Technology for a Changing World
Saab

Saab is one of the world’s leading high-technology companies, with its main operations in defense, aviation and space. Saab covers a broad spectrum of competencies and capabilities in systems integration.

Saab develops manufactures and delivers advanced products and services for the defense market, as well as for commercial markets where its expertise creates business opportunities.

Thanks to its strengths and strategic partnerships, Saab has the world as its market, but research, development and production are carried out principally in Sweden. Saab has a total of 12,000 employees. Total annual sales are SEK 17,848 million. Research and development corresponds to about 20 percent of turnover.
Contents

Ready for the future .................................................. 5
Unique competence for a changing world .......................... 6
SYSTEMS AND PRODUCTS WITH THE WORLD AS THEIR MARKET ... 9
AVIATION EXPERTISE FOR MILITARY AND CIVIL APPLICATIONS ..... 14
SAFER SOCIETY WHEN SYSTEMS ARE LINKED TOGETHER ........ 19
On the technological front line ..................................... 26
Saab in the global market ............................................. 29
A history of high technology ......................................... 30

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“Saab offers world-leading systems, products and services that meet society’s changing needs for protection and security.”
Ready for the future

Saab’s focus on defense, aviation and space is complemented by systems for public security. In a changing and uncertain world, Saab is well-equipped to meet the future – and to help others do so, too.

Saab’s ability to handle large, complex systems integration projects, which serve as the basis for the development of advanced systems and net-centric defense solutions, is also becoming an increasingly important factor in protecting civil society. The ability to integrate new systems with old, others’ systems with our own, and commercial systems with military, is one of our strengths.

Technological leadership is also a strength at Saab. Thanks to targeted investments in research and development, we can offer world-leading systems, products and services for an international market. Our expertise has made us an established partner in international development projects. Saab is currently participating in several high-profile collaborations, including in the areas of missiles and unmanned aerial vehicles for commercial and military applications.

Success in the international market requires that systems and products not only maintain the highest class but also are cost-effective to acquire and operate in the long term. Saab’s systems and products are designed to be continuously modified for new conditions. Together with the service and support we offer, they remain very competitive through their entire lifecycle.

We continue to strengthen our international operations. In 2004, 62 percent of new orders were from outside Sweden. Our financial strength gives us the opportunity to grow in the international market through acquisitions.

Our aim is to develop long-term relationships in a number of selected markets. The international sale of Gripen is an important gateway in this respect and Saab is taking over complete responsibility for new markets as of 2005. The existing relationship with BAE Systems, which has established Gripen in three export markets, will be maintained for those markets and we will continue to work together in new markets as appropriate.

Saab’s operations moving forward, will be dominated by a continued internationalization, development of new solutions to bolster national security and further efficiency improvements. As of 2005, our future operations will develop towards three different business segments: Defense and Security Solutions, Systems and Products and Aeronautics.

I am proud of Saab’s tradition of creating innovative, cost-effective solutions and our ability to cooperate constructively. By continuing this tradition, we will be ready to the challenges of the future.

Åke Svensson
President and CEO
Unique competence for a changing world

Defense and security solutions, advanced systems and products for the international defense market and space industry, and aeronautics are areas where Saab has built up world-leading competence. Services are an important complement in all these areas.

Saab has been working for many years to develop advanced solutions for the Swedish Army, Navy and Air Force. It has also taken system-wide responsibility for ensuring that various systems and products work together.

The last decade has brought with it a revolution in the way militaries organize and operate and a variety of new threats to society. This has created a need for greater cooperation across national borders and better use and coordination of military and civil resources. The various measures taken to improve national security will be increasingly important to Saab’s operations.

Three strategic areas
Saab focuses on three strategic areas:

- **Defense and Security Solutions**
  Saab has the competence to handle large, complex systems integration projects – to build systems of systems. A typical project is the development of command and control systems. Lifecycle commitments for operations, modifications and maintenance of systems are becoming more common.
  Saab conducts development work on net-centric defense solutions. This competence can also be transferred to the commercial sector. Increasingly, commercial systems are being adapted – and military and commercial systems linked together – to build a safer society. Saab is playing a key role in this work. Saab’s customers in defense and security solutions are mainly in markets where the company, through long-term cooperation, has built up special relationships.

