

**RUAG**

Aerospace Defence Technology

Annual Report 2005

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**Career opportunities for the next generation**

Many a career begins with the successful completion of an apprenticeship. Each year, RUAG gives an exceptional number of young men and women the opportunity to enter one of thirteen careers for which RUAG provides training. Whether general mechanics, IT specialists, mechatronics technicians or management trainees, these apprentices are eager to grasp their tools and show off their initiative, much to the delight of their employer. In return, they receive an excellent final evaluation, perhaps an opportunity to participate in professional world championships, but above all an outstanding launch pad for their future career. In the “blue ribbon” on these pages, we put a face to some of RUAG’s current apprentices.



## RUAG successfully on the path of industrial transformation

Since its founding in 1999 as a public limited company, the RUAG technology group has been engaged in a unique industrial transformation process. Step by step, the former arms manufacturer is remaking itself as an internationally operating technology group.

With production sites in Switzerland, Germany and Sweden, RUAG is involved primarily in the fields of aerospace, security-related communications and simulation. As the industry partner of its key customer, the Swiss Federal Department of Defence, Civil Protection and Sport (DDPS), RUAG undertakes the maintenance and modernization of the Swiss Armed Forces' weapons and systems along with specific niche functions for other armed forces. In addition, RUAG is the leading European provider of small calibre ammunition for hunting, sport, government agencies and security forces.

The seventh year of business since RUAG's founding as a public limited company opened a new chapter in the success story of its goal-centric transformation process, one filled with light but also, for the first time, with shadows as well.

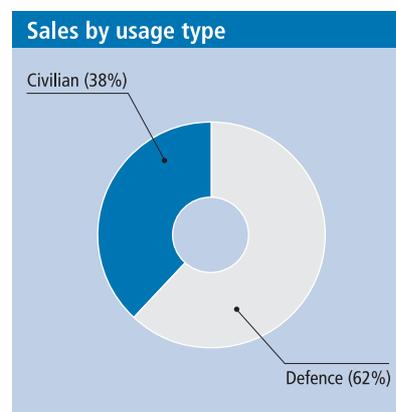
### One-off effects impact good operating profits

Two one-off factors impacted on the healthy operating result of CHF 61 million, reducing EBIT to CHF 19 million. The first was the disastrous storms, which totally devastated production facilities at the Group's site in Altdorf, Switzerland; the second the closure of metal processing activities at Thun. The civilian and European businesses expanded.

While the civilian and European businesses have expanded, operating profits have been unusually burdened by the catastrophic storms that totally devastated production facilities at the Group's site in Altdorf, along with the controlled phase-out of large calibre ammunition for tanks, mortars and artillery.

### Business environment

In the year under review the Swiss economy, while still somewhat tentative, proved stronger than might have been expected from the sluggish growth in the EU. In particular, the economic figures from the core euro zone countries Germany, France and Italy were far from brilliant. Nevertheless, overall exports



did rise in the second half of the year thanks to the growing US economy and impressive growth in Asia. Although the exchange rate situation eased in comparison with the previous year, prices for steel, copper and special alloys increased sharply, in some cases by over 40%.

### Market

As market leaders, European aircraft manufacturer Airbus and the American Boeing secured orders in the billions during the course of the year. Other aircraft manufacturers also scored sales hits. International aviation thus escaped the trough into which it had slipped after 11 September 2001, with a resultant boost for its supplier industries. The successful maiden flight of the new wide-bodied Airbus A380 in Toulouse on 27 April set new civil aviation standards. Development of the A380 cost over EUR 12 billion, one-third of it pre-financed by Germany, France, the UK and Spain. RUAG produces the wing trailing edge for the wide-bodied aircraft.

Following an initial consolidation phase in the 1990s triggered by a sharp decline in new investments, there was less movement in the European de-



Lukas Schreuder, design engineer, 3<sup>rd</sup> year of training





Nicole Frey, management trainee, 2<sup>nd</sup> year of training

fence technology market during the period under review. National interests and worries about maintaining core competencies represent hurdles for further consolidation in the industry, with land systems and ammunition remaining particularly fragmented. Still, a new round of consolidation is generally expected, the more so as investment in new systems procurement remains lukewarm. This is further underscored by the following facts: in light of the challenge of supporting modern armed forces, the European Nato members and candidate countries agreed in Prague to spend 2% of their gross domestic product (GDP) on defence in future. With a GDP share of 1.2% to 1.7%, Germany, Spain, the Netherlands, Belgium and Norway, to name a few, have all failed to achieve this rate. In comparison, Switzerland, which is not a member of Nato, has shown only 0.9%, placing it at the lower end of the scale at the same level as Luxembourg. Stiff competition in light of scarce investments is a challenge for RUAG, but export transactions in defined segments remain important by helping to secure know-how and technologies, primarily to the benefit of our key customer in Switzerland.

Business in the metals processing sector has proven difficult. Contract manufacturing orders are increasingly moving to low-wage countries. Cost pressure is also a constant companion in the automotive industry supply sector.

### Structural issues

IT services, which had previously been distributed among the subsidiaries, were combined into the newly founded company RUAG IT Services on 1 January 2005 and placed under a single management structure. We expect this step-by-step consolidation to unleash considerable synergies.

In the third quarter a decision was taken to centralize metals processing at the Altdorf site. These activities will be shut down in Thun by mid-2006.

Sales of large calibre ammunition for tanks, mortars and artillery have collapsed in recent years. After the DDPS, until then our main customer, announced that it would cease future procurement and the export business failed to develop as initially expected, an orderly retreat from this loss-plagued sector was decided. Suitable solutions are being sought for customers with

current contracts. The withdrawal from this business should be completed by mid-2007 at the latest.

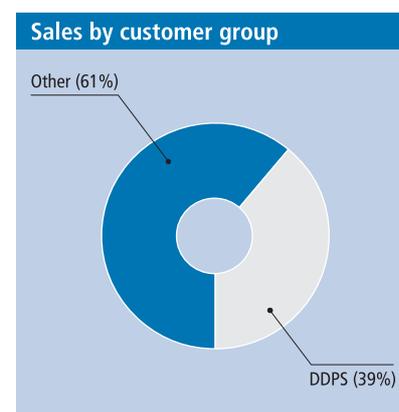
### Acquisitions

In the second half, the acquisition of the activities of C.O.E.L. GmbH in Wedel/Hamburg was wrapped up with effect from 1 January 2006. RUAG had previously worked closely with this 60-employee company on projects. The acquisition makes RUAG one of Europe's leading suppliers of two-way laser simulation and training equipment for security forces.

In April 2002 RUAG acquired Dynamit Nobel's small calibre ammunition business in Germany, merged it into the newly founded RUAG Ammotec and placed it under its own management. On 30 September 2005 RUAG repaid a loan from the seller as agreed at the time of acquisition, thus expanding its previous 80% stake to 100%.

### Sales

Sales in 2005 fell short of expectations. At CHF 1,194 million they were 0.7% below the previous year's figure of CHF 1,202 million. While Aerospace and Ammotec held steady at the previous year's level and Electronics grew,



Defence saw a substantial decline, especially in large calibre ammunition.

RUAG's transformation is also reflected in the continuing growth of the civilian business, which continued to grow from 37% of sales in the previous year to 38%. In 1999 the figure was a mere 7%. Sales by region are practically unchanged at 47% for Switzerland, 43% for other European countries, 5% for North America and 5% for various others. Sales by order type also proved robust, with production accounting for 54%, maintenance for 35% and services for 11%.

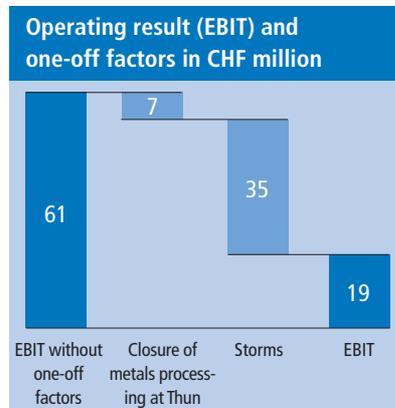
### Capital expenditure

Capital expenditure for the year under review totalled CHF 46 million (CHF 48 million). Of this, some 80% was invested in the renovation and modernization of plant and equipment (primarily machinery) and 20% in buildings.

