



SAFT IN 2013





SAFT IN BRIEF

Saft has long been the world's leading designer, developer and manufacturer of advanced technology batteries for industry.

Its multi-technology battery systems meet the needs of a wide variety of customers worldwide: nickel-based and primary lithium batteries in industrial infrastructure, transportation, civil and military electronics; lithium-ion solutions in energy storage, telecoms, space and defence. Saft continues to develop new generations of batteries for new applications, helping customers develop innovative products and services.

Saft's greatest successes are those of its customers.



INNOVATION
AWARD
2012

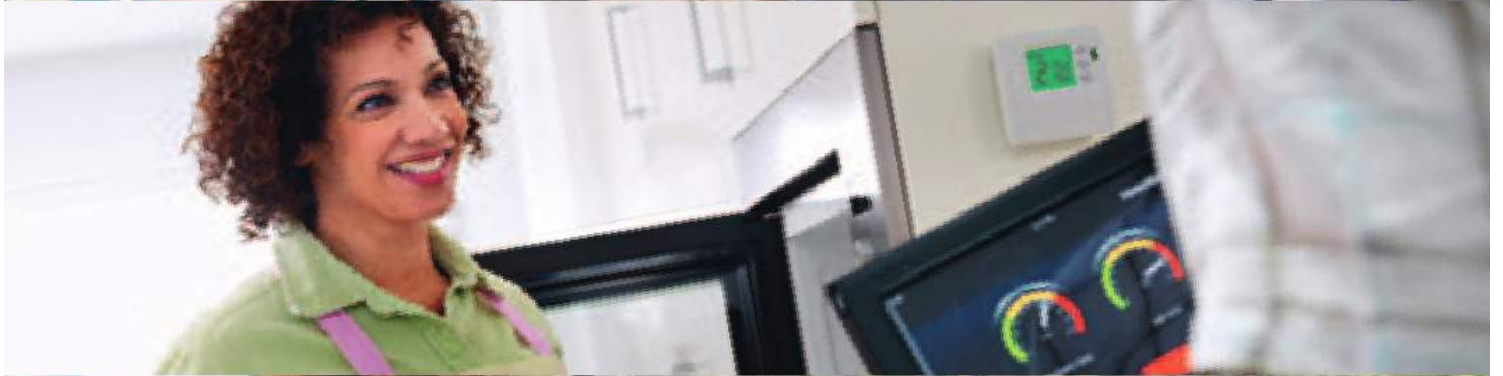
Saft has received the 2012 Innovation Award from the Scuderia Ferrari for its highest overall contribution to innovation during the last five years, thereby helping to maximize the team's results in the Formula One Championship. The criteria for the award were innovation, performance, reliability, process and cost control.



PORTFOLIO

Our greatest successes are those of our customers

SUCCESS STORIES, CUSTOMER STORIES



ENERGY STORAGE

Major player in renewable energy storage



GRID COMPATIBLE - Intensium® Max is Saft's ready-to-install containerised energy storage system designed for today's electricity grids and the smart grids of tomorrow. Its efficient, long-life Li-ion technology provides megawatt-level energy storage. The system is scalable to suit a wide variety of applications, for example to smooth intermittent generation or reduce ramp rates.