- **Systems and Products**
  Saab develops systems and products for the international market, including anti-armor systems, air defense and anti-ship missiles, underwater systems, combat training systems, signature management systems, avionics and electronic warfare systems. It also has considerable expertise in space technology, an area with both commercial and military users. In all these areas, Saab has cutting-edge international competence and market presence it is trying to gradually expand through partnerships and acquisitions.
  Customers are increasingly demanding long-term commitments, and Saab often assumes responsibility for a system or product through its entire lifecycle.

- **Aeronautics**
  Saab’s extensive competence in aeronautics rests on a long tradition and deliveries of over 4,000 aircraft. Its operations today encompass everything from Gripen, the world’s most modern in service fighter aircraft, to service and maintenance, development and production of aerostructures for commercial aircraft and a leasing portfolio.
Gripen is being used by more countries, and Saab is investing aggressively to achieve further success in the export market. In addition, it is working on continuous developments and upgrades as well as service and support for the air forces that use the system. Saab’s experience in service and support has made lifecycle responsibility for both military and commercial aircraft systems an important business.

Saab is also a strong partner in international aeronautics development programs. This includes military projects such as unmanned aerial vehicles and commercial projects where it supplies components to the world’s leading aerospace industries.

**Active in international alliances**

International cooperations are becoming increasingly important to the development of new systems and products. Saab participates and has participated in a number of development alliances, which demands great flexibility. Saab must be able to serve as a supplier of subsystems in certain situations and assume lead development responsibility in others. Furthermore, it is not unusual that companies that are partners in one project are competitors in another.

**Growing through acquisitions**

Saab is actively participating in the consolidation of the international defense industry and working systematically to identify potential acquisitions that fit its strategic areas.

For example, Saab has joined with the French company SNPE Matériaux Energétiques and Finland’s Patria to form EURENCO, one of Europe’s leading propellants and explosives companies. Saab has also acquired the Finnish defense company Elesco, which provides systems integration services to the Finnish defense forces. With its acquisition in Grintek, Saab is also well-established in South Africa.

**Business concept**

Saab offers broad-based systems solutions, products and services in public security, defense, aviation and space as well as related areas in the global market.
BOL is a countermeasures dispenser system with proven superior performance on several platforms.

BAMSE is a powerful and highly advanced medium-range mobile air defense missile system.
Systems and products with the world as their market

Saab develops world-leading systems and products for military and civil customers in the international market. Its products are distinguished by a systems approach and are well-adapted to work in various environments and together with other systems.

Saab’s unique systems integration expertise is critical to ensuring that its products can be linked with defense and security systems today and in the future. The possibility of continuous upgrades guarantees a long useful life and also means that many products are already adapted for use in a future interoperable and net-centric system. Operational and maintenance services, where Saab takes responsibility for its own as well as other manufacturers’ products through their entire lifecycles, are also an important part of the company’s offering.

Air
Saab’s electronic warfare systems such as jammers, warners and countermeasures dispenser systems for fighter aircraft have been supplied to Sweden, the U.S., the UK, Germany, Italy and France, among other countries.

One highly successful system is BOL, a countermeasures dispenser to deceive incoming missiles. The system is especially suited for relatively low heights, which has helped to attain great international success. BOL is currently in operational service on the Harrier, Tornado, F-14, Typhoon, F-15 and Gripen fighter aircraft. In 2004, Saab also received an order for flight tests on the F/A-18 Hornet in Australia.

In the areas of avionics and reconnaissance systems, Saab is established in both military and civil markets. Another example of a unique product now being introduced on the market is Saab’s Modular Reconnaissance Pod System, the first of which was delivered in 2004 to the Swedish Defense Material Administration for Gripen.

Saab has a wealth of experience in missiles and is participating in cooperations with the IRIS-T short-range air-to-air missile and the Meteor. The latter, a medium-range air-to-air missile, is being developed for Gripen and a number of other sophisticated fighter aircraft. Saab is also participating in a bilateral joint venture on TAURUS KEPD 350, a long-range stand-off weapon system designed to precisely penetrate dense air defenses. Saab has developed the advanced navigation system, among other things. TAURUS KEPD 350 is in production for the German Air Force.