### Earnings

Earnings before interest and taxes amounted to CHF 19 million (CHF 53 million). EBIT was especially hard hit by two factors; firstly the effects of the storms, with direct costs of CHF 35 million, and secondly the closure of metals processing activities in Thun, the one-off costs of which amounted to CHF 7 million.

Damage from the August storm significantly and unexpectedly exceeded estimates from risk management scenarios. Taking account of business management criteria, overall risk and, above all, the Group's solid equity base, an appropriate level of insurance cover had been chosen. However, the effects of this exceptional incident sur-



passed the available insurance cover. Losses across all of the affected locations were assessed at over CHF 160 million. The Altdorf facility alone sustained damage of CHF 150 million.

By mid-2007 RUAG will cease production of large calibre ammunition for tanks, mortars and artillery, a sector which has sustained heavy losses. For this reason the earnings from this sector are disclosed separately under "Abandoned business unit" in the income statement.

All of these factors together resulted in a first-time loss of CHF 19 million (CHF 29 million profit).

### Major projects and orders

The Swiss Air Force's F/A-18 fighter planes are being upgraded with state-of-the-art technology, including a new friend-or-foe identification system. In addition, a data link system provides error-resistant transmission of technical and tactical data between the aircraft and the air operations centre.

RUAG developed auxiliary fuel tanks for French manufacturer Dassault's Rafale aircraft, using the latest simulation and verification processes to ensure that all customer requirements were met. The

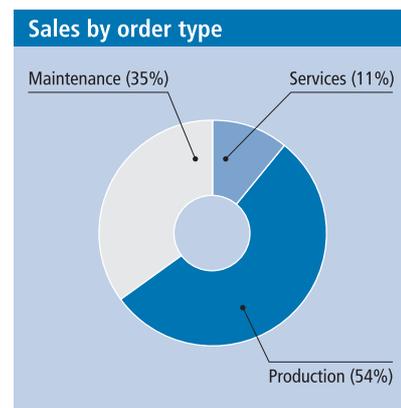
tanks entered series production during the year under review.

RUAG is modifying and preparing a Gulfstream jet for the installation of mission payloads on behalf of the German Aerospace Centre (DLR). Starting in 2008 the DLR will use the aircraft for worldwide atmospheric research from its base in Oberpfaffenhofen.

Development of the Swiss Armed Forces' C4ISTAR network-centric operations was advanced through the Joint Architecture Project. RUAG scored several export successes with laser-based small arms simulator systems.

The integration contract for the Swiss Armed Forces' Schützenpanzer 2000 armoured personnel carrier was successfully completed with delivery of the last vehicle. RUAG has also developed lightweight armour protection elements which it is fitting to new armoured vehicles for the Dutch Army.

The year under review saw new contracts to supply small calibre ammunition to the French police and customs authorities. RUAG also received another order from the German Bundeswehr for 4.6 x 30 mm calibre ammunition.





**Research and development**

RUAG is developing a new armoured vehicle launched bridge (AVLB) based on the chassis of the Leopard 2 tank for the Finnish armament group Patria. The new generation of AVLBs makes short work of obstacles with its 20-metre span and is intended for both civilian and military use.

In close cooperation with the manufacturer Heckler & Koch, RUAG developed a new 4.6 x 30 mm calibre cartridge for Heckler & Koch's short-range defence weapon. Personal defence weapons of this calibre will gain in significance with efforts to make the personal equipment of security forces smaller and lighter but more effective.

The European space agency ESA plans to launch the Herschel Space Observatory in 2007. RUAG won the contract to research and develop thermostable satellite structures made from carbon fibre and aluminium components.

Several European companies led by Dassault Aviation are working to develop and construct a demonstration prototype of a new Unmanned Combat Air Vehicle (UCAV) by 2010. RUAG is contributing wind tunnel trials and de-

veloping mechanical subsystems.

**Real estate**

CHF 12 million was invested in real estate in 2005. The greatest part was used at the Berne site, where market conditions were favourable, to refurbish properties for new tenants. At Altdorf, substantial costs were incurred by the removal and disposal of the enormous quantities of mud and rubble washed onto the company site by the storm. At the same time, intensive building repair work was undertaken so that tenants could resume occupancy and operations. The renovation will continue long into 2006.

**Personnel**

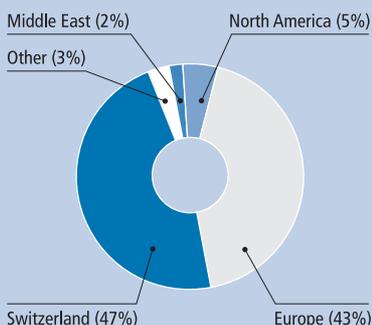
In the year under review RUAG employed 1.5% more staff than in the previous year. The average number increased from 5557 to 5640. While jobs were cut in metals processing, growth in Aerospace and Electronics created new posts. The relatively high number of apprentices remained unchanged at 420.

With the support of external consultants, RUAG launched a customized in-house training program for young managers under the label RUAG Top Leadership. In various modules the participants explore the topics of leadership, self-management, corporate culture, strategic management, marketing, sales and entrepreneurship.



Martin Misiurka, mechatronics technician, 4<sup>th</sup> year of training

**Sales by region**



**Outlook**

Economic forecasts at the end of the year under review revealed a more positive mood for 2006 than one year earlier. RUAG's order intake and orders on hand likewise underscore the optimistic expectations for the Group.

## Review of strategic direction

Because market conditions and market participants are changing at an ever-accelerating pace, the Board of Directors assigned operating management the task of reviewing the Group's strategy in 2005. This will ensure continued successful development of the company in the years ahead, to the benefit of the owner, the customers and the employees.

Like a lighthouse, the Group strategy adopted in 2000 has guided RUAG along the path of success until now. In the past five years, the RUAG Group has undergone a dramatic transformation, the importance of various sales categories has shifted significantly and the market and business environment have changed rapidly. Crucially, however, throughout this dynamic transformation process the value of the company has grown and the demands of its owner in the interest of the key customer, the Swiss Armed Forces, have been met.

In the year under review the Board of Directors and Executive Board assessed the results of an analysis of the market and environment and discussed the initial strategic implications. The revised Group strategy will be adopted and communicated in 2006. Already it is clear that:

- The defence technology business remains a supporting pillar for RUAG as a technology group.
- RUAG intends to remain the industry partner in the technological fields specified for the Swiss Armed Forces by the DDPS through outstanding quality and competitive performance.
- The customer portfolio, which has undergone strategic expansion in recent years and is now better balanced, will be further developed.
- Specific civilian business areas will continue to grow. The entire product portfolio will be streamlined, focused and made more profitable.
- RUAG will position and structure itself in such a way that an opening of the shareholder structure is possible in principle.

### Owner's strategy

In addition to direct reporting by the federal representatives on the Board of Directors, further exchanges of information with the owner took place on a regular basis during the year under review. The Board of Directors and operating management feel that RUAG has fulfilled the expectations of its owner. They have also noted that the Swiss Government is reviewing both the principles of arms policy for the entire Swiss defence industry and the owner's strategy for RUAG which expires at the end of 2006. Thanks to its regular exchanges with the owner RUAG's Board of Directors does not expect compatibility between the Confederation's owner's strategy and RUAG corporate strategy to present any insurmountable hurdles.

Swiss President Samuel Schmid, the head of the DDPS, attended the annual shareholders' meeting in May as the owner's representative. He paid tribute to the positive development of RUAG. The 2004 financial statements were approved, discharge was granted to the governing bodies and the distribution of a dividend was resolved.