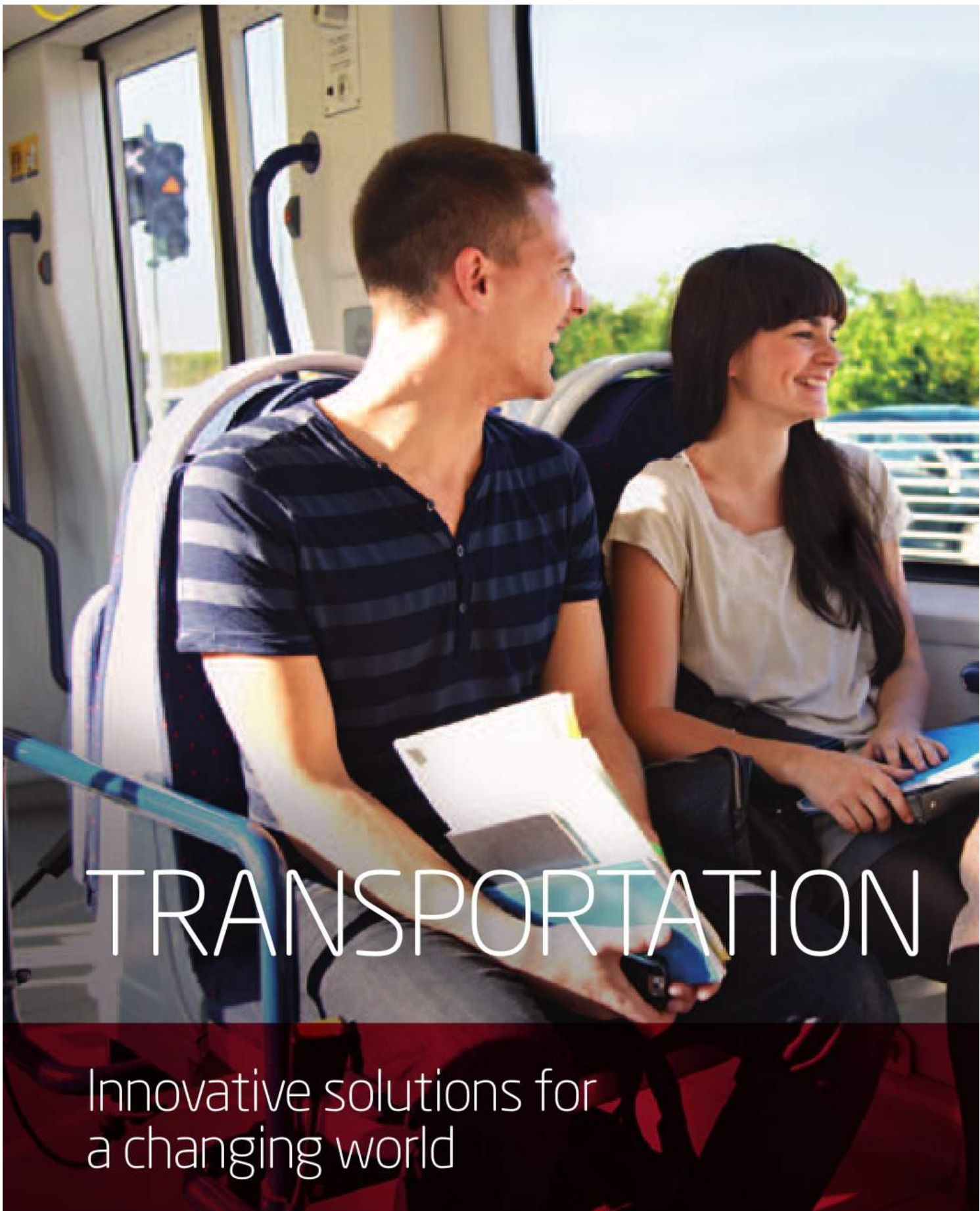


Integrating renewable energy sources into the grid is advancing rapidly. Saft is working with power utilities in their quest for effective solutions for the generation, transmission and distribution of electricity thanks to its Li-ion energy storage solutions.



"Installing Saft's energy storage system on Gran Canaria is an ideal opportunity to evaluate the technical and economic viability of this innovative solution by making reserves of energy available in isolated locations, distribution substations, and even for energy arbitrage."

Pablo Fontela Martinez, Project Manager STORE, Endesa



TRANSPORTATION

Innovative solutions for
a changing world



HYBRID/REGENERATIVE - Saft has developed a new-generation compact, modular Li-ion battery solution to meet the specific needs of the growing regenerative hybrid traction rail market. The modules can be installed on a variety of rolling stock and are designed to suit every power need. Operators using this solution can save up to 30% of their energy costs and reduce emissions.



Soft continuously designs and produces new generations of batteries responding to the rail industry's challenges in terms of reliability, safety and performance. Its catalogue ranges from individual batteries to fully integrated, turnkey battery systems, for new and replacement projects.