In air defense missiles, Saab offers several systems, from the RBS70 portable air defense missile and vehicle-mounted ASRAD-R to BAMSE, an advanced medium-range mobile system that defends against aircraft, missiles and unmanned aerial vehicles.
Land

Saab is a leader in the development of anti-armor and support systems. Carl Gustaf, AT4 and AT4CS are world-leading, proven systems that are easy to handle and highly reliable. AT4 has been used by the U.S. Army since the mid-1980’s and in 2004, it placed an order for the further developed AT4CS after an extensive United States Special Operations Command (USSOCOM) qualification. AT4CS is the world’s only anti-armor weapon that is fully operational in confined spaces. Saab received an award for AT4CS from the U.S. Army as one of the top ten innovations in 2003.

For the British and Swedish defense forces Saab is developing NLAW, the next-generation portable anti-armor system, which meets stringent demands in terms of robust design and ease of use. Like AT4CS, NLAW can be fired from confined spaces.

Signature management is another area where Saab is among the world leaders. Its products provide protection against detection across the electromagnetic spectrum, from visible to infrared light, as well as against radar and guided weapons. Saab is the sole supplier of the ultra lightweight camouflage net system (ULCANS) to the U.S. Army.

Saab is currently the world leader in the development of military training systems. The systems are based on realistic and robust simulators and comprise everything from target equipment to advanced systems for coordinated training up to the battalion level. This form of training is often an integral part of the total package offered to the customer.

These systems, which are designed on a scalable, modular architecture flexible enough to be adapted to future training needs and methods, are based on Saab’s laser simulators, whose high precision guarantees that exercises are as realistic as possible. Saab also develops combat training equipment for coordinated training of ground forces. One such system is GAMER, for training of a platoon up to a brigade with both real and virtual elements.
Densely populated areas are among the most demanding theaters in which troops can operate. Buildings and other structures force them to split up, block their sights and make communications difficult. Snipers and booby traps can lay in hiding and civilians have to be protected.

This is particularly relevant in the case of international peacekeeping missions in recent years, where troops have had to operate in urban settings. Terrorists can also take advantage of such complex theaters to conceal themselves and carry out attacks, placing special demands on the units that combat them.

There is therefore a tremendous need to be able to train under realistic conditions. In Saab’s systems, soldiers, vehicles and even buildings are equipped with detectors to indicate hits from the laser simulators on various weapons. Participants are also equipped with GPS and a radio system that allows training commanders to follow, via a computer screen, everyone’s movements and status and who is shooting who. With a newly developed system, participants can also be monitored inside buildings, from room to room. All information is recorded and provides a valuable tool when reviewing and evaluating exercises after the fact.

Saab currently has staff stationed at 11 training locations around the world, including the U.S., the UK and Germany. The number of missions is increasing as international missions grow in scope and more countries take part.
Saab develops systems to combat naval targets on or below the water’s surface. RBS15 is a very powerful system with a versatile anti-ship missile that works both day and night and in all types of weather conditions. RBS15, which is designed for naval warfare in anything from an archipelago to the open seas, is currently operational in the Swedish, Finnish and Croatian Navies, as well as the Swedish Air Force, since the system can also be used from the air.

Saab’s special expertise in underwater technology, particularly shallow and difficult underwater environments, is internationally renowned. Torpedo 2000 is effective against surface vessels and submarines in deep or shallow water. For mine hunting, Saab has developed Double Eagle, a world leader in remote controlled underwater vehicles. This experience has been applied to autonomous unmanned underwater vehicles. Although remote controlled underwater vehicles are now being used mainly for mine hunting, autonomous systems will have both civil and military applications in the future. Monitoring of pipelines on the seafloor is one possible example.

In 2004, Saab received an order from the Swedish and the Finnish Navies for product definition of the next generation underwater system, TMS (Torpedo, Mine and Sensor). The aim is to develop a system that combines all three functions. This work combines Saab’s expertise in torpedoes and unmanned autonomous underwater vehicles.
Space

Saab is the majority owner of the space company Saab Ericsson Space, whose ties to defense technology and commercial telecommunications makes it Europe’s leading independent supplier of advanced equipment to the space industry. Saab’s space operations are based on systems expertise and advanced electronics, competencies that can also be found in its other operations.

Saab’s main products are computer systems, microwave electronics and antennas for satellites, and guidance and separation systems for launchers. In the latter area, Saab has a dominant share of the world’s commercial market.

Information and communication are becoming increasingly important to the military, as well as to civil authorities that are responsible for national security.

