualification flight is planned for September 2004. As of 2006 – and over the operational life of the ISS, estimated to be roughly 10 years – an ATV will be launched to the space station every 18 months.

> CONTRAVES SPACE

Activity Contraves Space is an internationally renowned company in the field of aerospace technology. The division develops and manufactures payload fairings for launch vehicles through application of composites technology, as well as producing structures and precision mechanisms for satellites. Further key products are its instruments for use in space exploration and laser terminals for optical data transmission between satellites to facilitate global telecommunication. Contraves Space works on behalf of institutional customers such as the European Space Agency, as well as for commercial European and American providers of launch-vehicle-based transportation services.

Market The aerospace market relevant to Contraves Space experienced a modest decline in 2002 but encompasses a total annual volume of roughly CHF 1 billion. Stagnation in the telecommunications industry led to lower demand for satellites, which in turn meant that fewer rocket launches took place. In addition, global competition in the satellite delivery segment intensified. The European aerospace transport enterprise Arianespace, and thus also Contraves Space, are subject to increasing competitive pressure from American providers and their Russian partners. In the commercial segment of the industry, Contraves Space is the leading supplier of payload fairings for customers in Europe and the United States. In the institutional segment of the aerospace market, the division is allied with ESA in a number of important programs.

2002 In the face of declining market volume, Contraves Space essentially achieved the goals it had established for the 2002 financial year. Orders received totaling CHF 86 million remained at the levels recorded in the previous year, however total sales declined by 5 percent to CHF 113 million. Reduced demand for telecommunications satellites exerted a negative impact on the division's commercial business. In the institutional ESA-related market, planned projects – in particular the Galileo space navigation program – were postponed.

Highlights The European Earth-observation satellite ENVISAT was launched at the end of February 2002 with two Contraves-manufactured instruments on board. As a part of this mission, the extended version (Long Fairing) of the Ariane 5 payload fairing was successfully flown for the first time. The qualification of the payload fairing for America's new Atlas V-500 launch vehicle was concluded upon the successful separation test conducted in July. In addition, Contraves Space was able to deploy its aerospace technologies in products outside of the division's traditional market – it is developing aperture mechanisms for lithography systems used in microchip production. A low point of the financial year came with the failed mid-December launch of the enhanced-performance Ariane 5 launch vehicle, which would for the first time ever have transported a total payload mass of 10 tons into geostationary Earth orbit.

Sustainability In the coming years, ENVISAT will analyze changes in the global ecosystem. Contraves Space played a significant role in developing two of the ten onboard scientific instruments. One of them, MIPAS, determines the concentration profile of more than 20 gases relevant to the climatic process in the atmosphere. To that aim, the division has developed high-resolution optical systems, including the related telescope and software. The other, ASAR, is a high-performance radar system with which, in addition to numerous operational modes, makes it possible to assess the thickness of the polar ice cap. For its radar antenna, which measures a total of ten meters in length, Contraves Space was responsible for designing and manufacturing the fold-out composite structure.

➤ OUTLOOK

Contraves Space anticipates that sales will experience another modest decline in 2003, mainly as a result of continuing reduced demand from the telecommunications industry. The division's business activities are also dependent upon the general trend in the aerospace market following the Columbia disaster and the failed launch of the enhanced-performance Ariane 5. In April 2003, Contraves Space will fulfil customer delivery of the qualification model of its aperture mechanism for photolithographic systems. The initial units are planned for market introduction at the end of 2003. Scheduled for mid-2003 is the maiden voyage of America's new Atlas V-500 launch vehicle with its 20.7 meter long payload fairing supplied by Contraves Space.

> GLOSSARY

Advanced Synthetic Aperture Radar (ASAR) is an extremely high-resolution radar aboard the European Environmental Satellite ENVISAT which facilitates measurements on all continents at any time of day or night, regardless of the prevailing weather conditions. The antenna is 10 meters long by 1.5 meters wide; Contraves Space developed and manufactured the antenna support structure.

Automated Transfer Vehicle (ATV) The European space transporter ATV is a single-use vehicle that will regularly resupply the manned space station. An Ariane 5 launcher will place the ATV into Earth orbit. Thereafter, the ATV will automatically propel itself to the space station using its own rocket motor. The ATV also has reboost capability, so it can assist with the important task of making orbital corrections to the entire space station. The ATV is a major contribution by the European Space Agency to the ISS. Starting in 2004, an ATV will fly to the ISS every 18 months. Contraves Space is responsible for the spacecraft's structural subsystems.

Back End is also referred to as Assembly and Packaging. This is where wafers are sliced into individual dies or chips and mounted in a hermetically sealed package with electrical connections to the outside world.

BioChip A substrate coated with hundreds or even thousands of microscopic reaction sites consisting of specific DNA or protein molecules. Specific means that they react only with precisely fitting, complementary reaction partners according to the lock-and-key-principle, and do not react with other molecules. This enables a sample to be tested for the presence of hundreds or thousands of reaction partners. Like a computer chip performing thousands of electronic mathematical operations at the same time, a BioChip can perform hundreds or thousands of biological lock-and-key reactions simultaneously. This opens the door to a deeper understanding of processes in cells, organs, plants, animals and human beings.

Charge-Coupled Device (CCD) A light-sensing microchip consisting of up to several million individual pixels. CCDs are built into image-capturing devices such as digital still and video cameras, PC and cell phone cameras, scanners and bar code readers. They are also widely used in industrial and scientific imaging applications.

CD-R stands for Compact Disc Recordable. CD-R discs are write-once data storage media, mechanically compatible with their conventional (read-only) counterparts and with a native capacity up to 840 MB.

CD-RW is a rewritable version of the above, with a somewhat smaller capacity of 650 MB. The recording layer is mostly based on phase-change technology.

Chemical Vapor Deposition (CVD) is a technique in which one or more gaseous reagents form a solid insulating or conducting layer on the surface of a wafer. Several forms of CVD exist for a variety of specific applications.

Die Bonder A machine that picks, positions and bonds chips onto strips, substrates or leadframes, sometimes referred to as die attach.

DVD stands for Digital Versatile Disc or Digital Video Disc. DVDs are made of 1 or 2 sandwiched polycarbonate discs, either 8 or 12 cm in diameter. Launched in 1997, a DVD may contain up to 17 GB of data (DVD-18), depending on the disc type. 4.7 GB (DVD-5) discs are currently enjoying a boom, thanks to their suitability as a storage medium for films and other video entertainment.

DVD-R is the recordable version of DVD, mostly based on organic dye.

DVD+RW is the rewritable version of DVD, mostly based on phase-change technology.

Electro-plating is an electrochemical process for treating metal surfaces. Metal items to be plated are immersed in a bath of metallic salt solution. When an electric current is passed through the bath (electrolysis), the salt chemically decomposes to deposit a metallic coating of chromium, copper, nickel, zinc, etc. on the item. Electroplating imparts a pleasing finish to metal surfaces (chromium plating), and can also protect against corrosion (zinc galvanizing).