SOCHI - Soft nickel-based rail batteries have been selected by Siemens to support emergency backup and starting power applications onboard 38 electric trains that will serve Russia's Sochi Olympic Winter Games in 2014. They can deliver exceptional performance at temperatures as low as -40°C.



UTILITY METERING

High-level performance
for a market on the move



LONG LIFE - For reliable, cost-efficient and long-lasting meters, batteries with these same qualities are crucial. Saft primary lithium batteries are the ideal choice. They are safe, compact and reliable, with an exceptionally long life of over 20 years. Also, Saft's experienced application engineers help customers face the challenges of a changing market environment as they adapt or upgrade their equipment.



Utility metering continues to be a strong market for Saft as it moves in the direction of the smarter metering to support the needs of the smarter electricity, gas and water grids being deployed. The market is expecting high reliability and over 20 years life for the power solutions and Saft has the technologies and track record to support these needs.



"The key point in our partnership with Saft is the overall technical support. This enables an excellent understanding of our needs, with the aim of finding the most suitable solution. The strength of Saft is the consistency of support on all aspects: technical, logistics and sales, with a constant concern for quality and reliability."

Jean-François Pollet, Global Category Manager Battery, Itron

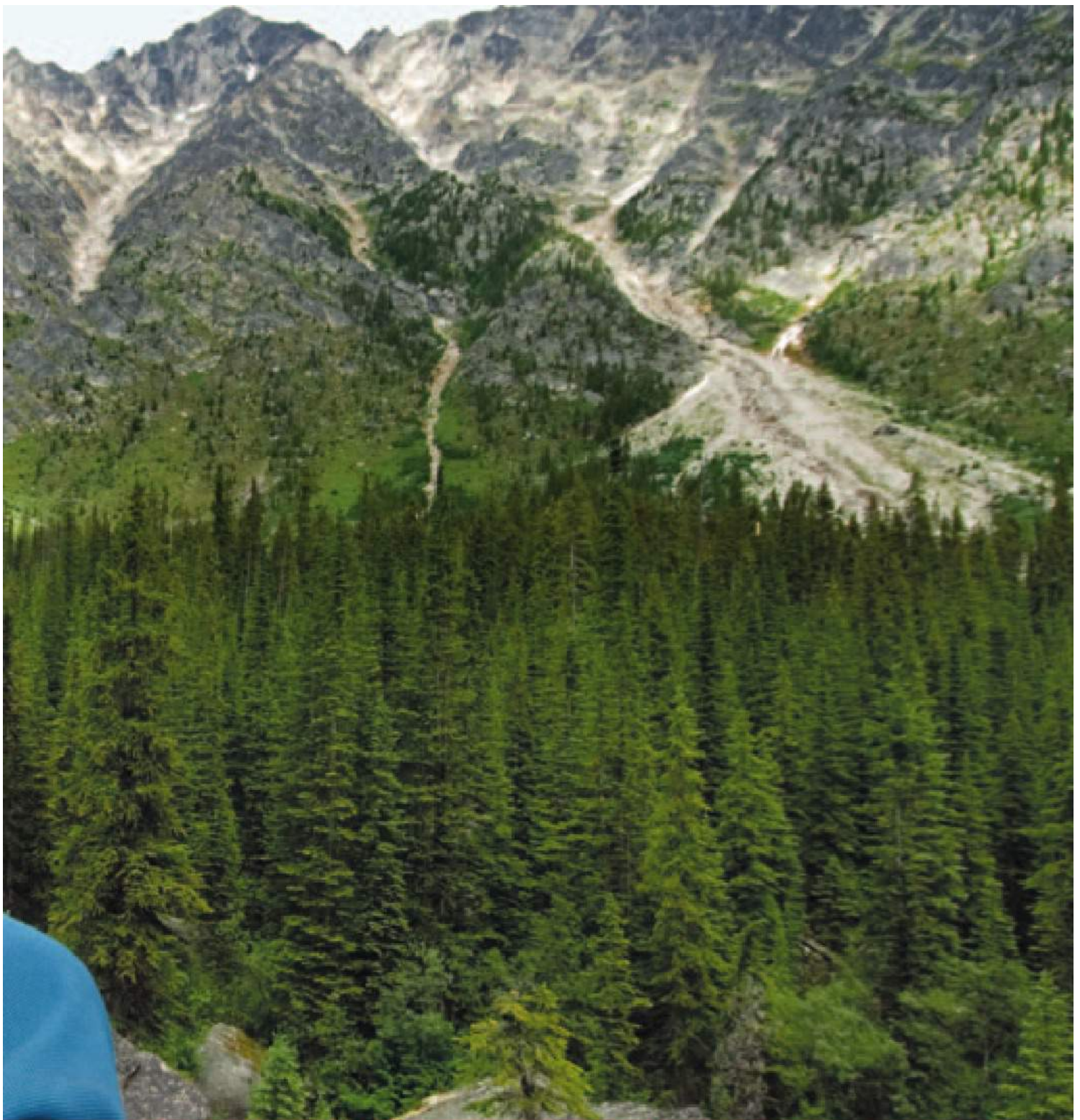


TELE- COMMUNICATIONS

Experience in support
of telecoms networks' new needs



HIGH CYCLING CAPABILITY - The Saft Evolion® Li-ion module for the telecom industry offers a unique combination of float charging capability and high cycling performance. The Evolion® provides deep cycling capability, fast charging, and high energy density. It is maintenance-free and reliable over a wide range of operating temperatures. It is ideal for off-grid hybrid power systems, but can also act as a compact backup system for a wide variety of telecom installations.



Saft supplies emergency batteries to telecommunications operators for backup power in the event of a network fault. Its latest ranges of nickel and Li-ion batteries are designed to operate for long periods without maintenance and, above all, in difficult environments.



"Our primary requirements were low weight and compact dimensions, combined with fast charging, deep cycling capability, long cycle life and reliability over a wide range of operating temperatures. Saft has developed the Evolion® battery to meet all these criteria, so it was the ideal choice."

Francesco Di Noto, Ausonia Program Director

SERVING CUSTOMERS

Saft's 4,066 employees across 18 countries are committed to serving and marketing customers worldwide.

The company's sales and marketing departments are deployed in 30 sales offices located on five continents. Each Saft division has its own sales team, though if the customer situation demands, one division can work with the other in certain markets.