The space industry finds itself at an exciting juncture, where many systems can be utilized for different purposes. One example is the European navigation satellite system Galileo, which is under development and to which Saab is contributing key components. Galileo will be utilized in a diverse range of areas for public and private services, including the transportation and energy sectors, and by police and emergency services. Space operations further strengthen Saab’s high technological and research-intensive focus and its ability to assume overall systems responsibility in the development of a net-centric defense and a safer society.

Europe’s investments in space, including Galileo, are vital to the development of European cutting-edge technology, and also have considerable commercial potential.
Aviation expertise for military and civil applications

Few companies in the world have the ability to develop advanced fighter aircraft. Saab is one of them. Gripen is the world’s first fourth generation fighter aircraft and the first and only to be in operational service, which it has been since the mid-1990’s. Saab is also one of the few companies that can supply complex subsystems to the demanding commercial aviation industry. Another area where Saab is among the world leaders is the research and development of unmanned aerial vehicles.
Gripen is designed to be a highly advanced, flexible aircraft system with a very low operating cost. The design of its computer system allows the Gripen to easily adapt to new roles and facilitates continuous upgrades of the entire aircraft system. Gripen will remain a modern fighter aircraft for another 30-40 years.

Thanks to Saab’s expertise in systems integration, the aircraft is uniquely able to utilize a powerful data link to share large amounts of information with other Gripen fighters and other units. Gripen can therefore serve as a command and control center for a large formation of aircraft, and can lead or participate in operations on land or on sea. Gripen is also NATO-adapted to participate in international operations.

Saab has aggressively cultivated the export market. Gripen has already been selected by the air forces of Sweden, South Africa, Hungary, and the Czech Republic. This makes Gripen a world leader in the export market. Saab’s expert customer support means that a decision to select Gripen marks the start of a long-term relationship with the procuring country. In South Africa, for example, the introduction of Gripen has resulted in several cooperations between Saab and South African companies. Saab takes a long-term view of its presence in customers’ countries.
The wing that made it possible

Saab has applied its experience in military aviation to its commercial operations, previously through the development and production of its own commercial aircraft and today in its role as a supplier of key components and subsystems to commercial and military aircraft manufacturers.

Saab is developing and manufacturing the mid and outer fixed leading edge of the wing of the new Airbus A380 superjumbo, the world’s largest passenger aircraft. The program is worth an estimated USD 1 billion for Saab over the next 20 years. Saab is also engaged in testing and verification work related to the aircraft’s fuel, brake and landing systems.

Saab is also participating as a risk-sharing supplier in the Airbus A400M project to develop and manufacture the next generation of military transport aircraft. To date, 180 aircraft have been ordered by seven countries in Europe, with a market for another 200 to 300 aircraft.

Saab has a valuable leasing portfolio of its Saab 340 and Saab 2000 regional aircraft. More than 500 aircraft are in operational service by over 50 carriers in over 20 countries. Extensive support operations keep the aircraft attractive in the global market.

Saab’s support operations are the market leader in their class, with substantial experience and competence in the support and maintenance of aircraft manufactured by Saab as well as others. In addition to working on its own systems, Saab provides maintenance and component service for aircraft manufactured by Embraer, Boeing, Bombardier and Fokker, among others. Saab also provides maintenance for regional aircraft in Australia and Asia.
Military conflicts in recent years have demonstrated how useful unmanned aerial vehicles (UAV’s) can be. Intensive development work is now under way on new, more advanced systems. There is also considerable potential for a number of commercial applications.

UAV’s can already be used as sensor and weapons platforms. When they are into a net-centric defense, they are even more useful. For example, they can be used for information gathering in areas where conditions are dangerous and other units cannot be deployed without a clearer picture of the risks.

They have broad-based commercial applications as well. To make society safer, UAV’s could be used by emergency services and the coast guard, for medical transports or to find downed power lines.

Utilizing the experience it gained in the development of Gripen, Saab is developing unmanned aerial vehicles. The technical demonstrators SHARC (Swedish Highly Advanced Research Configuration) and Filur (Flying Innovative Low-Obtrusive Unmanned Research) have successfully demonstrated Saab’s proven expertise in key areas such as the capability to conduct safe, autonomous flights, including take-offs and landings.

With its competence in aviation, sensors and systems integration, Saab can offer systems that work together with other civil or military units in the air, at sea and on land.