Flip Chip interconnect technology is a technique for mounting a chip with its active side facing towards the substrate.

Front End is a collective term for the earlier stages of chip production, and actually consists of two parts. First, multiple material deposition and processing cycles are used to build the basic transistors. Next, further deposition and processing cycles create the electrical connections between the hundreds of millions of transistors on a single chip. Front End is also referred to as wafer processing and manufacturing.

Liquid Crystal Display (LCD) is the technology used for displays in notebook and other smaller-scale computing devices. From the ubiquitous wristwatch and pocket calculator to advanced high-resolution computer screens, this type of display has evolved into an important and versatile interface. A liquid crystal display consists of an array of tiny segments (called pixels) that can be manipulated to present information. This basic idea is common to all displays, ranging from simple calculators to full-color LCD televisions.

Low-Energy Plasma Processing (LEPP) is a plasma-enhanced process for low-temperature wafer cleaning and low-temperature, high-speed deposition.

Mastering the final creative and technical step prior to pressing a CD, DVD, or other medium.

Micro-Electro-Mechanical Systems (MEMS) are integrated microdevices or systems combining electrical and mechanical components. They are fabricated using integrated circuit (IC) batch processing techniques and can range in size from micrometers to millimeters. These systems can sense, control and actuate on the microscale, and function individually or in arrays to generate effects on the macroscale. MEMS is an enabling technology; current applications include DMD projection systems, accelerometers, pressure, chemical and flow sensors, micro-optics, and others.

Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) An instrument developed and built by Contraves Space together with Astrium, used for global monitoring of trace gases and their photochemical interactions in the Earth's lower stratosphere. Atmospheric temperature and the distribution of aerosol particles are important parameters of global climate change that can be derived from MIPAS observations.

Packaging concerns housing chips to protect them from environmental influences, and to produce a finished product suitable for industrial use.

Plasma-Enhanced Chemical Vapor Deposition (PECVD) performs CVD through the use of a vapor containing electrically charged particles or plasma. The plasma makes the vapor more reactive.

Photolithography is a process used to transfer an electronic circuit layout pattern from the photomask to a resist layer deposited on the wafer.

Photomask is used in photolithography to block resist exposure in the areas corresponding to the electronic circuit. It consists of chrome opaque areas supported on a very high-quality quartz plate that is transparent to UV radiation.

Physical Vapor Deposition (PVD) deposits a thin layer of metal on the wafer surface for electrical contacts and wires, using a process called sputtering.

Precision Technology is a blend of mechanical, IT, physics and chemistry expertise. Interdisciplinary interaction of these sciences, coupled with the skill of applying scientific knowledge to customers' processes and applications, enables Unaxis to develop the necessary equipment and products. Unaxis equipment combines these technologies to produce precisely controlled conditions of vacuum and temperature. Extreme cleanliness minimizes problems caused by stray particles to facilitate production of precision structures and coatings. All of this is fundamental to Unaxis manufacturing processes and end products. Unaxis uses precision technology in all its areas of activity. The Unaxis Optics division applies special-purpose coatings with precisely defined characteristics. The Contraves Space division develops lightweight structures and high-precision mechanisms for satellites, scientific instruments for space research, as well as optical terminals for data transmission between satellites. At ESEC, precise and productive robotic automation is likewise pushing the envelope of technological feasibility in chip assembly.

Thin Film Transistor (TFT) technology is used to make the liquid crystal displays (LCDs) found in notebook and laptop computers. Each pixel (the basic unit of programmable color on a computer display or in a computer image) is controlled by its own transistor. One transistor per pixel reduces the current needed to make it illuminate, which in turn increases switching speed for a more responsive display.

Thin Film Technology produces extremely thin coating layers, as little as one thousandth of the diameter of a human hair. Thin films are extremely versatile: they filter and reflect light, protect and enhance surfaces, insulate against heat or cold, conduct and control electric current and assist in information storage. Thin films are made from highly purified solid coating materials, which are either naturally occurring elements like titanium, aluminum, copper, gold and silver, or man-made compounds. Unaxis uses thin film technology in virtually all of its activities and applications, as a highly effective means of deploying expensive materials, for making extremely small structures, and for modifying a material's characteristics or imparting new characteristics. Unaxis' Semiconductors, Displays, Data Storage and Surface Technology (Balzers) divisions all develop coating equipment and processes for a wide range of applications in the semiconductor industry, data storage (CDs, DVDs), telecommunications (mobile phones) and mechanical engineering (engine parts).

Vacuum Technology is essential to a number of surface treatment production processes. Such processes, e.g. highly uniform coating processes and thermal surface hardening, can only be performed under extremely clean and controlled conditions. Unaxis develops vacuum-based production processes and associated equipment for semiconductor manufacturing and all kinds of coating processes. The Leybold Vacuum division makes vacuum pumps and custom solutions for a broad array of modern production and analysis processes, as well as for scientific research. Leybold solutions are essential for manufacturing many products. Each and every microchip is made in a vacuum. Storage media like CDs and DVDs are vacuum-coated, just like optical components, car headlights and mobile phone casings. Manufacturing display screens, thermionic and X-ray tubes all requires a high vacuum. Many analytical instruments like electron microscopes and mass spectrometers, even TV screens and light bulbs likewise depend on a vacuum for their operation.

Wafer A thin (less than 1 mm), circular slice cut from a cylinder of monocrystalline semiconductor material and used as a substrate on which to manufacture semiconductor devices and integrated circuits. Wafer diameters can range from about 25 mm to 300 mm, depending on the material involved.

Wire Bonder Equipment that connects the contact pads of a semiconductor device with the leads of the substrate. The most common method of making an electrical connection from a die to a substrate. The wire is bonded to the die and substrate by thermal compression and/or ultrasonic welding. Wires are typically made of gold, aluminum or copper.

THERE IS ONLY
ONE FUTURE.
WE AIM TO
SHAPE IT – WITH
TRANSPARENCY
AND CREDIBILITY.

UNAXIS CORPORATE GOVERNANCE PRINCIPLES CORRESPOND TO THE “SWISS CODE OF BEST PRACTICE FOR CORPORATE GOVERNANCE” AS WELL AS INTERNATIONALLY RECOGNIZED STANDARDS.