## **Reconstruction**

The Mechanical Engineering centre at Altdorf was completely destroyed by the storms of 22–23 August. The Board of Directors took the write-off as an occasion for a thorough review. After contacting key customers and investigating other aspects of the market, the Board of Directors approved the Executive Board's request for reconstruction of the production centre along with the considerable capital expenditure this would entail. The Board of Directors expects the cantonal government to rapidly implement the immediate measures for better flood control that have been announced and to press ahead with long-term infrastructure upgrades. Other-

wise, another storm event will make it impossible to continue operations at the Schächenwald industrial estate.

## **Acknowledgements**

The Board of Directors thanks its customers for their trust and for their orders. Thanks are due to RUAG's shareholder for its cooperation, and to the Group's management and staff for their great commitment and outstanding performance in a year marked by extraordinary events. The Board of Directors and the Executive Board will do all in their power to ensure that RUAG continues to reliably satisfy the needs and expectations of its customers, shareholders and stakeholders.



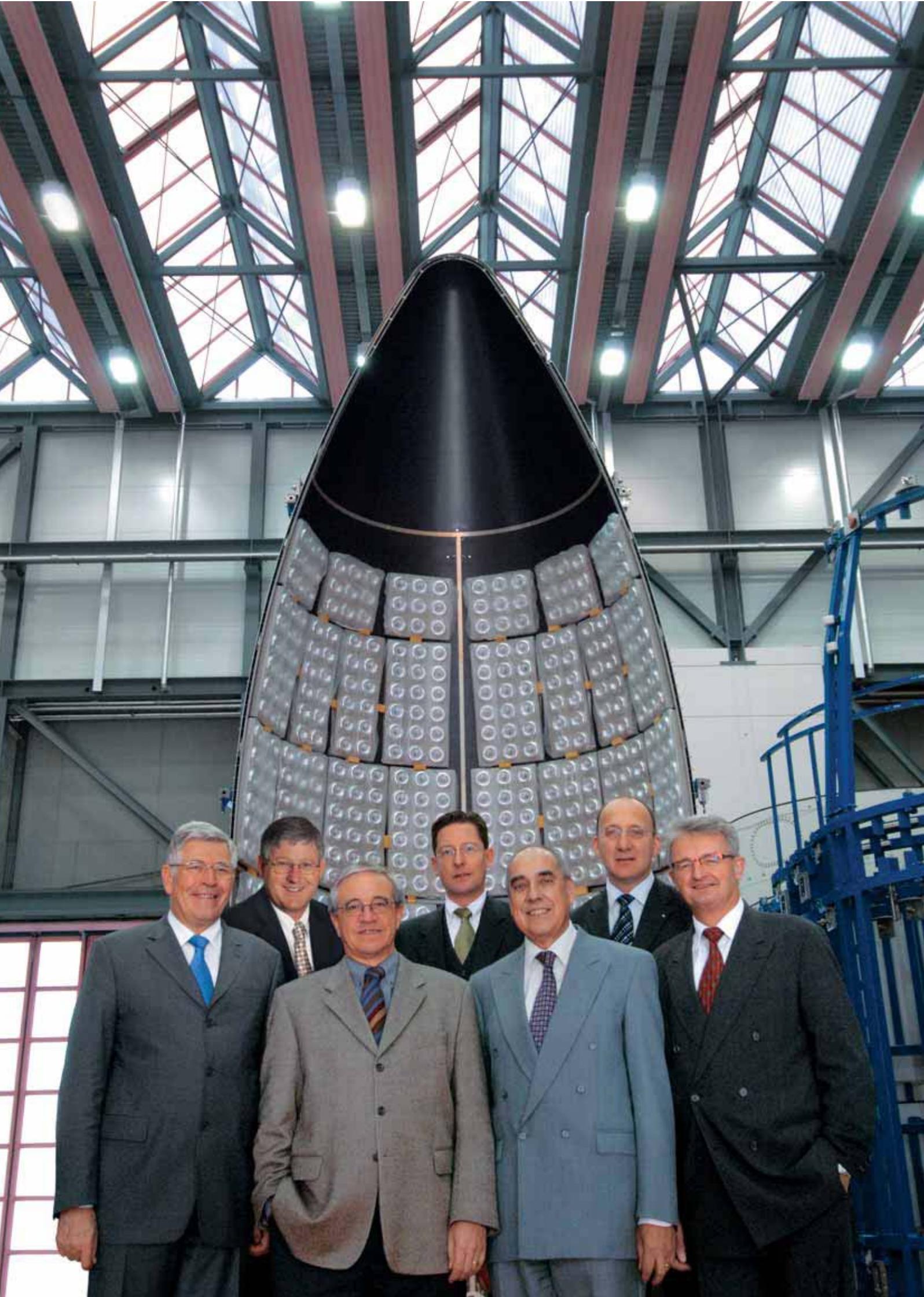
Konrad Peter

Chairman of the Board of Directors



Toni J. Wicki

Chief Executive Officer



## Members of the Board of Directors

Name	Born	Position	Member since	Elected until
Konrad Peter	1946	Chairman, non-executive	2002	2006
Toni J. Wicki	1944	Chief Executive Officer	1999	2007
Dr Hanspeter Käser	1943	Vice-Chairman as of 5 May 2004, non-executive	1999	2007
Dr Peter Saurer	1945	Non-executive member	2002	2006
Hans-Peter Schwald	1959	Non-executive member	2002	2006
Jakob Baumann	1958	Non-executive member	2003	2007
Paul Häring	1957	Non-executive member	2004	2008

## Executive Board

Name	Born	Position	Member since
Toni J. Wicki	1944	Chief Executive Officer	1999
Ueli Emch	1945	Member, Head RUAG Electronics	1999
Urs Kiener	1965	Member, Chief Financial Officer	2002
Eduard Knecht	1954	Member, Group Head Human Resources	1999
Stephan Kocher	1944	Member, Head RUAG Land Systems	1999
Cyril Kubelka	1963	Member, Head RUAG Ammotec	2004
Dr Myriam Meyer Stutz	1962	Member, Head RUAG Aerospace from 1 August 2005	2005
Peter Scherrer	1955	Member, interim Head RUAG Aerospace until 31 July 2005	1999
Martin Stahel	1946	Member, Head Group Services	2000

The CVs of members of the Board of Directors and the Executive Board can be found on our website, [www.ruag.com](http://www.ruag.com).

## Outstanding expertise in the manufacture of aircraft structures

Over the years, RUAG has evolved into a highly proficient partner in the field of aircraft structure manufacturing, operating in a market now shaped by global competition. A decisive competitive advantage and essential success factor is the use of leading-edge technology to enhance productivity and efficiency.

RUAG and Airbus are linked in a long-standing partnership which originated with the first aircraft of this model series, the A300. The A320 family brought the Emmen, Switzerland, and Oberpfaffenhofen, Germany, locations their first component development contracts. The wing tip and winglet structure was developed in Emmen, while various fuselage structures and the outer wing flaps were designed in the Bavarian town of Oberpfaffenhofen. The long-haul A330 and A340 models brought additional development and assembly contracts. RUAG Aerospace in Emmen has been working on the 14 m outer trailing edge for the double-decker A380 since 2001. This component is not only part of the wingbox structure, but also houses each wing's three ailerons.

By the end of 2005 components for 32 aircraft had been manufactured and delivered.

The newly formed Structure business unit of RUAG Aerospace now employs some 700 highly skilled workers at plants in Emmen, Oberpfaffenhofen and Geneva.

### Sole supplier of pressure bulkheads and fuselage tail tips

RUAG in Oberpfaffenhofen specializes in the conventional assembly of large fuselage structures for various types of aircraft. Since 1989, rear pressure bulkheads for the A320 family have been assembled here on the world's only computer-controlled riveting system for rotationally symmetrical components. Today RUAG is the sole supplier of pressure bulkheads and fuselage tail tips for the entire Airbus A320 family.