Together with Dassault of France, Saab is the largest partner in the Neuron program, a European demonstrator project to study and develop the next generation of unmanned combat aerial vehicles. Demonstration flights are planned in Sweden in 2011. Saab is also studying medium-sized unmanned aerial systems for surveillance and communication for both international peacekeeping and commercial needs, where a potential market is expected by 2009.

Together with Europe’s other leading aircraft system suppliers, Saab is currently pushing for the development of harmonized regulations to integrate unmanned aerial vehicles in European airspace.

Development of UAV’s requires technical expertise on a broad as well as a detailed level, which is why a large part of development work will be done by international alliances. Saab’s expertise in aircraft systems and systems integration is a key to success and makes it a preferred partner. It also makes the development of UAV’s a future priority for Saab.

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**Next generation aircraft without pilots**

Saab utilizes its expertise in aviation technology to take part in international cooperations on unmanned fighter aircraft.
Situation awareness that provides decision superiority, and the ability to coordinate weapon systems, is crucial to maximize your defense capabilities.
Safer society when systems are linked together

Modern society is becoming more complex at the same time that the threats military and civil authorities face are becoming more unpredictable. To make sure that resources work together optimally in a crisis, you need efficient, robust and reliable information and communication systems.

Saab can assume overall responsibility for getting various systems to work together. This competence has been developed through its long-term alliance with the Swedish defense forces, where Saab has had principal responsibility for advanced and in some cases unique development projects. Saab’s ability to assume systems integration responsibility is also sought after by civil authorities and companies with information and communication systems that place high demands on reliability and security. The Swedish railway authority and the Swedish Rescue Services Agency are two examples of such customers.

Net-centric defense has a greater impact

Several military forces are currently developing a net-centric defense. The aim is to more flexibly link sensors, information systems, decision-makers and resources within a network. This creates an opportunity to better understand the situation, make faster decisions and put together a force with exactly the right components to handle a specific mission.

Such a situation might involve a military commander who, while planning a maneuver, must analyze information from manned and unmanned aerial surveillance vehicles, satellites and intelligence from headquarters, distribute this information to his subordinates and coordinate the maneuver with the support of troops in the air and at sea. All the information can be accessible to every unit and be updated in real time, giving everyone what they need to know as the situation develops.

Net-centric defense is as much a new way of thinking and working as it is a new technological solution. Through upgrades and modifications, existing materiel can in many cases be used more efficiently in a net-centric defense.

Saab’s extensive experience integrating complex systems and getting them to work together in system of systems is why it has been given principal responsibility for developing the basic structure of the Swedish net-centric defense. This work is being done in collaboration with Boeing, Ericsson and IBM. Boeing is also one of the main contractors responsible for the development of new defense systems in the U.S.

New systems for multinational assignments

The international dimension is growing in importance. Multinational troops on peacekeeping or conflict management missions have to be sure that the systems supplied by various nations’ militaries – and sometimes civil authorities – work together.
The demands on international systems create new opportunities for Saab. One example is the international Network Centric Operations Industry Consortium, NCOIC, which Saab played a part in founding. NCOIC is an alliance of 28 leading companies that are developing a uniform standard for the future net-centric defense.

**From individual systems to systems of systems**

Saab can take responsibility for systems integration services from an overall level down to individual subsystems. This could mean integration solutions for various subsystems such as Saab Surveillance System for air surveillance, Saab Future Soldier System for future information systems for individual soldiers, or command and control systems for air, land and sea applications. One example of the latter are command and control systems with automatic air defense capabilities that detect, prioritize and implement defensive measures against a number of incoming threats and are installed in the Visby, Göteborg and Stockholm class corvettes.

Saab is also the world's leading manufacturer of transponders for automatic identification, which are used to identify ships and facilitate traffic management as well as to support search and rescue missions.

The Saab Vessel Traffic Management System (VTMS), based on the global AIS standard, is an open system that can integrate information from a large number of sensors to show the real-time status of a sea area or coastline. Saab's system makes it possible to significantly improve security at sea and avoid collisions and accidents in ports and other high traffic areas. The system is flexibly designed and can be adapted to many different user requirements. Saab Vessel Traffic Management System is currently used along the coasts of China and Malaysia, among other places.
Saab has a leading position in naval command and control and fire control systems for small and medium-size vessels.