> CORPORATE GOVERNANCE AT UNAXIS CORPORATION

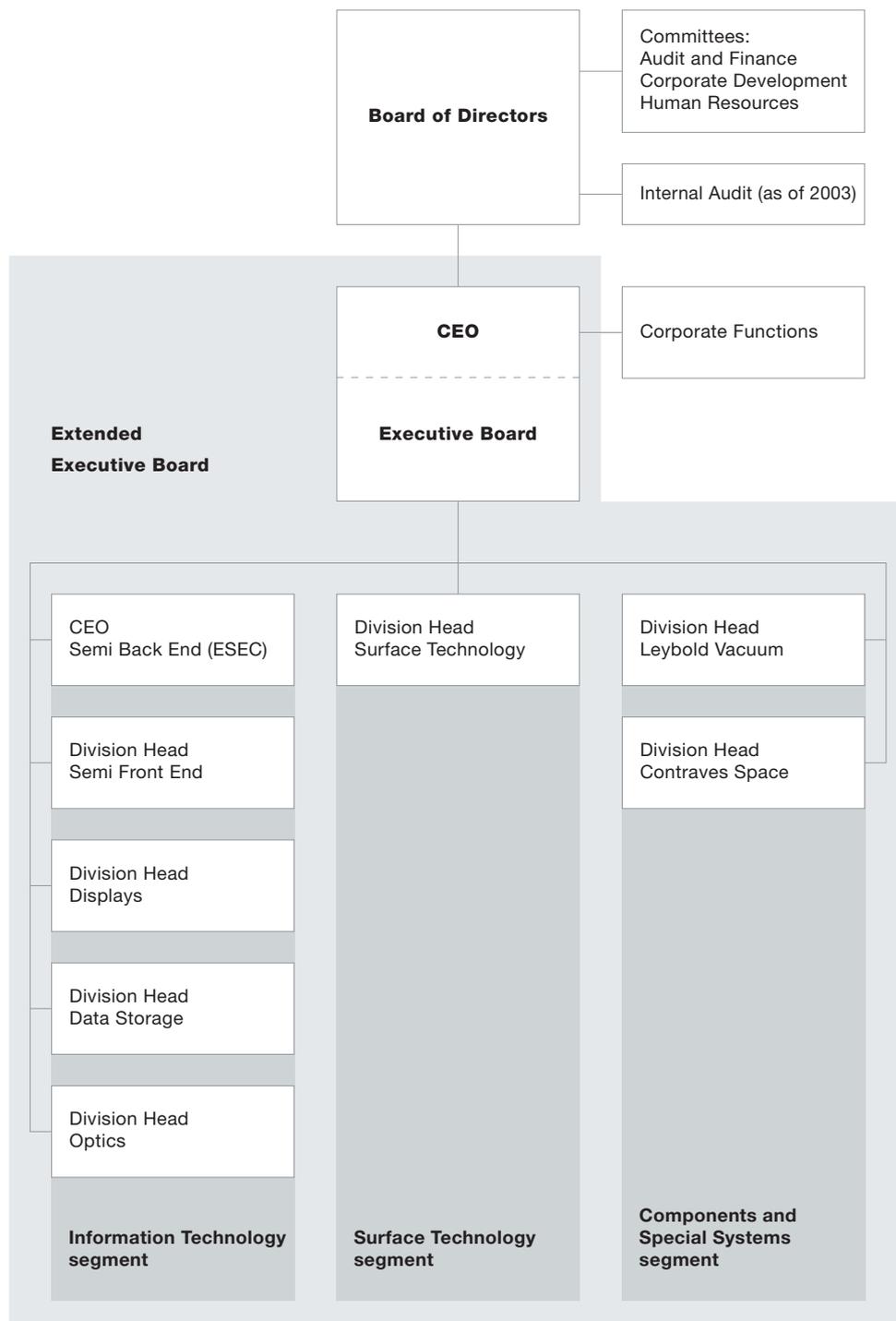
Unaxis feels a deep sense of obligation to uphold the recognized principles of good corporate governance as laid out in the “Swiss Code of Best Practice for Corporate Governance” propounded by “Economiesuisse.” By addressing this justified concern, Unaxis aims to sustain and increase the trust placed in it by the company’s current and future shareholders, providers of funding, employees and business partners, as well as the general public.

Responsible corporate governance requires transparency with regard to the organization of management and control mechanisms at the uppermost echelons of the enterprise. Therefore, the “Directive governing Information on Corporate Governance” (DCG), enacted by the SWX Swiss Exchange and effective since July 1, 2002, requires that issuers of SWX-listed securities make available to investors in an appropriate form certain key information pertaining to corporate governance.

Already in its 2001 annual report, Unaxis published a great deal of the information that is to be disclosed under DCG, albeit not in a separate section of the report. In the present annual report, the corporate governance information as prescribed by DCG has been summarized in a segregated section, whereas references to other portions of the annual report have been included in certain instances in an effort to avoid redundancies and enhance readability. If a specific disclosure relevant to a topic addressed by DCG is absent in the following statements, it can be assumed that the given aspect does not apply in the case of Unaxis. All material changes between the balance sheet date and the time this annual report went to press have been taken into account.

> GROUP STRUCTURE

Management of Unaxis Corporation is carried out at the behest of the Board of Directors via the Executive Board and ultimately by the eight divisions that directly conduct the operative business of the company. The Board of Directors, Executive Board and the company's individual divisions are supported in their work by centralized Corporate Functions offices.



With the exception of ESEC, all the other subsidiary companies of Unaxis are, to the greatest extent, wholly owned either directly or indirectly by Unaxis Holding Inc. as the parent company of the Group.

In the case of the Semiconductors Back End division (ESEC), this subsidiary company is listed in the main trading segment of the SWX Swiss Exchange and has its headquarters in Steinhausen, Switzerland. Unaxis Holding Inc. owns a 56.8 percent equity interest in ESEC, the shares of which are traded under security number 1 104 478, ticker symbol ESEN. As at December 31, 2002, the market capitalization of ESEC amounted to CHF 242.7 million. ESEC is fully consolidated in Unaxis' financial statements.

Unaxis also holds a 19.5 percent equity interest in Inficon Holding AG, Bad Ragaz, Switzerland, which is listed both on the SWX Swiss Exchange (security number 1 102 994, ticker symbol IFCN) and on NASDAQ (security number 1 150 246, ticker symbol IFCN). As at December 31, 2002, Inficon had a market capitalization totaling CHF 164.4 million. This shareholding is valued at its current market price and corrections in its time-relevant countervalue are reflected directly in shareholders' equity, i.e. with no effect on the income statement.

The companies included in the scope of consolidation are listed on pages 110/111 in reflection of Unaxis' legal structure of shareholdings, as well as on pages 100/101 according to their country of domicile, together with supplementary information pertaining to their respective percentage of ownership, equity capital, number of employees and company head.

> BOARD OF DIRECTORS

The basis for the organization and duties of the Board of Directors of Unaxis Holding Inc. is to be found in the Swiss Code of Obligations, the Articles of Association of Unaxis Holding Inc. and in its Rules of Organization.

Members of the Board of Directors

The Board of Directors of Unaxis Holding Inc. comprises seven (maximum number as per the company's Articles of Association: nine) non-executive members as at December 31, 2002. Until the spring of 2002, the Chairman of the Board also held the position of Chief Executive Officer (CEO). The members of the Board have no material business dealings with Unaxis Corporation.

Name	Position	Age	Elected	Until	Executive/Non-executive
Dr. Willy Kissling (CH)	Chairman	58	1998	2005	Executive until May 2002
Jack Schmuckli (CH)	Vice Chairman	62	1998	2004	Non-executive
Prof. Dr. Pius Baschera (CH)	Member	52	1998	2005	Non-executive
Peter K�pfer (CH)	Member	58	1998	2005	Non-executive
Dr. Markus Rauh (CH)	Member	63	1999	2004	Non-executive
Prof. Dr. h.c. Lothar Sp�th (D)	Member	65	1998	2004	Non-executive
Bruno Widmer (CH)	Member	61	1998	2004	Non-executive

Further information on the members of the Board can be found in the overview on page 53.