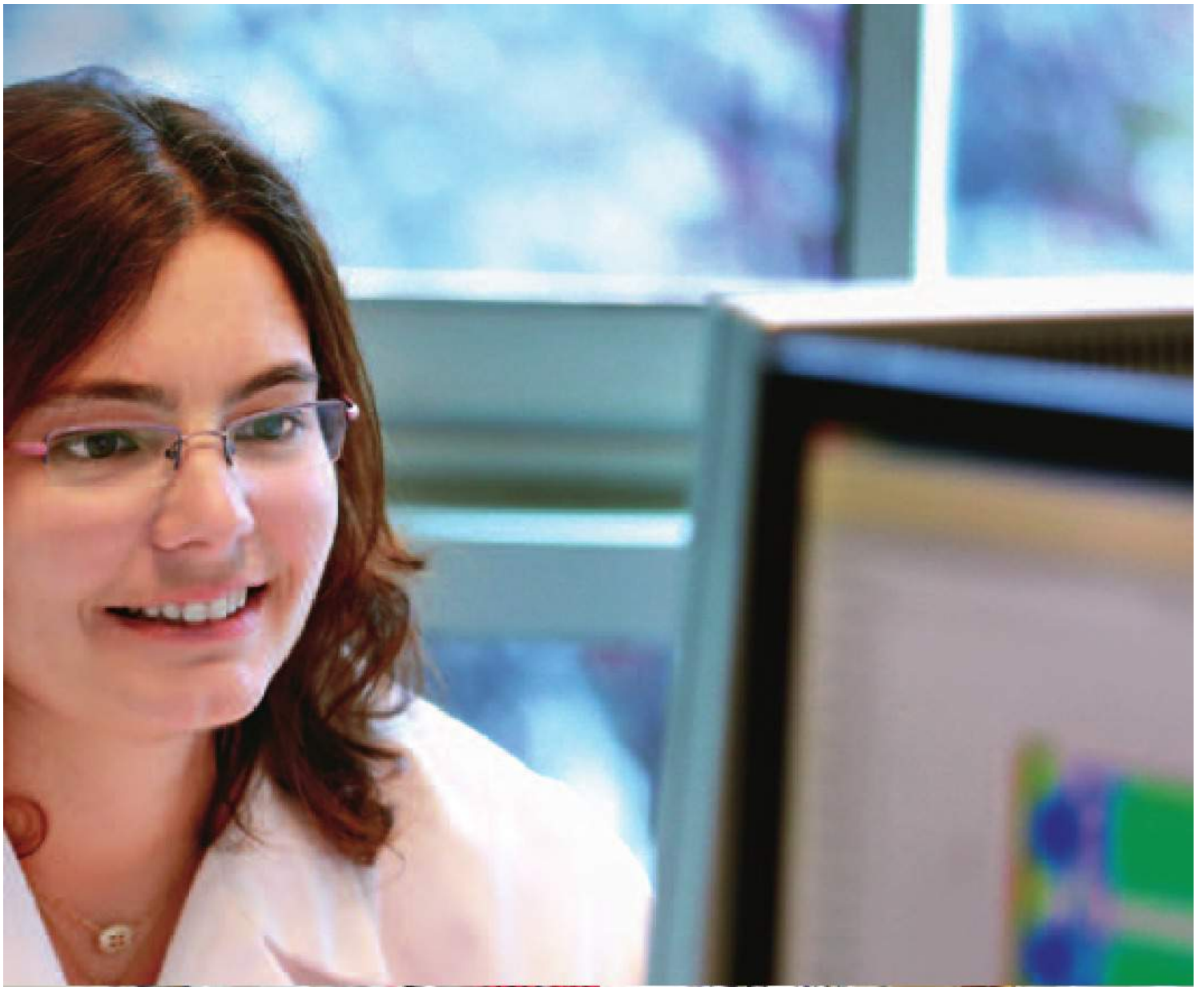
The Industrial Battery Group sales and marketing teams comprise 129 people. They are organised by geographic zone, whereas the Specialty Battery Group's sales teams of 75 people are structured by brand. In certain markets or regions, the sales teams are complemented by agents or distributors with whom the company has been working for several years.

Thirty sales offices on five continents

Most of the sales and marketing teams are based in Europe and the USA. However, their numbers in emerging countries, particularly throughout Asia and Brazil, are constantly on the rise.

On most of the advanced-technology battery markets targeted by Saft, the Saft® brand is a key criterion in the customers' purchase decisions. However, Saft also markets products under other well-known brands: Alcad®, Tadiran®, Nife® and Ferak®. This strategy enables the company to leverage its position on certain specialised markets throughout the world and meet the diverse needs of its customers.





MEETING CUSTOMER NEEDS, WHEREVER THEY ARE

Energy – defence – transportation – telecoms. These are markets Saft serves. They are global. So is Saft. Its international scope is built on a long-standing, state-of-the-art manufacturing base anchored in Europe and North America. Its high-technology battery solutions make an important contribution to major programmes, be they in Europe, America, BRIC or elsewhere, supported by a wide network of sales offices guaranteeing responsiveness to local customer needs.