The advanced Saab Future Soldier System allows soldiers to interact effectively in large networks.
Saab 2000 Erieye AEW&C (Airborne Early Warning & Control) is a highly competitive system for air surveillance. It is also a good example of how Saab combined its know-how in systems integration with its experience from the development and production of turboprop aircraft to create a high-performance turn-key solution. AEW&C can be integrated with the customer’s existing systems and is well-suited to serve as part of current or future net-centric defense systems.

Comprised of a radar system manufactured by Ericsson and systems for ESM (Electronic Support Measures) and self protection from Saab, AEW&C is installed on the Saab 2000, a highly reliable and fuel efficient twin engine turboprop designed for low maintenance and optimized for high availability and quick turnarounds for refueling and service. The aircraft provides an excellent platform for radar and meets the AEW&C system’s demands for performing a 180 degree turn in less than 30 seconds to maintain its radar image.

Saab 2000 Erieye AEW&C can be used for search and rescue operations, surveillance and control of national borders and economic zones, and detection of illegal immigration and drug trafficking.
**Services for civil and military customers**

Saab’s competence in command, control and telecommunications systems, in combination with its advanced technical services, allows it to take responsibility for its own and other manufacturers’ products. Saab’s commitment can include further developing and ensuring functionality throughout a system’s useful life. This also makes the company attractive to customers who, in an effort to streamline, are looking to outsource portions of their operations such as logistics and operational support.

Saab offers sophisticated technical services, systems integration, and systems and aftermarket solutions. It offers services for every stage of a system’s lifecycle, from needs analysis, systems integration, delivery inspection, technical support and maintenance to decommissioning. As an independent consultant, Saab is also able to manage acquisition, integration, verification and validation projects. The company’s services cover a variety of technical specialties and applications, including robust communication systems, aeronautics systems, road and air traffic control system and sensor systems.

Saab has customers in both military and civil markets. Although its largest customer in this area is the Swedish defense forces, it also services customers in industry and the public sector, as well as other defense manufacturers in Sweden and abroad.

In a state procurement program for 51 Swedish public authorities, Saab ranked highest among companies that offer IT consulting services. These services are provided for any market and industry.

For customers, it is important that Saab is active in both military and civil sectors. The latter is driving technological development in communications and logistics, in the same way that the military market is driving development in areas such as systems and information security, decision support, modeling and simulation.

Saab also has specialists in measurement technology. Aside from Sweden, expansive operations are currently conducted in Finland, Germany and Denmark.
September 11, 2001 has become a symbol for the new threat scenario our societies face. Since the end of the Cold War, the greatest threat in Europe is no longer a conventional invasion. The terrorist attacks of recent years have demonstrated how vulnerable society is when even a few terrorists use modern technology against its citizens.

However, it is not only terrorists who are threats to modern society. The loss of power supply, disruptions in traffic management systems or accidents involving hazardous substances and natural catastrophes are other examples of events that can have tremendous, detrimental consequences.

The police and other criminal justice authorities fight crime, the armed forces defend the country and participate in international military operations, and emergency services stand prepared if an accident should occur. However, problems can arise when trying to coordinate their efforts and making the right information accessible to everyone who needs it. Since each of these authorities has built up its own information and command and control systems, they are rarely compatible, which can lead to significant problems and efficiency losses when they have to be coordinated.

Although it might seem easy to connect them together, the complexity of many of the systems our society relies on makes issues that would seem easy to resolve, such as standards for transferring information, complicated.
Linking civil and military systems

Defense is the area where the most progress has been made in transitioning to a network structure to boost performance and better meet modern-day threats, even though efforts are still in the early stages. Protecting a country today is less a question of meeting a military threat at the border and more of protecting key services that society relies on. Energy distribution, traffic management systems and communication networks are a few examples. Saab has the know-how to build robust and reliable systems that at the same time ensure fast, efficient information flows and optimize the use of various resources. This creates totally new opportunities to handle threats or strains to society.

Different countries have made different progress in this effort. They may, for example, have connected the radio and data communication systems of the police and emergency services with those of the defense forces to coordinate rescue efforts after an accident that requires the use of military helicopters. Or they may be able to transfer information from a military surveillance aircraft and various radar sensors to the coast guard to track a ship suspected of smuggling, at the same time the police are tracing the electronic financial transactions.