Cross-involvement

No member of Unaxis' Executive Board holds a seat on the board of directors of any company that has a representative who is a member of the Board of Directors of Unaxis Holding Inc.

The involvement of Board members of Unaxis Holding Inc. in the Board of Directors or senior management of other listed companies can be gathered from the information on the Board members on page 53.

Elections and terms of office

Board members are elected by the general meeting of shareholders for a term of office of three years. They may be elected for a new office period of three years prior to the expiration of their office period. The schedule of elections is to be set in such a way that each year the term of office of about one third of the members of the Board of Directors expires. Pursuant to the Organization Regulations, the mandate of Board members expires – notwithstanding the current term of office – at the annual general meeting of shareholders after completion of the 70th year of age.



From left to right: Jack Schmuckli, Dr. Markus Rauh, Prof. Dr. h. c. Lothar Späth, Peter Küpfer, Dr. Willy Kissling, Bruno Widmer, Prof. Dr. Pius Baschera.

Dr. Willy Kissling has been Chairman of the Board of Unaxis Holding Inc. since 1988. Until May 2002, he simultaneously held the position of CEO. He is also Vice Chairman of Forbo Holding AG, Holcim Holding AG and SIG Holding AG, as well as a board member of Schneider Electric S.A. (F). Since 1970, he has carried out various management functions, including CEO and Delegate of the Board of Directors of Landis & Gyr AG from 1987 through 1996. Dr. Kissling studied at the University of Bern (Dr.rer.pol.) and Harvard Business School (PMD).

Jack Schmuckli has been a Director of Unaxis Holding Inc. since 1998 and was named Vice Chairman in 1999. He is also Chairman of the Board of Allreal Holding AG, as well as a board member of Hilti AG (FL), SEZ Holding AG and Wicor Holding AG. From 1975 through 1998, he held a variety of management positions at Sony Corporation: since 1985 as Chairman and CEO of Sony Europe (D), and as of 1986 also as a board member of Sony Corporation (J). Mr. Schmuckli has an educational background in business management.

Prof. Dr. Pius Baschera has been a Director of Unaxis Holding Inc. since 1998. He is also a member of the Advisory Board of Vorwerk Gruppe (D) and Ardex Gruppe (D), as well as Chairman of the Board of Venture Incubator AG. Prof. Baschera has held the position of CEO of Hilti AG (FL) since 1993. He studied business management and manufacturing sciences at the ETH Zurich (Dr.sc.tech.), where he has been an Honorary Professor since 2001. Dr. Baschera lectures regularly on the topics of innovation management and corporate leadership.

Peter K pfer has been a Director of Unaxis Holding Inc. since 1998. He is also Chairman of the Board of Valora Holding AG and Pilatus Flugzeugwerke AG, as well as a board member of Swisscom AG, Julius B r Holding AG, Holcim AG and Swiss Steel Group. Mr. K pfer has been an independent management consultant since 1996. From 1964 through 1983, he worked for various auditing firms and, from 1985 through 1996, held management positions at CS Group. Mr. K pfer is a certified public accountant.

Dr. Markus Rauh has been a Director of Unaxis Holding Inc. since 1999. He is also Chairman of the Board of Swisscom AG, Vice Chairman of the Board of Leica Geosystems AG, Vice Chairman of the Supervisory Board of Leica Camera AG (D), Vice Chairman of the Board of Dietiker Switzerland AG, as well as a board member of the St. Galler Kantonalbank, The Generics Group AG, Madison Management AG, Synthes AG and Anova Holding AG. Dr. Rauh worked in management positions at Sperry Univac, Philips and Leica. He earned his Dr. sc. tech. degree from the ETH.

Prof. Dr. h.c. Lothar Sp th has been a Director of Unaxis Holding Inc. since 1998. He is also Chairman of the Supervisory Board of caatoosee AG (D), Herrenknecht AG (D), I-D Media AG (D), Lambda Physik AG (D) and S ba Beteiligungs AG (A), as well as a board member of Jomed AB (S) and Sustainable Performance Group. He also holds offices in a number of nonprofit and politically oriented bodies. Prof. Sp th took over as head of Jenoptik GmbH (D) in 1991 and has been Chairman of that company since its 1996 conversion into a joint-stock company. Prior to that, he was Prime Minister of the German state of Baden-W rttemberg. His education is in civil services.

Bruno Widmer has been a director of Unaxis Holding Inc. since 1998. He is also Chairman of the Board of Panoramic Communications (USA), a board member of Barone Ricasoli SA (I), as well as a member of the Strategy Committee of the European Business School (GB). Mr. Widmer joined the management of Advico AG in 1972 and was their CEO from 1978 to 1998. From 1998 through 2001, he held the office of CEO of Young & Rubicam Europe, Middle East & Africa (GB). Mr. Widmer's educational background is in business management.

A motion will be made at the 2003 annual general meeting of shareholders to elect Dr. h.c. Harald Eggers, CEO of the Memory Products Group, Infineon Technologies AG, Munich (D), as successor to departing Board member Prof. Dr. h.c. Lothar Sp th.

Internal organizational structure

The Board of Directors meets at the invitation of the Chairman as often as business matters require or, alternatively, at the request of one of its members or the CEO. In 2002, seven Board meetings were held, at which an average of 6.4 of the total membership of seven was in attendance.

Three permanent committees – the Audit and Finance Committee (AFC), Corporate Development Committee (CDC) and Human Resources Committee (HRC) – provide assistance to the Board of Directors and offer support in preparation for key decisions.

The members of these committees, as well as their chairmen, are elected by the Board of Directors at the proposal of the Chairman of the Board. Their respective terms of office correspond to their term of office as Director. At committee meetings, additional Board members may voice their opinions in an advisory capacity. As a general rule, members of the Executive Board and, to the extent required, individual specialists may also attend these meetings in an advisory capacity. Minutes of the meetings are documented. The committees are comprised as follows (status: December 31, 2002):

Name	Audit and Finance Committee (AFC)	Corporate Development Committee (CDC)	Human Resources Committee (HRC)
Dr. Willy Kissling		C	C
Jack Schmuckli	M	M	
Prof. Dr. Pius Baschera		M	M
Peter Küpfer	C		
Dr. Markus Rauh		M	M
Prof. Dr. h.c. Lothar Späth			
Bruno Widmer	M		M

C = Chairman, M = Member

Audit and Finance Committee (AFC)

The AFC comprises at least three non-executive and preferably independent members of the Board of Directors. The majority of its members, among them the chairman of the committee, must be experienced in the fields of finance and accounting. The AFC advises the Board mainly in the following areas:

- > Risk management and audit
- > Accounting and financial reporting
- > Financial strategy, capital structure, determination of financial objectives, financial planning and financial controlling
- > Mergers and acquisitions, as well as other transactions bearing significant financial impact
- > Corporate governance issues
- > Examination and release of mid-year and quarterly financial reports on the basis of a specific mandate by the Board of Directors

The AFC meets at the invitation of its chairman as often as business matters require, however at minimum four times per year. Five meetings were held in 2002.