### New order for fuselage side panels

The tradition of the automated riveting process continues today. RUAG was



Christian Wüthrich, plant and equipment technician, 2<sup>nd</sup> year of training





Sabrina Zuncker, industrial painter, 3<sup>rd</sup> year of training

chosen to manufacture fuselage side panels in a tendering process against global competition. The panels in question are in the centre portion of the fuselage of the A320 family and are assembled using the latest automatic riveting systems. These panels consist essentially of a metallic outer skin reinforced on the inside with spars and ribs and equipped with emergency ex-

its. Two latest-generation Integrated Panel Assembly Cell (IPAC) riveting systems were acquired for this project.

Alongside price, the customer also considered reliability in terms of quality and on-time delivery when selecting its supplier. These competencies and capabilities play a decisive role in minimizing project and later programme risks. RUAG was able to leverage its close existing integration with the customer's processes and IT systems to clearly differentiate itself from its competitors.

### **Latest technology provides high degree of automation**

The two automatic riveters newly purchased for this contract are based on the very latest technology. In ideal circumstances, the systems can complete a rivet, i.e. drive, bore, sink, seal and insert the rivet, in just under four seconds – some 20 times faster than

manual riveting. This means riveting rates of up to 17 rivets per minute. The computer-controlled 7-axis machines can handle saucer-type components up to a maximum size of 11 x 4 m, enabling manufacture of panels for all aircraft manufacturers' current fuselage diameters, with the sole exception of the A380. The company thus has the capability to handle orders for all sizes of aeroplane, from wide-bodied jets to regional aircraft.

With this significant investment in high-performance systems and automation technology for the highly cost-effective manufacture of fuselage panels RUAG is able to offer customers the highest quality products at competitive prices. In a completely global market with fierce competition from the Far East the ability to enhance productivity and efficiency through the use of best-in-class technology is a key competitive advantage of strategic importance.

## Network-centric operations: initial milestones reached

The Swiss Armed Forces plan to set up a comprehensive network of command, communication and reconnaissance systems by 2011. As an industry partner, RUAG supports the linking of existing and new systems into an integrated system for network-centric operations.

In technical jargon this system is known as C4ISTAR (for Command, Control, Communication, Computer, Intelligence, Surveillance, Target Acquisition and Reconnaissance). It provides real-

time information on the disposition of friendly forces and to some extent the environment and hostile forces. A common status report supports and accelerates the decision-making process at all relevant command levels.

"C4ISTAR" strengthens the communications and command lines between the Armed Forces, government agencies and rescue and security organizations. The majority of the Swiss Armed Forces' operations are subsidiary in

nature, and involve security assignments or the provision of humanitarian assistance for disasters, for example. The new networked system is therefore essential to efficient deployments.

Once the network is fully operational, the status report overview and a more accurate understanding of environmental conditions will make it easier to act in accordance with the operational/tactical aims of higher-ranking command centres. Furthermore, the close networking in



of the troops with the command information system at the logistical base allows easier management of routine logistical operations without loss of time in traversing command hierarchies.

### **New planning and action procedures**

The ability to rapidly exchange information and make quick decisions depends not only on modern technologies, but also on planning procedures that have become very complex and must continually integrate new data. This process is demanding because the interdependencies between materiel requirements, doctrine, training, personnel, structures and financial resources need to be constantly assessed.

### **RUAG the industry partner**

The DDPS has contracted RUAG as the Swiss Armed Forces' industry partner for realization of the C4ISTAR integrated military system. We have therefore set up a C4ISTAR Centre of Excellence and Integration within RUAG Electronics, which is responsible for the integration and maintenance (including software management) of existing and

new reconnaissance, communication and command systems. RUAG is responsible for integrating products from different suppliers. Integrating all these components into one comprehensive system, in other words linking the command information systems of land forces, air forces and logistics units along with the relevant sensors (reconnaissance and surveillance systems), is a major challenge. To meet this challenge RUAG has brought the personnel working on these issues together into a newly formed division. The military experience of the 250 or so employees working on land and air command information systems at various locations is crucial, since it is only with an in-depth understanding of the customer's environment that we can provide effective advice on implementation.

### **First steps**

RUAG has already proven its capability in its first steps. Working closely with the Swiss Armed Forces, it laid the foundation of the command and reconnaissance network architecture and provided methodological support during the specification of joint processes in the Joint Architecture Project.

As part of a research project during the year under review by armasuisse, the procurement organization of the Swiss Armed Forces, we developed a demonstration platform on which new technologies or doctrine approaches can now be tested live.

In addition, RUAG's C4ISTAR Centre of Integration and Excellence is supporting the Armed Forces' planning staff in the consolidation and dissemination of basic knowledge.



Björn Dham, electroplater, 1<sup>st</sup> year of training

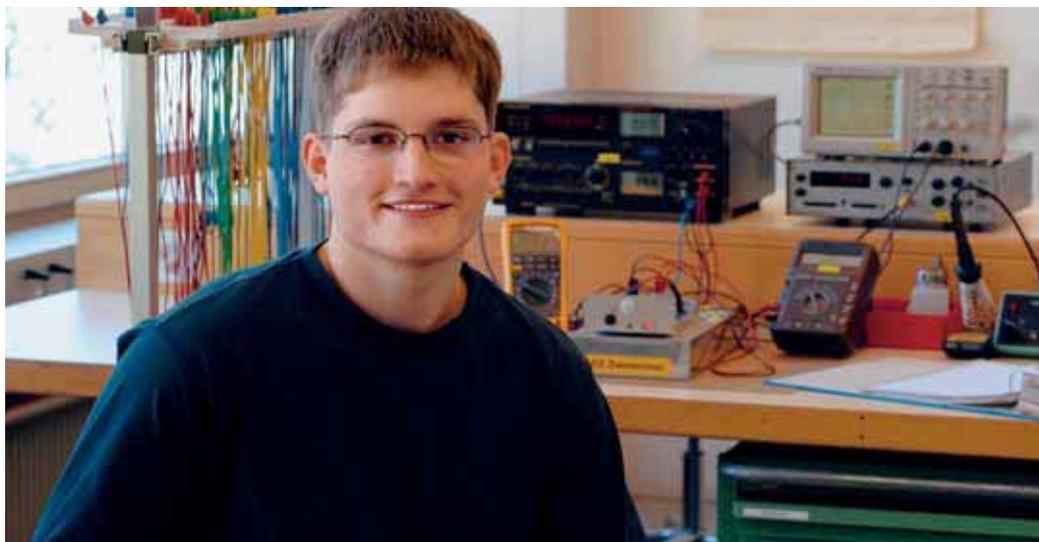
## European market leader in hunting rifle cartridges

There is scarcely a hunter in Europe who is not familiar with RUAG's ammunition brands. RWS®, Norma®, Hirtenberger® and Geco® boast assisted brand recall rates of well over 90% within the segment. In the respective home markets, recall is close to 100%. These rates can normally only be achieved in the consumer goods sector at enormous cost.

Rifle cartridges or ball cartridges are fired from rifle-barrelled weapons and are used in hunting large game. From roe deer to wild boar, red deer or even elk and bear, all types of European game are hunted with these cartridges.

### **Ammunition sector shows exceptionally high brand relevance**

The strength of RUAG's brands was analysed by the well-known consumer research group GfK (Gesellschaft für Konsumforschung, Nuremberg). Besides the high quality consumers attributed to the brands, one result in particular was astounding: the extremely high level of brand relevance in the ammunition technology market surprised even the market researchers. In a nutshell, brand relevance is an indicator of how important or unimportant brands are in the consumer's buying decision. Three essential dimensions – "information efficiency", "risk reduction" and "ideal application" – are scrutinized. The results are then weighed and indexed by their significance. With an index value of 58, the brand relevance for ammunition technology in Germany was higher even than that of camera cell phones and cars. In Italy, France and Spain the figure is even higher – the highest ever measured by GfK.