Its experience in systems integration makes Saab a key player in this work. An important step involves RAKEL, a digital radio communication system that will be shared by Sweden’s public security authorities. As part of a consortium together with Nokia and Eltel Networks, Saab will integrate and design the system and have responsibility for radio planning and security.

Efforts to make society safer will be an important area for Saab in the future.
On the technological front line

Technological expertise at the highest level is a priority for Saab. To retain and develop this expertise, Saab cooperates extensively with other companies, universities and institutes of technology. Saab’s investments in research are highly goal-oriented – slightly over 20 percent of turnover is devoted to research and development work to ensure that Saab remains on the technological front line.

Saab participates in several different types of national and international research and development cooperations. Some involve multinational product development, where Saab works together with other companies to develop new systems and products. Examples include its participation in the development of the Meteor medium-range air-to-air missile, an alliance with five other nations, and NLAW, where Saab has principal responsibility for development of the next generation light anti-armor system for the British defense forces.

Saab also participates in various European research technological development programs, such as the EU’s framework program for research and development. Another international cooperation in which Saab participates is NCOIC, the Network Centric Operations Industry Consortium, which was formed to create an international standard for future net-centric defense.

Cooperation with universities and institutes
Saab cooperates closely with a number of universities and institutes of technology in Sweden and internationally. In Sweden, one of the most important is the National Aeronautics Research Program (NFFP), a collaboration between the defense industry, represented by Saab, Volvo Aero and Ericsson Microwave Systems, and a number of universities and institutes of technology. The NFFP cooperation has served as the basis for Saab’s demonstrator of an unmanned aerial vehicle, among other things. This type of interplay between industry and researchers can generate new fields of research that can lead to important advancements.

Saab can offer advanced simulators for many different applications, including training for Gripen pilots.
Saab sponsors a professorship at Chalmers University of Technology and a number of adjunct professors, who are Saab employees on part-time leave to work at various colleges and universities. Another example is LinkLab, a collaboration between Saab and Linköping University to create a center of excellence for aeronautical research and development. Saab also monitors international developments, including through a technology office at MIT, the Massachusetts Institute of Technology.

**Competent employees – a key to success**

For Saab to conduct research and development of the highest international caliber, it must have highly skilled employees. The company therefore places great emphasis on attracting, developing and retaining qualified employees. Five percent of all civil engineers at Saab have research training - this is a high number that Saab is trying to increase even further.

Saab’s industrial doctorate candidates are another link between the company and the research world. After a minimum of two years of employment at Saab, these civil engineers take part in a research program conducted together with universities and institutes of technology. Saab has more than 30 doctorate candidates in cooperation with Swedish and international schools.

Furthermore, Saab arranges the prestigious “Teknik-SM” technology championships, where the nation’s engineering students compete each year for the title of Swedish champion in future technology. Saab’s aim with the competition is to promote interest in engineering and encourage innovative thinking and creative problem solving. In 2005, 150 three-man teams participated in the competition.

**Expertise, trust and drive**

Saab’s fundamental values can be summarized by the words expertise, trust and drive. This reflects the goals of professionalism and world-class technological expertise, an open working climate, and persistence, commitment and pride in Saab during good times and bad. This approach has created a positive climate for cooperation with union representatives.

A non-hierarchical philosophy and a modern management philosophy help Saab to effectively capitalize on the competence within the company. Personal responsibility at all levels, in combination with employees’ technological know-how, creates a dynamic, innovative climate, which is reflected in the large number of patents the company generates.

To ensure access to future leaders and further development of its current leadership corps, Saab offers a range of development programs.
Cleaner environment with modern technology
Environmental work is an important part of Saab’s efforts to be a leader in the application of technology. In defense, aviation and space, high demands are placed on security and technical performance. This means that materials that are classified as hazardous for human health and the environment sometimes must be used. Replacing hazardous materials whenever possible is a priority at Saab, which has initiated and participated in several national and international projects in this area. As environmental requirements increase, Saab is being asked to conduct risk audits prior to the decommissioning of defense materiel and, in some cases, to handle the entire decommissioning process.

Technology and knowledge for all of society
Saab’s major investments in research and development are naturally an asset to the company, but they are also a technological incubator for the country. The advanced research cooperations between Saab, demanding customers, universities and institutes of technology and other companies, generate knowledge and ideas that spread far outside the defense industry and can lead to new products, business ideas and companies.