Corporate Development Committee (CDC)

The CDC comprises at least three members of the Board of Directors. The CDC advises the Board mainly in the following areas:

- > Strategic orientation of the corporation
- > Development of the company's portfolio of holdings
- > Mergers and acquisitions, as well as other transactions bearing significant financial impact
- > Organizational development and structure

The CDC meets at the invitation of its chairman as often as business matters require, however at minimum two times per year. Two meetings were held in 2002.

Human Resources Committee (HRC)

The HRC comprises three individuals, the majority of whom are non-executive, independent members of the Board of Directors. The HRC advises the Board mainly in the following areas:

- > Fundamental issues pertaining to the company's personnel
- > Personnel composition of the Board of Directors and key governing bodies of the company
- > Measures pertaining to management development
- > Issues associated with the compensation of Board members and senior management

The HRC meets at the invitation of its chairman as often as business matters require, however at minimum three times per year. Three meetings were held in 2002.

Definition of areas of responsibility

Based on art. 17 para. 3 of the Articles of Association, the Board of Directors has essentially delegated the business management of Unaxis Holding Inc. and the Group as a whole to the Chief Executive Officer (CEO). The scope of tasks for which the Board bears responsibility encompasses to the greatest extent those inalienable and non-delegable tasks as defined by law. Among those duties are the ultimate management of Unaxis Holding Inc. and the Group as a whole; the nomination and relief from office of the CEO as well as the other members of the Executive Board and the Division Heads; and the ultimate supervision of those who have been entrusted with the management and representation of the corporation.

Information and control instruments vis-à-vis senior management

The Board of Directors receives regular comprehensive information that enables its members to assess the course of the company's business activities on a highly current basis. Components of Unaxis' management information system (MIS) include the following instruments:

- > Strategic controlling
Strategic analyses of individual divisions and the company as a whole, including an annually updated strategic plan.
- > Operative controlling
Annual financial planning (budget), as well as monthly control reports that include budgeted/actual analyses to aid in assessing the operative course of business.

Two additional instruments for assessing and controlling risk are to be introduced starting in the 2003 financial year:

- > Business risk management
A reflection of the risk matrix for the company as a whole as well as for its individual divisions. This annually generated and closely scrutinized overview enables identification of significant risks, facilitates monitoring of ongoing risk developments, and constitutes the basis for measures aimed at steering those risks.
- > Internal audit
Verification of the company's compliance with legal provisions and corporate guidelines, along with systematic examinations by a first-rate auditing firm, with the associated reports being submitted directly to the Audit and Finance Committee (AFC) for the attention of the Chairman of the Board.

> SENIOR MANAGEMENT

Fundamental management philosophy

The Chief Executive Officer (CEO), the Executive Board and Corporate Functions offices create an optimal development environment for the divisions, which in turn conduct and bear responsibility for the operative business of the company. The considerable latitude afforded to division heads in their day-to-day business is clearly balanced by centrally directed management and supervisory functions within the company. This applies in particular with regard to financial management and issues of strategic importance.

Executive Board/Extended Executive Board

The CEO bears fundamental responsibility for managing the business of Unaxis Holding Inc. and the Group as a whole. In addition, the CEO heads the Executive Board, which in particular is responsible for preparations and consultation with regard to the business activities of Unaxis Holding Inc. and its subsidiary companies. In addition to the CEO, the Executive Board consists of the Chief Financial Officer (CFO) and two other members.

The Executive Board and divisional heads jointly constitute the Extended Executive Board, which addresses in particular strategic topics and operational issues of company-wide importance. In addition, the division heads bear responsibility for strategic, financial and operative management at their respective divisions.

Name/Nationality	Age	Position	Joined in	Position Held since
Heinz Kundert (CH)	50	Chief Executive Officer	1981	2002 ¹
Paul E. Oth (CH)	59	Chief Financial Officer until 31.12.2002	2000	2000
Kaspar W. Kelterborn (CH)	38	Chief Financial Officer as of 1.1.2003	2002	2003
Kurt Mück (D) ²	47	Member of the Executive Board	2000	2000
Asuri S. Raghavan (USA)	50	Member of the Executive Board	2003	2003
Hans Wunderl (A)	51	CEO Semiconductors Back End (ESEC)	2002	2002 (2002) ³
Dr. Martin Bader (D)	44	Division Head Semiconductors Front End	1987	2001 (1996) ³
Ruurd Boomsma (NL)	46	Division Head Displays	1999	2002 (2001) ³
Vacant ²	08	Division Head Data Storage	–	–
Dr. Detlev Häusler (D)	44	Division Head Optics	1999	2002 (1999) ³
Dr. Hans Schulz (D)	43	Division Head Surface Technology	1987	1999 (1996) ³
Dr. Monika Mattern-Klosson (D)	45	Division Head Leybold Vacuum	1985	2002 (1999) ³
Dr. Umberto Somaini (CH)	59	Division Head Contraves Space	1977	2002 (1997) ³

¹ Beforehand, Heinz Kundert became Chief Operating Officer (COO) as of 1999

² Kurt Mück is presently ad interim head of the Data Storage division

³ Date divisional leadership was assumed

Additional information on the members of the Extended Executive Board can be found in the overview on page 57 ff.

Extended Executive Board: senior management members

Heinz Kundert has been CEO of Unaxis since May 2002. Following earlier professional activities outside of today's Unaxis Corporation, he headed the Far East sales region for Balzers AG (FL) from 1981 through 1991. As of 1991, he headed its Electronics Business Unit and, in 1995, assumed responsibility for the BPS segment of the newly formed Balzers & Leybold Group. In 1999, he was named COO of the restructured Oerlikon-Bührle Group (today's Unaxis). Mr. Kundert is Chairman of the Board of ESEC Holding AG, as well as a member of the boards of SEMI International and EFQM. He has a technical/business management educational background.

Paul E. Otth was CFO of Unaxis from June 2000 to the end of 2002. Prior to that, he held similar positions at several other companies, the last of which was divisional head of Siemens Building Technologies. Mr. Otth is Vice Chairman of the Board of Ascom Holding AG and Inficon Holding AG, as well as a board member of SBB, Swissquote Holding AG, EAO Holding AG and ESEC Holding AG. He is a certified public accountant.

Kaspar W. Kelterborn was named CFO of Unaxis in January 2003. Before assuming that post, he held various international management positions at Clariant International AG in the area of finance and controlling, including Regional Head of Finance & Administration in Singapore, which he took over in 1999. Prior to joining Unaxis, he was divisional head of Finance & Controlling responsible for the financial management of Clariant's Life Science & Electronic Materials division, headquartered in Great Britain. He is a member of the board of Tertianum-Neutal AG. Mr. Kelterborn holds a lic. oec. degree from the University of St. Gallen.