Andreas Horn, electronics technician, 3<sup>rd</sup> year of training

### **Market volume in Europe**

In pre-expansion Europe (EU 15) the number of cartridge users was estimated to be approximately 6.2 million hunters. France, Italy and Spain are the leading countries, with a total of roughly 3.4 million hunters, followed by Great Britain, Germany and Sweden with a combined 1.3 million hunters. The annual consumption of hunting rifle cartridges in the 15 European Union Member States is estimated at approximately 25 million.

While the total European market for hunting and sport ammunition has declined slightly in recent years – especially in the sport sector – the hunting cartridge sector has experienced steady growth as ever more countries come to favour cartridges for hunting cloven-hoofed game.

### **Multi-brand strategy**

With its RWS®, GECO®, Norma® and Hirtenberger® brands of rifle cartridge RUAG offers the active and discerning

hunter the world's widest selection of ammunition, thereby optimizing coverage of demand for cartridges. RUAG offers over 50 different calibres and more than 20 types of ammunition. RUAG Ammotec's multi-brand strategy enables it to serve a variety of market segments, from high-performance premium brand cartridges to good soft-point cartridges for the price-conscious

hunter. In the high-price segment RUAG is the undisputed market leader with the RWS®, Norma® and Hirtenberger® brands.

Brand strength, technological expertise and product variety are also the pillars that have enabled RUAG's growth in hunting rifle cartridges to outpace that of its competitors in recent years.

### Well-positioned

To back up the lead-based bullets that currently dominate its product range, RUAG is prepared for any restrictions that might be imposed on the materials used. In the RWS Bionic® bullet we have already introduced a lead-free hunting bullet that underscores our technology leadership in the lead-free sector as well.

## International partner for conversion and continued use

RUAG's extensive experience and professionalism have earned it a reputation as an international partner in the repurposing of Leopard main battle tanks. The Leopard forms the basis of a new armoured engineer vehicle (AEV) developed in conjunction with industry partners. Now an armoured vehicle launched bridge (AVLB) has been added to the product family.

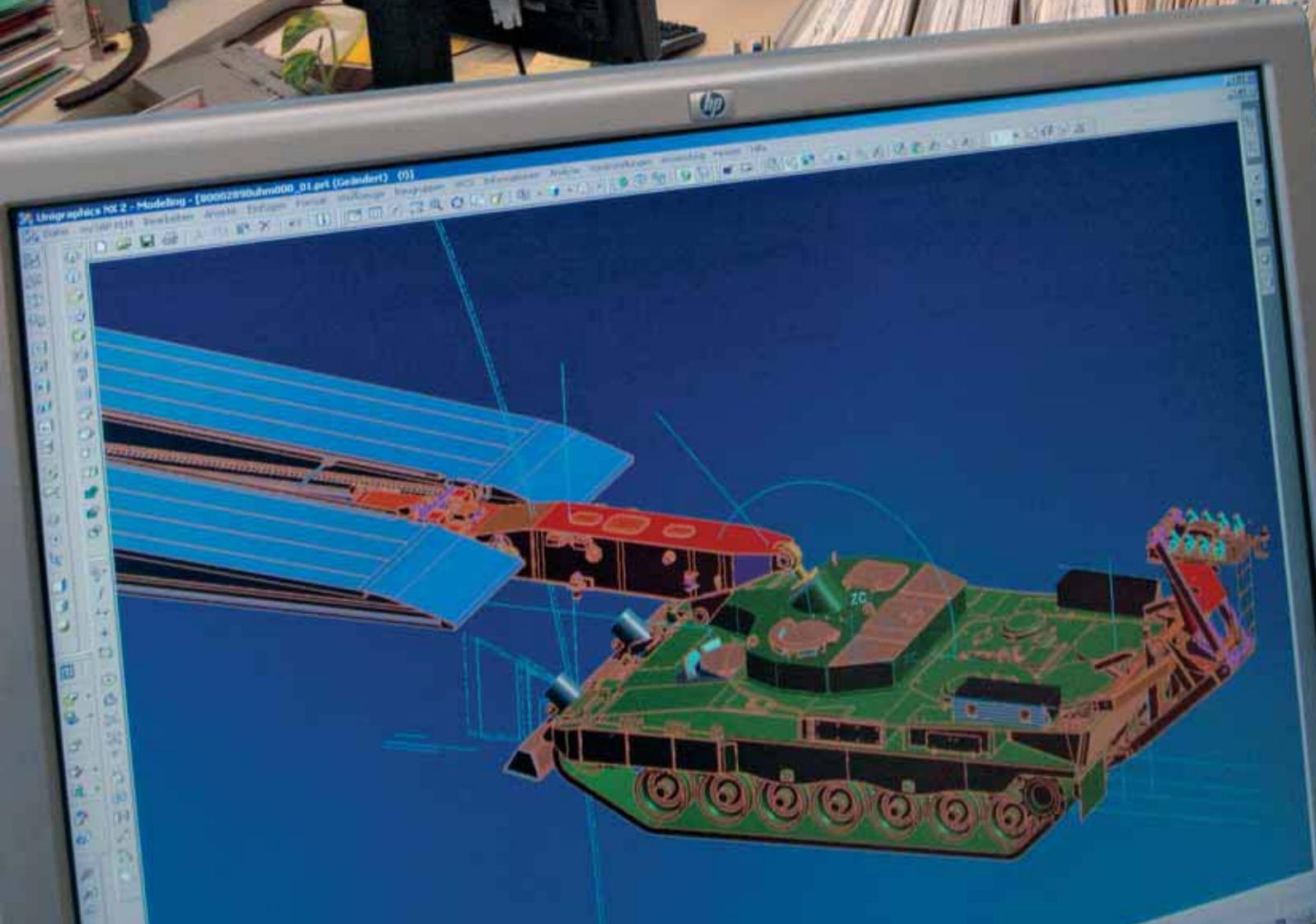
### Market potential

Most European countries are faced with a gap between the defined missions and the actual capabilities of their armed forces. Closing this gap will demand more efficient use of resources. One option is to focus on modern weapons platforms with the aim of reducing logistics and peripheral costs; another is to cooperate with other

countries' armies in procurement and maintenance. Most European armies have adopted the Leopard 2 as their main battle tank platform. Vehicles decommissioned through fleet reductions then become available for modernization and refitting. Standardization of systems to ensure compatibility and interoperability is not only a prerequisite for cooperation between European ground forces (e.g. the Eurobrigade) but also a means to reduce procurement and logistics costs. Resources can be conserved by standardizing logistics during fleet operations and integrating the industry over the entire life cycle of a weapon system. The existing vehicle fleets represent potential for the defence industry in several areas. The Leopard 2 main battle tank has to be adapted to the requirements of modern warfare in terms of command communications (integration into a C4ISTAR system), armour protection (mine, overhead and all-round protection) and maintenance. Related support vehicles such as recovery vehicles, engineer vehicles, mine-clearing vehicles



Irène Kunz, electronics technician, 3<sup>rd</sup> year of training





and armoured vehicle launched bridges have to be based on the same platform.

### RUAG's role

The Swiss Armed Forces have deployed the Leopard 2 as a main battle tank since 1987. In the 2001 arms programme, the 65/88 armoured recovery vehicle (ARV) was replaced by the Büffel ARV developed by Rheinmetall Land Systeme as part of an effort to simplify the platform and reduce costs. The Swiss Armed Forces' vehicle fleet is expected to undergo a midlife upgrade as part of an upcoming armaments programme. Main battle tanks developed in the 1970s will have to be adapted to current and future requirements. Working with its partner KMW, RUAG has developed a modular programme which will enable command of the battle tanks through the army's command system, eliminate weak spots by introducing the latest technology and thus enhance system availability.

Drawing on the market potential that had been identified, RUAG and Rheinmetall Land Systeme developed the KODIAK armoured engineer vehicle (AEV) using their own financial resources, their aim being to provide engineer corps with a vehicle built on proven Leopard 2 components but backed up by pioneering technology. Built on a converted main battle tank chassis, the KODIAK can be used both as an AEV and a heavy tactical mine-clearing vehicle.