A hothouse for new businesses and products
Saab offers a creative workplace where skilled employees occasionally generate ideas that fall outside Saab’s core business. The company has a structured process where such ideas can be developed until they are ready to be spun-off and stand on their own. Saab thereby takes responsibility for ensuring that technological competence and ideas develop into products that will benefit all of society.

Many new products, business ideas and companies have been generated in this way through Saab’s innovations. Examples include Saab Rosemount Tank Radar® and Kapsch TrafficCom AB, which together now have a turnover of SEK 1.3 billion per year. Other examples are MX Composites AB, which develops and designs products in metal matrix composites for the automotive and aviation industries, and A2 Acoustics AB, which is based on expertise gained from Saab’s investments in commercial turboprop aircraft and Gripen.

In combination with the transfer of knowledge that takes place through its various cooperative projects, Saab serves as a growth engine for the entire country.
Saab in the global market

Saab is continuing to expand its operations in markets outside Sweden. The company is organized in business units. Together with Saab International, they are Saab’s points of contact with international customers. Through Saab Industrial Cooperation, Saab can also offer industrial collaborations in the form of offset programs.

Saab’s business units have specialized expertise in various systems and products, while Saab International is a group function in which Saab has brought together regional, country and customer knowledge from its various markets. Saab International provides the business units with information about the market and assists at every step of the way, from the first contact with the customer through the entire sales and aftermarket process.

Most contracts also involve Saab Industrial Cooperation, which coordinates Saab’s offset commitment between the business units and Saab’s outside business network. Based on the customer’s needs, Saab creates an offset program that the customer can consider in its evaluation process. Saab Industrial Cooperation then takes part during implementation, to ensure that the program meets with the customer’s expectations and that the goals agreed upon – e.g. in terms of industrial, commercial and research-related cooperations – are being achieved.

MARKETING ORGANIZATION

Group Management

BUSINESS UNITS

Saab International

Western/Northern Europe

Central/Southern Europe

Americas/Africa

Middle East/Asia/Pacific

Saab Industrial Cooperation

Saab Aerostructures
Saab Aerosystems
Gripen International
Saab Aircraft
Saab Aircraft Leasing
Saab Aviocomp
Saab Barracuda
Saab Bofors Dynamics
Saab Contracting
Saab Ericsson Space
Saab Metech
Saab Nyge Aero
Saab Systems
Saab Training Systems
Saab Transponder-Tech
Saab Underwater Systems
SaabTech
AerotechTelub
CSM Materialteknik
A history of high technology

When Saab, Svenska Aeroplan Aktiebolaget, was founded in 1937, its primary aim was to meet the need for a domestic military aircraft industry in Sweden.

The aircraft company
When deliveries of its first aircraft, the light bomber and reconnaissance aircraft B17, Saab became the dominant supplier to the Swedish Air Force. Saab and the Swedish Air Force have progressed together through various generations of military jet aircraft, introducing world-leading technology every step of the way.

In the late 1940’s, Saab introduced the J29 Tunnan fighter, which was followed in the 1950’s by Lansen and later by Draken (1960) and Viggen (1971).

The first deliveries of Gripen, the first and only fourth generation in service fighter aircraft, began in 1993. In 1999 South Africa signed the first export order for Gripen.

The engineering company
Military aircraft production led not only to commercial aircraft production but also a number of other businesses and products. In the 1940’s what is now known as Saab Automobile was spun off. In the 1960’s Saab helped to create Sweden’s computer, mis-
sile and space industries. In 1969 Saab and Scania merged to form Saab-Scania, a company combining aircraft and defense systems with the manufacture of automobiles, trucks and buses. In 1990 Saab Automobile was created. Five years later, in 1995, Scania was separated from Saab.

**The defense company**

In 2000 Saab acquired the defense group Celsius, and with it over a century of Swedish defense industry history. Bofors, for example, has manufactured cannons since the second half of the 19th century, and SaabTech and Saab Systems trace their roots back to Philips, Datasab, Ericsson, AGA and Satt Electronics. By acquiring Celsius, Saab brought a large part of Swedish defense industry history together under one roof and created Scandinavia’s dominant company in the field. The broad-based product range is clearly focused on future defense needs and a safer society.