Kurt Mück has been a member of the Executive Board of Unaxis since February 2000. Previously, he headed a division of Siemens AG and was Managing Director Europe for the semiconductor business of Philips. Mr. Mück is a member of the board of Inficon Holding AG. He completed technical and business management studies in Germany and the USA.

Asuri S. Raghavan will join the Executive Board of Unaxis in March 2003 after having been Vice President of the Surface Integrity Group business unit of Novellus Systems Inc. (USA). He was President and CEO of Gasonics International (USA) prior to its acquisition by Novellus in 2001. From 1987 to 1998, he worked for Kulicke and Soffa Industries, Inc. (USA), and, prior to his departure, was President of its Equipment Group. Mr. Raghavan has completed studies in the fields of engineering, computer sciences and information systems.

Extended Executive Board: Division Heads

Hans Wunderl has been CEO of ESEC since October 2002. Prior to assuming that post, he held various international management positions at IBM, Data General and ASMI. Most recently, as General Manager ASMI/USA, he was responsible for the development, production and global marketing of the company's American-manufactured semiconductor equipment. Mr. Wunderl is an electrical engineer with a degree from Eindhoven Technical University (NL).

Dr. Martin Bader has headed the Semiconductors Front End division since 1996. He held various other positions at Balzers AG after having joined the company in 1987. Since 1993, he has been a member of the Advisory Board for Research and Technology of the Liechtenstein Chamber of Industry and Commerce (FL). Dr. Bader has a degree in physics and is also a Dr. rer. nat. with supplemental MBA studies.

Ruurd Boomsma has been head of the Displays division since July 2001. Upon joining Unaxis in 1999, he initially bore responsibility for the turnaround and divestment of the company's Materials division. Over the 16-year period prior to that, he held various internationally oriented management positions at the technology companies ASMI, MRC, Hauzer Technocoating and the Buhrs Group. Mr. Boomsma studied physics at the State University of Groningen (NL).

Dr. Detlev Häusler has been head of the Optics division since 1999. Before assuming that position, he was a divisional head of Carl Zeiss Jena GmbH (D) as well as a senior management consultant with McKinsey & Co., Munich (D). He has also worked as a research associate at the University of Southern California (USA) and the Max Planck Institute for Fluid Dynamics Research (D). Dr. Häusler holds a degree in physics from the Georg August University in Göttingen (D).



From left to right: Hans Wunderl, Dr. Hans Schulz, Dr. Monika Mattern-Klosson, Asuri S. Raghavan, Kaspar W. Kelterborn, Ruurd Boomsma, Heinz Kundert, Dr. Martin Bader, Kurt Mück, Dr. Detlev Häusler, Dr. Umberto Somaini.

Dr. Hans Schulz has been head of the Surface Technology division since 1996. Prior to that, he held various management positions within the division, among others as head of the Surface Technology subsidiary in Germany from 1994 through 1995. He is a member of the board of trustees of the Fraunhofer Institute for Coating Technology (IST) in Braunschweig (D). Dr. Schulz earned his Dr. Ing. degree from the Karlsruhe Institute of Technology (D).

Dr. Monika Mattern-Klosson has headed the Leybold Vacuum division since 1999. After joining Leybold Vakuum GmbH in Cologne (D) in 1985, she held various positions in research and management. She is a board member of the Professional Association for Compressors, Compressed-Air and Vacuum Technology section of the Federation of German Machine and Equipment Engineers, as well as the Cologne Metal and Electric Industry Employers Federation and the Gaede Foundation (D). Dr. Mattern-Klosson holds a degree in physics from the RWTH in Aachen (D).

Dr. Umberto Somaini has been head of the Contraves Space division since 1997. In 1979, he joined the now-divested Oerlikon Contraves AG, where he performed research tasks. He transferred to today's Contraves Space division in 1992. He is a trustee of the International Space Science Institute in Bern. He also sits on various committees of national and international space travel institutions. Dr. Somaini studied electrical engineering in Switzerland and Great Britain, and earned his doctorate at Loughborough University (GB).

Management contracts

As at December 31, 2002, Unaxis Holding Inc. and its subsidiary companies have no outstanding third-party management contracts of a material nature.

> COMPENSATION, SHAREHOLDINGS AND LOANS

Content and method of determining the compensation and share ownership programs

The members of the Board of Directors receive compensation, the value of which in a normal year is paid half in cash and half in the form of stock options. Depending on the development of EBITDA over the previous financial year, the options component may vary between 40 and 300 percent of the established value. The amount of remuneration for Board members is proposed by the Human Resources Committee and set by the Board of Directors.

Members of the Extended Executive Board receive compensation that, in addition to a fixed basic salary, includes a variable component generally amounting to 25 percent of their total remuneration, whereas the actual amount of the variable component payable is dependent upon their having achieved annually predetermined financial and individual goals. In addition, the members of the Extended Executive Board receive stock options as a form of long-term bonus. The Human Resources Committee approves the compensation of the Extended Executive Board, including the related options, at the proposal of the CEO.

The issuance of options is based on the Board of Directors Regulations dated November 11, 1998 and September 11, 2002, as well as the corresponding Rules for Group-Level Employees dated May 23, 2001.

Compensation for acting members of governing bodies

Total compensation (excluding employer contributions to the AHV state pension fund) paid to the non-executive members of the Board of Directors amounted to CHF 400 000 in the 2002 financial year. These non-executive Board members were also issued 6810 stock options.

Total compensation (including all employer pension fund contributions, but excluding employer's AHV contributions) paid in the 2002 financial year to the executive member of the Board who held office on the Extended Executive Board until May of that year, as well as to the others members of the Extended Executive Board, amounted to CHF 7 134 128. The aforementioned executive member of the Board and members of the Extended Executive Board were also issued a total of 16 998 options for Unaxis stock.

In the 2002 financial year, a total of CHF 926 000 in severance compensation was paid to members of the Extended Executive Board.

Compensation for former members of governing bodies

In the 2002 financial year, no compensation was paid to any former member of a governing body of Unaxis.

Options

Those members of the Board and Extended Executive Board who held office on December 31, 2002 owned stock options as set forth below, whereby each option entitles the holder to purchase one registered share of Unaxis Holding Inc.:

Options held by Board members as at December 31, 2002

Issued	Number	Expiration	Blocked until	Exercise price in CHF
2000	17 542	5/5/2003	5/5/2003	650
2001	12 535	5/30/2005	5/28/2004	400
2002	15 695	5/12/2006	5/12/2004	225

Options held by Extended Executive Board members as at December 31, 2002

Issued	Number	Expiration	Blocked until	Exercise price in CHF
2000	10 305	5/4/2004	5/5/2003	650
	1 835	5/5/2003	5/5/2003	650
2001	6 682	5/28/2008	5/28/2003–2004*	315
	2 121	5/30/2005	5/28/2004	400
2002	12 198	5/13/2009	5/13/2004–2005*	189.50
	2 777	5/12/2006	5/12/2004	225

* 50 percent each on both dates

The options with an exercise price of CHF 350 issued to Board members in 1998 and 1999 expired worthless in November 2001 and May 2002, respectively. The issuance of options to Extended Executive Board members only commenced in 2000.