Together with local lead contractor Patria, RUAG bested international competition in bidding to develop an armoured vehicle launched bridge (AVLB) based on the Leopard 2 platform for the



Gregory Ghenzi, electrician, 1<sup>st</sup> year of training

Finnish Army. RUAG is now applying its many years of experience and skill to convert a main battle tank into a highly integrated AVLB.

### Centre of Excellence

One of RUAG Land System's strategies is to secure and expand its role as Centre of Materiel Excellence for the Swiss Armed Forces. Thanks to its expertise in tracked vehicles and heavy weapons, RUAG has been made industry partner to the Swiss Armed Forces. Above all RUAG's internationally competitive integration capabilities allow it to evaluate, test and develop new systems in partnership with the Swiss Armed Forces. RUAG will be responsible for the logistics management, maintenance, repair and availability of vehicles and systems throughout their entire life cycles.

RUAG will be devoting special attention in future to research and development in the area of protection. Given RUAG's internationally recognized expertise in the ballistic protection and mine protection of vehicles, prospects are good for a continued strong performance in this area.

## Corporate Governance

This chapter of our Annual Report describes the principles of management and control at the most senior level of the RUAG technology group in accordance with the SWX Swiss Exchange directive regarding information on corporate governance. However, the RUAG Group has made certain adaptations and simplifications to reflect its shareholder structure. Unless otherwise specified, the information is applicable as at 31 December 2005.

### Board of Directors

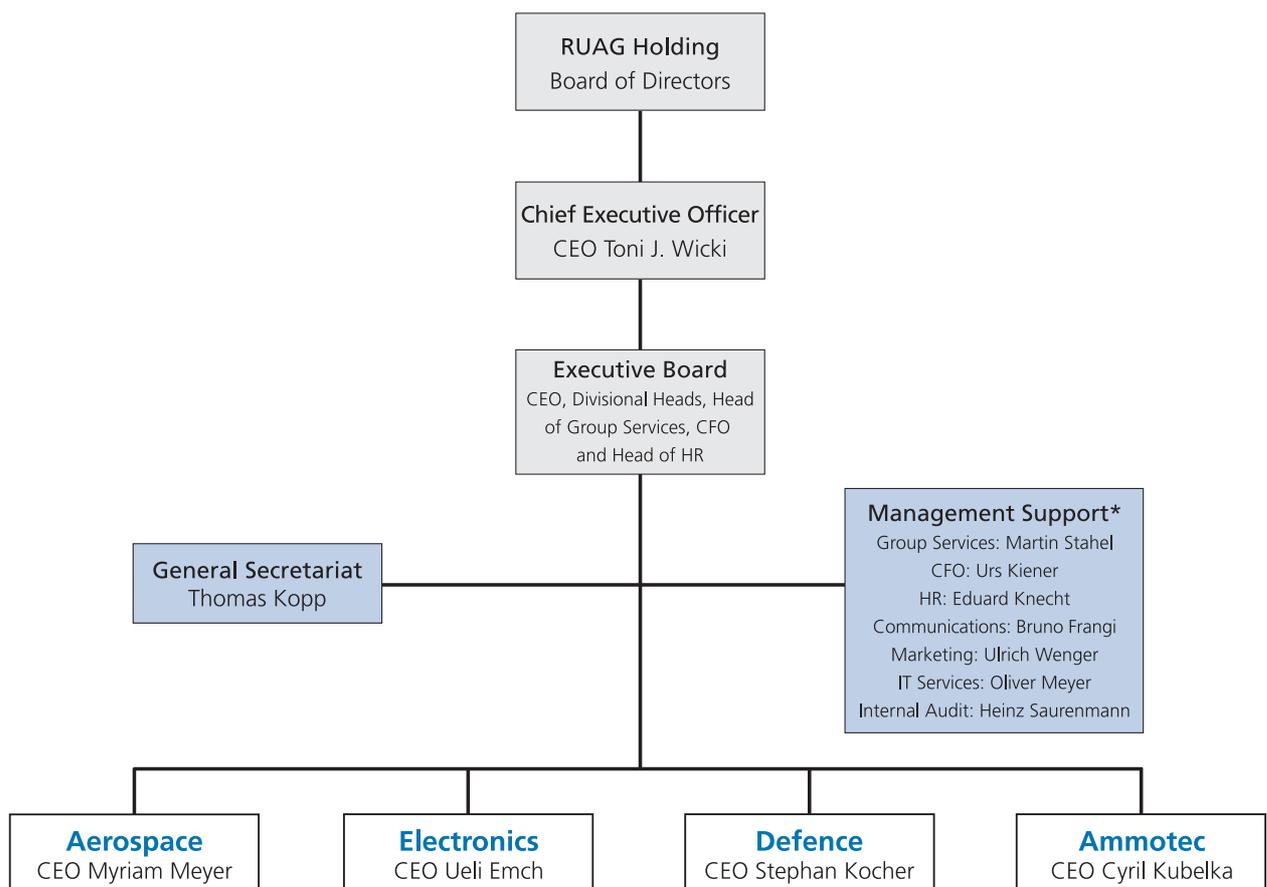
The duties of the Board of Directors of RUAG Holding are governed by the Swiss Code of Obligations, the Federal Council's owner's strategy, the Articles of Association and the Regulations Governing Organization and Operations.

The Board of Directors of RUAG Holding consists of seven individuals. The Chief Executive Officer is currently the sole executive member of the Board. The

non-executive members have no material business relationship with the RUAG Group. The list on page 9 provides information about the name, age, position, date of appointment and remaining term in office of each member of the Board of Directors.

### Conflicts of interest

The members of the Board of Directors of RUAG Holding do not sit on the board of any other listed company.



\* Finance/Controlling, HR, Communications, Marketing, IT Services, Legal, Internal Audit

Detailed information on the company's legal structure can be found on page 37 of the 2005 Financial Report.



Beat Lauber, automation technician, 3<sup>rd</sup> year of training

### Election and term of office

The Board of Directors of RUAG Holding is elected by the annual shareholders' meeting. In accordance with the Articles of Association, the Board of Directors consists of at least three individuals. A majority of the members of the Board of Directors must be Swiss nationals domiciled in Switzerland. The members of the Board of Directors are elected for a four-year term and may be re-elected. The Board of Directors is responsible for defining the rotation of such elections.

### Internal organization

The Board of Directors holds ultimate responsibility for the business strategy and overall management of the RUAG Group. It possesses supreme decision-making powers and determines the strategic, organizational, financial and accounting guidelines to be pursued by the RUAG Group. The Board of Directors has delegated the management of day-to-day business to the Chief Executive Officer (CEO), who is responsible for the overall management of the RUAG Group and for all matters not delegated to another corporate body under the terms of Swiss law, the Arti-

cles of Association, the owner's strategy of the Federal Council and the Regulations Governing Organization and Operation.

The main duties of the Board of Directors under the terms of the Swiss Code of Obligations and Articles of Association of RUAG Holding are:

- The strategic orientation and leadership of the RUAG Group in accordance with the owner's strategy of the Federal Council
- The structuring of the accounting system, financial controlling and financial planning
- The appointment and dismissal of members of the Executive Board and other senior executives
- Supreme oversight of business activities
- Production of the Annual Report, preparation of the annual shareholders' meeting and implementation of resolutions passed by the latter.

Decisions are taken by the Board of Directors as a whole. To assist the Board in its role, two committees have been formed: an Audit Committee and a Compensation Committee. In the 2005 financial year the Board of Directors held regular meetings on six occasions. In addition, the committees met on seven occasions. The agenda for meetings of the Board of Directors is set by the Chairman in consultation with the Chief Executive Officer. Any member of the Board of Directors may request that an item be included on the agenda. The members of the Board of Directors are provided with documentation prior to each meeting of the Board of Directors to enable them to prepare for the items to be discussed.

The Board of Directors maintains an exchange of views with the senior executives of the company and regularly visits one or more of RUAG's sites.

### Committees

The Board of Directors has formed an Audit Committee and a Compensation Committee and elected chairmen. The

committees meet regularly to draw up the minutes of meetings and recommendations for discussion at the regular meetings of the Board of Directors. The agenda of each committee's meetings is set by its chairman. The members of the committees are provided with documentation prior to the meetings to enable them to prepare for the items to be discussed.

### Audit Committee

The Audit Committee is composed of four non-executive members of the Board of Directors: Hanspeter Käser (Chairman), Konrad Peter, Peter Saurer and Paul Häring. The members of the Audit Committee are experienced in financial and accounting matters. The Audit Committee meets regularly and is convened by the Chairman as and when business requires. The meetings are also attended by the Chief Executive Officer, Head of Group Services, Chief Financial Officer, Internal Auditor and representative of the external auditors.

The main duty of the Audit Committee is to ensure a comprehensive and efficient audit structure for RUAG Holding and the RUAG Group. The duties of the Audit Committee include:

- Assessing processes in the risk and monitoring environment (internal controlling system)
- Monitoring financial reporting
- Assessing the internal and external auditors
- Establishing and approving the main elements of the audit



Rebecca Noti, IT specialist, 4<sup>th</sup> year of training

- Acceptance of the audit report and any recommendations of the auditors prior to submission of the annual financial statements (individual and consolidated) to the full Board of Directors for approval
- Submitting a proposal to the full Board of Directors regarding which external firm should be proposed to the annual shareholders' meeting for election as auditor and group auditor; assessing the service provided, remuneration and independence of the external auditors and examining the compatibility of audit activities with any consultancy mandates

The Audit Committee regulates and monitors internal auditing. It provides the full Board of Directors with a regular report on its activities and immediately informs the Board of any important matters.

### Compensation Committee

The Compensation Committee is composed of three non-executive members of the Board of Directors: Konrad Peter (Chairman), Hanspeter Käser and Hans-Peter Schwald.

The Compensation Committee is responsible for personnel planning for the Executive Board and submitting nominations for vacant posts at this level to the full Board of Directors.

The Committee is also charged with proposing the compensation package for the members of the Board of Directors, determining remuneration policy for the members of the Executive Board and approving the emoluments of the members of the Executive Board. The

Compensation Committee meets at least once a year.

### Information and controlling tools in relation to the Executive Board

The Management Information System (MIS) of the RUAG Group is structured as follows: The subsidiaries' balance sheet, income statement and cash flow statement are compiled on a monthly, quarterly, semi-annual and annual basis. This information is consolidated for the various divisions and for the group as a whole and compared to the budget. The budget, which represents the first year of a four-year plan for each subsidiary, is examined in the form of a feasibility forecast based on quarterly results.

The Chief Executive Officer provides the Board of Directors with a monthly written report on business performance and budget compliance.

### Executive Board

#### Management organization

The Board of Directors has appointed an Executive Board under the chairmanship of the Chief Executive Officer. Its powers and duties are set out in the Regulations Governing Organization and Operations and in the description of the functions of the Chief Executive Officer. The Divisional Heads report to the Chief Executive Officer, who is responsible for overall management and cross-divisional cooperation.

The CEO, Divisional Heads, Head of Group Services, Chief Financial Officer and Head of Human Resources sit on the Executive Board (8 members).



Tobias Geissler, logistics assistant, 1<sup>st</sup> year of training



Nicolas Stocker, electrician, 4<sup>th</sup> year of training

### Chief Executive Officer

The Chief Executive Officer manages the RUAG Group. He submits RUAG's strategy, long- and medium-term objectives and management guidelines to the full Board of Directors for their approval. At the proposal of the Chief Executive Officer, the full Board of Directors decides on or approves the four-year corporate plan, annual budget, individual projects, individual and consolidated financial statements and human resources issues. At the request of the Chief Executive Officer, the Compensation Committee examines the remuneration of the members of the Executive Board as well as insurance issues.

The Chief Executive Officer regularly provides reports to the Board of Directors on business performance, anticipated business matters and risks, and also changes at the more junior management level. The members of the Board of Directors may request and examine additional information. The Chief Executive Officer must inform the Chairman without delay of any significant unexpected developments. The Chief Executive Officer regularly monitors whether the Articles

of Association or the regulations and signatory powers issued by the Board of Directors require amendment and applies for such amendments to be made.

### Members of the Executive Board

The list on page 11 provides information on the name, age, position and date of appointment of each member of the Executive Board.

### Management contracts

No management contracts have been concluded by RUAG Holding and its subsidiaries with any third parties.

### Compensation, profit-sharing and loans

#### Compensation and compensation policies

The members of the Board of Directors receive remuneration for their services as proposed from time to time by the Compensation Committee, submitted to the full Board of Directors for approval and ratified by the annual shareholders' meeting.

The Chief Executive Officer and Executive Board of the RUAG Group are compensated according to their performance. Their compensation consists of a fixed and a variable component. Employer contributions to pension funds are also taken into account. The variable component comprises between 0 and 50% of the fixed component and is based on the achievement of various measurable, individually agreed goals. Goals are defined annually and in advance. At the request of the Chief Executive Officer, the Compensation Committee approves the remuneration of the members of the Executive Board. There are no profit-sharing schemes that allow for the purchase of shares or stock options.

#### Compensation for incumbent company officers

The overall emoluments (excluding employer contributions to statutory retirement and survivors' insurance) paid to the non-executive members of the Board of Directors for the 2005 financial year amounted to CHF 0.45 million (previous year: CHF 0.45 million).

The overall emoluments (including all employer contributions to pension funds, excluding employer contributions to statutory retirement and survivors' insurance or similar state social insurance contributions) paid to the executive member of the Board of Directors and the other members of the Executive Board for the 2005 financial year amounted to CHF 3.28 million (previous year: 3.36 million).

In the 2005 financial year, no severance compensation was paid to non-executive members of the Board of Directors

or members of the Executive Board having terminated their function with the company.

### **Maximum overall compensation**

The highest total compensation (including all employer contributions to pension funds, excluding employee contributions to statutory retirement and survivors' insurance) paid to the executive member of the Board of Directors for the 2005 financial year was CHF 0.65 million (previous year: 0.72 million).

### **Compensation for former company officers**

No compensation was paid during the financial year to non-executive members of the Board of Directors or members of the Executive Board having departed during the financial year, the prior-year period or previous to that after the departure of such members.

### **Additional fees and remuneration**

During the 2005 financial year, the members of the Board of Directors and Executive Board and/or closely connected individuals received no appreciable fees or other remuneration for additional services provided to RUAG Holding or one of its subsidiaries.

### **Loans to members of governing bodies**

The members of the Board of Directors or Executive Board and/or closely connected individuals are not, or were not, involved in transactions outside the normal business activities of RUAG Holding or one of its subsidiaries, or in any other transactions which are in some shape or

form unusual yet material for RUAG Holding, during the current or preceding financial year.

As at 31 December 2005, RUAG Holding and its subsidiaries had not provided any securities, loans, advances or credits to the members of the Board of Directors or Executive Board and/or closely connected individuals.

### **Capital structure**

The share capital of RUAG Holding amounts to CHF 340,000,000, comprising 340,000 fully paid-up registered shares, each with a par value of CHF 1,000. As at 31 December 2005, RUAG Holding did not have any conditional or authorized capital, nor had it issued participation or dividend-right certificates. The registered shares of RUAG Holding are not listed.

### **Changes to capital in the last three financial years**

No changes to capital were decided.

### **Shares**

Each registered share carries one vote at



Melanie Saner, general mechanic, 3<sup>rd</sup> year of training



Beno Schaller, general mechanic, 2<sup>nd</sup> year of training

General Meetings of Shareholders of RUAG Holding. The voting right may only be exercised if the shareholder is registered in the RUAG Holding share ledger as a shareholder with voting rights. The registered shares carry full dividend entitlement.