Although conditional capital exists for the issuance of stock options to company employees, all previously issued options are covered by shares acquired in the open market.

Share allotment in the year under review

In the 2002 financial year, no shares were allotted to members of either the Board of Directors or the Executive Board.

However, within the framework of the company-wide stock ownership plan, members of the Extended Executive Board each had the opportunity on May 13, 2002 to purchase Unaxis shares for a maximum of CHF 10 000 at a 25 percent discount to the then-current market price of CHF 189.50. Those shares are locked-in for a period of two years.

Share ownership

As at December 31, 2002, members of the Board of Directors held, according to their own declaration, a total of 6751 registered shares of Unaxis Holding Inc.

As at December 31, 2002, members of the Extended Executive Board held, according to their own declaration, a total of 347 registered shares of Unaxis Holding Inc.

Additional fees and remunerations

The members of the Board of Directors and the Extended Executive Board or parties closely related to those individuals, received in the 2002 financial year no fees or any other kind of remuneration that equaled or exceeded one half of their normal compensation as remuneration for any additional services they may have rendered to Unaxis Holding Inc. or its subsidiary companies.

Loans to members of governing bodies

As at December 31, 2002, Unaxis Holding Inc. and its subsidiary companies had granted no guarantees, loans, advances or credits to members of the Board of Directors, the Executive Board or any party closely related to those individuals.

Highest total compensation

The highest total compensation paid in the 2002 financial year to a single member of the Board of Directors totaled CHF 1 637 500 and was made to the Chairman of the Board for his activities in the Board of Directors and (until May 2002) as Chief Executive Officer. The aforementioned amount includes an extraordinary compensation component for his efforts related to the restructuring of the enterprise during the years 1998–2002. In addition, the Chairman of the Board was issued 8 885 stock options in the year under review.

> CAPITAL STRUCTURE

Capital

The equity capital of Unaxis Holding Inc. amounts to CHF 263 401 840, consisting of 13 170 092 registered shares, each with a par value of CHF 20.

The company also has authorized capital totaling CHF 40 000 000, as well as conditional capital in the same amount that is earmarked for the coverage of convertible bonds, warrant bonds, etc. Additional conditional capital of CHF 7 200 000 exists for purposes related to employee stock ownership plans.

Authorized capital

Pursuant to Art. 6 of the Articles of Association, the Board of Directors is authorized, at any time up to May 7, 2004, to increase the share capital up to a maximum aggregate amount of CHF 40 000 000 through the issuance of a maximum of 2 000 000 registered shares, which shall be fully paid-in with a par value of CHF 20 per share. Increases by firm underwriting as well as partial increases are permissible. In each case, the issue price, the date for entitlement to dividends and the type of contribution shall be determined by the Board of Directors. The Board of Directors is authorized to exclude all or parts of the subscription rights of the shareholders and to convey them to third parties, provided that such new shares are to be used for the acquisition of enterprises through share swaps or for financing the acquisition of enterprises or divisions thereof, or of participations or of newly planned investments of the company. Shares for which subscription rights exist but are not exercised shall be sold by the company at market conditions.

Conditional capital for warrant bonds and convertible bonds

Pursuant to art. 6a of the Articles of Association, the company's share capital shall be increased by a maximum aggregate amount of CHF 40 000 000 through the issuance of a maximum of 2 000 000 registered shares with a par value of CHF 20 per share by the exercise of option and conversion rights which are granted in connection with bond obligations of the company or one of its Group companies. The subscription rights of shareholders are excluded. The current holders of option certificates and/or convertible bonds are entitled to purchase the new shares. The Board of Directors is empowered to limit or exclude the advanced subscription rights of shareholders (1) to finance or refinance the acquisition of enterprises, divisions thereof, or of participations or of newly planned investments of the company or (2) to issue warrant and convertible bonds on the international capital market. To the extent that the right to subscribe in advance is excluded, (1) the bonds are to be placed with the public at market conditions, (2) the term to exercise the option and the conversion rights may not exceed 7 years as of the date of the bond issue and (3) the exercise price for the new shares must at least correspond to the market conditions at the time of the bond issue.

Conditional capital for employee participation

Pursuant to art. 6b of the Articles of Association, the company's share capital shall, to the exclusion of the subscription rights of shareholders, be increased through the issuance of a maximum of 360 000 registered shares, which shall be fully paid-in, with a par value of CHF 20 each, by a maximum aggregate amount of CHF 7 200 000 by the exercise of option or conversion rights, which have been granted to the employees of the company or of one of its Group companies according to an employee participation plan to be approved by the Board of Directors. The issuance of shares at less than the stock exchange price is permissible. The details shall be determined by the Board of Directors.

Changes in capital

The outstanding share capital of Unaxis Holding Inc. experienced its most recent change in 1999, when a total of 14 539 convertible bonds representing a total nominal value of CHF 72 695 000 were converted into 494 326 CHF 20 par-value registered shares. That resulted in a CHF 9 886 520 increase in share capital to a total of CHF 263 401 840 (13 170 092 registered shares, each with a par value of CHF 20). The corresponding amendment to the Articles of Association was made in March 2000.

To cover the stock options issued to members of the Board of Directors as well as certain members of the company's management cadre, a total of 42 514 and 44 250 Unaxis shares were purchased in 2000, 2001 and 2002, respectively (see also pages 60 f. and 95). Other than that total, Unaxis holds none of its own shares. The reserve for the purchase of the company's own shares amounted at December 31, 2002 to CHF 46 650 413.

Detailed information concerning changes in equity capital of Unaxis Holding Inc. over the past three years can be found in the equity capital overview on page 77 of the annual report.

Shares

All equity securities of Unaxis Holding Inc. are in the form of registered shares, each with a par value of CHF 20. All are fully entitled to receive dividends.

Fundamentally, the registered shares of Unaxis Holding Inc. are not certificated (i.e. registered shares with deferred printing of certificates), but instead are carried solely as book-entry securities in the inventory of SIS SegalInterSettle AG. Shareholders may at any time request the company to print and deliver their shares in certificate form free of charge, and the company may at any time print certificates for uncertificated shares. If the registered shares are in fact to be printed, Unaxis Holding Inc. may issue certificates, each covering a number of shares. The share certificates bear the facsimile of the signatures of two members of the Board of Directors.

Limitations on transferability and nominee registrations

There are no restrictions on the transfer of shares. The company shall recognize only those parties entered in the share register as shareholders or beneficiaries. Fiduciary shareholders or, as the case may be, nominees are also entered into the share register.

Convertible bonds and warrants/options

As at December 31, 2002, no convertible bonds or warrant bonds of the company were outstanding.

However, on that date, there existed a total of 123 898 options owned by members of the Board of Directors and certain members of the company's management cadre, each entitling the holder to purchase one registered share of Unaxis Holding Inc. These options are covered in their entirety by shares that have been acquired in the open market, so that their exercise will not result in any change in share capital.