### Share register

The Board of Directors keeps a register of shareholders.

## Shareholder structure

### Shareholders

The Swiss Confederation owns 100% of the share capital and all the voting rights in RUAG Holding. The Federal Department of Defence, Civil Protection and Sport represents shareholder interests of the Swiss Confederation pursuant to the Federal Act on State-Owned Armaments Companies, art. 3, section 2.

### Owner's strategy of the Federal Council

The owner's strategy of the Federal Council establishes the transparent, binding framework which enables

RUAG Holding and its subsidiaries to fulfil their duties on a commercial basis while taking account of broader interests. The owner's strategy is anchored in the Articles of Association of RUAG Holding.

In its owner's strategy the Federal Council lays down strategic objectives in the interest of Swiss national defence, expectations regarding cooperation and joint undertakings as well as human resource policy and financial objectives.

The Federal Council amended certain points of the owner's strategy and extended its validity to 2006 in November 2002.

### Swiss Confederation representation on the Board of Directors

In addition to the representative of the Department of Defence, Civil Protection and Sport (post currently held by Jakob Baumann), a representative of the Federal Finance Administration (post currently held by Peter Saurer) sits on the Board of Directors of RUAG Holding.

### Cross-shareholdings

The RUAG Group has not entered into any cross-shareholdings with other companies, either in terms of capital or votes.

### Codetermination rights of shareholders

### Voting right restrictions and representation

Each registered share carries one vote at General Meetings of Shareholders of RUAG Holding. A shareholder may be

represented by another shareholder only by written proxy.

### **Statutory quorums**

The following resolutions are subject to decision by statutory quorums in accordance with the Swiss Code of Obligations (art. 704):

- Changes to the purpose of the company
- Introduction of voting shares
- Restrictions on the transferability of registered shares
- Approved or conditional capital increase
- Capital increase out of equity in consideration of a contribution in kind or for the purpose of acquisition in kind and the granting of special benefits
- Restriction or abolition of subscription rights
- Relocation of the company's registered office
- Dissolution of the company without liquidation

### **Convening and setting the agenda of annual shareholders' meetings**

The annual shareholders' meeting is convened and its agenda set in accordance with statutory provisions.

### **Change in control and defensive measures**

#### **Obligatory offer for sale**

The Articles of Association contain no provisions concerning opting-out and opting-up in accordance with the Federal Act on Stock Exchanges and Securities Trading (SESTA art. 22).

#### **Change in control clauses**

Under the terms of the Federal Act on State-Owned Armaments Companies, any disposal of the capital or voting majority of the Swiss Confederation to third parties requires the approval of the Federal Assembly. Otherwise there are no specific clauses concerning a change in control of RUAG Holding.

### **Auditors**

#### **Duration of mandate and term of office for lead auditor**

PricewaterhouseCoopers AG, Berne, have been auditors to RUAG Holding since 1999 and Group auditors to the RUAG Group since 1999. The lead auditor has been responsible for the audit mandate for both RUAG Holding and the RUAG Group since 2000.

#### **Audit fees and additional expenses**

In the 2005 financial year PricewaterhouseCoopers billed the RUAG Group CHF 0.8 million (previous year: 0.8 million) for its services in connection with

the auditing of the annual accounts of RUAG Holding and the Group companies as well as the auditing of the consolidated financial statements of the RUAG Group.

In addition PricewaterhouseCoopers billed the RUAG Group CHF 0.3 million (previous year: 0.3 million) in respect of audit-related services, management consultancy, tax advisory and due diligence services as well as other auditing services related to internal auditing.

### **Supervisory and controlling tools in relation to auditing**

The Audit Committee of the Board of Directors evaluates the performance, fees and independence of the auditors and of the Group auditor on an annual basis and submits to the Board of Directors a proposal as to which external auditor should be recommended to the annual shareholders' meeting for appointment. The Audit Committee then monitors on an annual basis the scope of external auditing, the auditing plans and the relevant processes and in each case discusses the audit results with the external auditors.

### **Information policy**

The RUAG Group pursues an open information policy in relation to the public and to the financial markets. The published figures extend beyond the statutory requirements in terms of transparency.

## Important dates

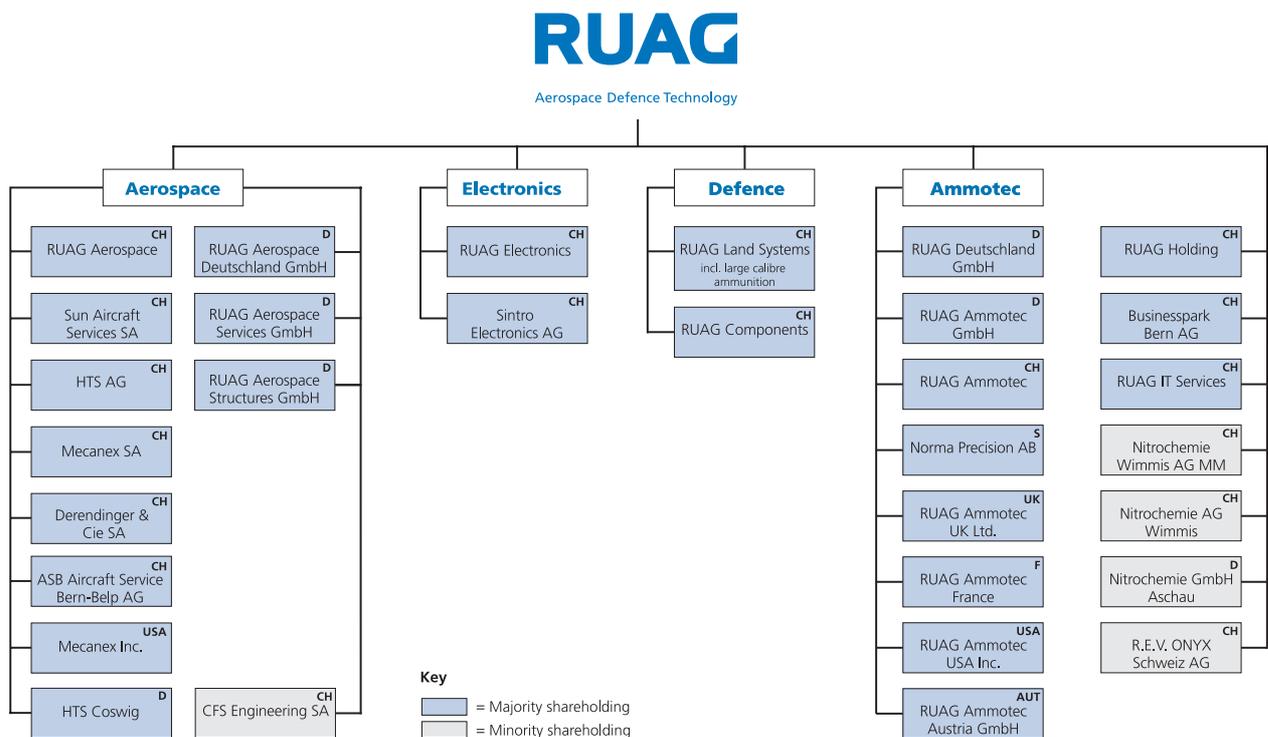
Financial year-end:	31 December 2005
Announcement of annual results:	24 March 2006
Publication of Annual Report:	24 March 2006
Annual shareholders' meeting:	03 May 2006

The Annual Report containing the annual financial statements for the year ended 31 December 2005 is sent to shareholders together with an invitation to the annual shareholders' meeting.

Current Annual Reports and press releases can be found at [www.ruag.com](http://www.ruag.com). Media conferences are held at least once a year.

## GROUP STRUCTURE

### Subsidiaries and affiliates





## Addresses

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SECURITY IS OUR GOAL, QUALITY OUR STANDARD