> SHAREHOLDERS' PARTICIPATION

Voting rights and representation restrictions

No voting-rights restrictions exist with regard to the shares of Unaxis. Each shareholder may be represented at the general meeting of shareholders by the company-appointed independent proxy, by Unaxis Holding Inc. or, by means of a written proxy, by another shareholder who is recorded in the share register.

Statutory quorums

The Articles of Association of Unaxis Holding Inc. provide for no specific quorums that exceed the provisions of corporate law.

Convocation of the general meeting of shareholders and agenda

Supplemental to the provisions of corporate law, the company's Articles of Association provide for the following:

- > Convocation of the general meeting of shareholders is accomplished via a one-time announcement in the Swiss Official Gazette of Commerce; and
- > Addition of a matter for discussion to the agenda can be requested at latest ten weeks prior to the date of the general meeting of shareholders.

Share register entries and related deadlines

At the general meeting, all shareholders recorded in the share register at the time the invitation is issued are entitled to vote. Changes made at a later date will be taken into consideration, provided this is possible from an organizational standpoint and that equal treatment can be ensured.

The 2003 general meeting of shareholders will be held on May 20, 2003 at the Lucerne Culture and Convention Center (KKL). Shareholders who are already recorded in the share register or will be recorded by April 30, 2003, respectively, as being entitled to vote will receive, together with their invitation, a registration form for participation at the annual general meeting, with which an admission card including voting material can be requested.

Crucial to the issue of an admission card is the status of the share register as of April 30, 2003. In the case that shares of the holdings listed on the admission card have been sold, the shareholder is no longer entitled to exercise the voting rights for these shares.

> SHARE DATA

	2002	2001	2000	1999	1998	
Share capital						
Par value	20	20	20	20	20	in CHF
Voting rights per share	1	1	1	1	1	
Total outstanding shares	13 170 092	13 170 092	13 170 092	13 170 092	12 675 766	number of pieces
Treasury shares a)	213 360	180 840	147 014	104 500	64 500	
Shares with voting and dividend rights	12 956 732	12 989 252	13 023 078	13 065 592	12 611 266	
Conditional shares for convertible bonds and bonds with warrants	2 000 000	480 000	480 000	480 000	974 326	
of which reserved	0	0	0	0	494 326	
Conditional shares for employee participation	360 000	360 000	360 000	0	0	
of which reserved	0	0	0	0	0	
Authorized shares b)	2 000 000	2 000 000	2 000 000	0	0	
Data per share						
Net income per share c)	-3.01	8.53	39.17	0.39	-13.50	in CHF
Equity per share c)	114	128	116	79	86	
Dividends per share d)	2.00	2.00	2.00	-	-	
Share price* high	207	393	511	320	310	*adjusted values
low	66	103	300	157	149	
year-end	93	179	365	320	161	
Market capitalization						
high	2 726	5 176	6 730	4 214	3 930	in CHF million
low	869	1 357	3 951	2 068	1 889	
year-end	1 225	2 357	4 807	4 214	2 041	

a) Shares reserved for stock options issued to individual directors and executives

b) Resolution by the annual general meeting of shareholders on May 7, 2002

c) New basis: number of shares with voting and dividend rights

d) Dividend 2002: proposal of the Board of Directors

Major shareholders	2002	2001	2000	1999	1998	
Number of shareholders	17 707	18 376	15 715	10 378	9 989	
Bührle family	n.a.	n.a.	n.a.	35	37	in percent
Ihag-Holding AG and Mrs. Anda-Bührle	29	28	27	n.a.	n.a.	
Shareholder represented by a fiduciary	-	-	-	7	7	

> CHANGES OF CONTROL AND DEFENSE MEASURES

Duty to make an offer

Pursuant to the Articles of Association of Unaxis Holding Inc., a person who acquires shares in the company is not required to make a public purchase bid pursuant to art. 32 and 52 of the Federal Act on Stock Markets and Securities Trading (“opting out”).

Clauses on changes of control

In the case of a change of control with regard to Unaxis Holding Inc., Unaxis Management Inc. is under the obligation to pay a one-time net severance payment to any members of the Executive Board who have been dismissed other than for cause within the meaning of Art. 337 of the Swiss Code of Obligations within a period of two years from the effective date of a change of control or who, themselves, resign within one month subsequent to the effective date of a change of control. The amount of such severance payment is equal to one yearly base salary at the time of termination plus one yearly target short term cash bonus plus all contributions in the pension fund in the twelve-month period preceding the date of termination.

In addition, upon any change of control, all options granted to members of the Executive Board under the Employment Agreement but not yet vested shall vest immediately, and this regardless of whether the individual's employment agreement is terminated or remains in force. Such options may be exercised within a period of one year or, alternatively, sold to Unaxis Management Inc. at the market value at the date of change of control.

Deemed to constitute a change of control is the replacement of the Chairman of the Board in combination with the acquisition by whatever means directly or indirectly of at least 50 percent of voting control of Unaxis Holding Inc. by any person or entity who, at the time the agreement with the given Executive Board member was signed, held no more than 5 percent of the company's shares.

> AUDITORS

Duration of mandate and lead auditor's term of office

Ernst & Young and Allgemeine Treuhand AG have been the auditors of Unaxis Holding Inc. (formerly Oerlikon-Bührle Holding Ltd.) since the founding of the enterprise in 1973, as well as Group Auditors since 1989.

The lead auditor has held his office since the 2001 Unaxis annual report.

Auditing fees and additional fees

Ernst & Young invoiced a worldwide sum of CHF 3 million in auditing fees, plus CHF 2 million for sundry services.

Supervisory and control instruments pertaining to the audit

The Audit and Finance Committee of the Board of Directors conducts an annual assessment of the work, remuneration and independence of the auditors and Group Auditors, and submits a proposal to the Board for the election of external Auditors by the general meeting of shareholders.

The Audit and Finance Committee (AFC) examines the scope of the external audit and related audit plans. In addition, the results of the audit are discussed in detail with the external auditors.

> INFORMATION POLICY

General

Unaxis provides its shareholders and the capital market with information in an open, comprehensive and timely manner. The company's information policy is oriented towards the principle of equal treatment of all capital market participants.

Aside from its detailed annual report and mid-year report that are prepared in accordance with International Financial Reporting Standards (IFRS, formerly IAS), Unaxis publishes key financial figures and a related commentary for the first and third quarters of its financial year. In addition, media releases keep shareholders and the capital market abreast of significant changes and developments at the company.

As a company listed on the SWX Swiss Exchange, Unaxis is in particular also subject to an obligation to disclose price-sensitive facts ("ad hoc publicity" requirement).

Unaxis' website – www.unaxis.com – is a permanently accessible platform for company-specific information.

Agenda

- April 29, 2003: Key figures for the 1st quarter of 2003
- May 20, 2003: Annual general meeting of shareholders, KKL Lucerne
- August 19, 2003: Publication of the semi-annual report
- October 28, 2003: Key figures for the 3rd quarter of 2003

Contact

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