AUSTRALIA

- Sydney

BRAZIL

- São Paulo

CHINA

- Hong Kong
- Shanghai
- ◆▲ Zhuhai

CYPRUS

- Limassol

CZECH REPUBLIC

- Prague
- ▲● Raskovice

FRANCE

- ★● Bagnolet
- ▲ Bordeaux
- Bourges
- ▲ Nersac
- ◆● Poitiers

GERMANY

- ◆● Büdingen
- Nuremberg

GREAT BRITAIN

- Glasgow
- Harlow
- ◆● South Shields

INDIA

- ▲● Bangalore
- Delhi
- Mumbai

ITALY

- Milan

NETHERLANDS

- Eindhoven

NORWAY

- Osteraas

RUSSIAN FEDERATION

- Moscow

SINGAPORE

- Madrid

SWEDEN

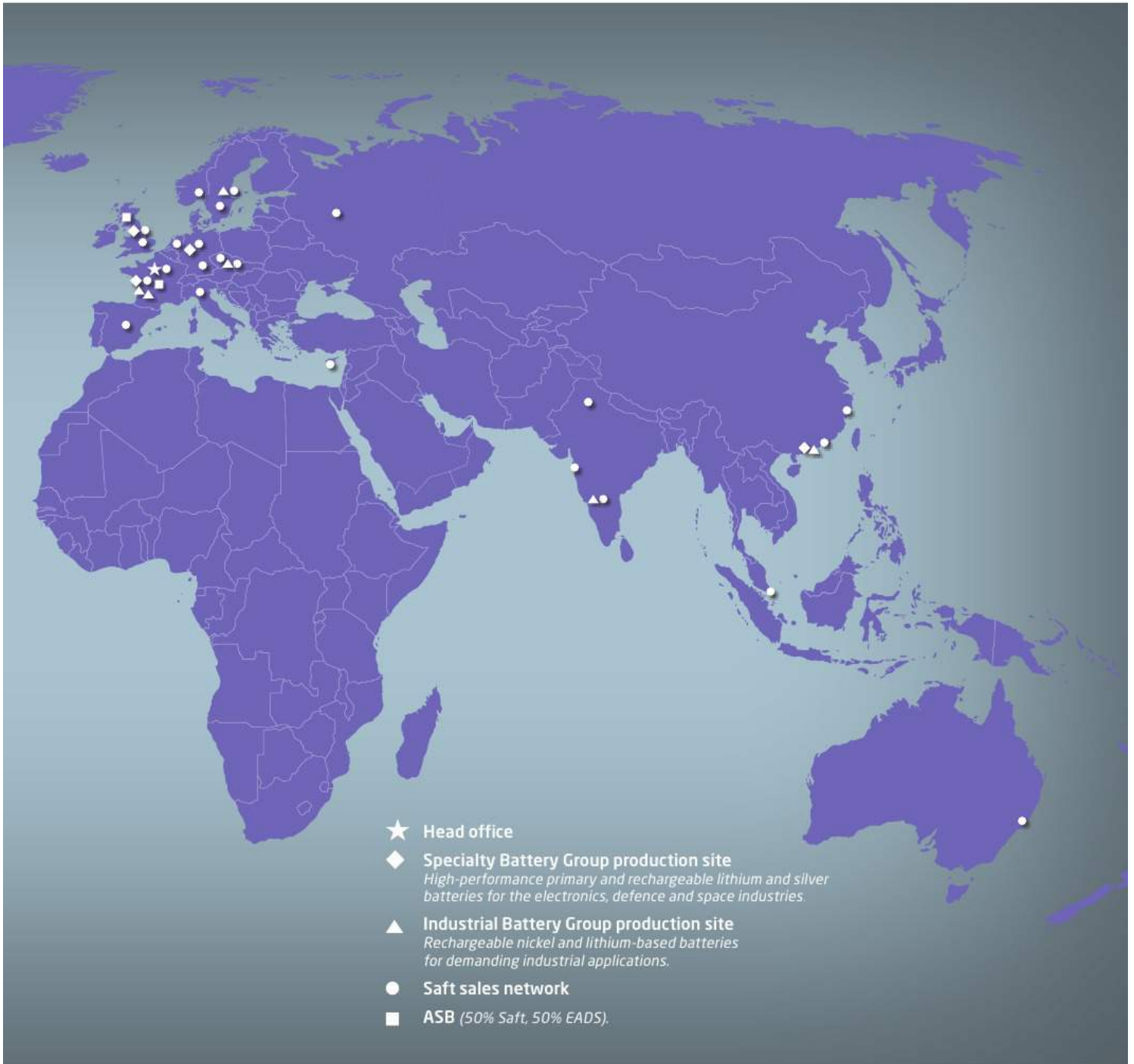
- ▲● Oskarshamn
- Växjö

USA

- ◆●■ Cockeysville
- ▲● Jacksonville
- North Haven
- Port Washington
- ◆● Valdese
- ▲● Valdosta
- ▲ West Palm Beach

18
COUNTRIES
AROUND THE WORLD

4,066
STAFF
WORLDWIDE

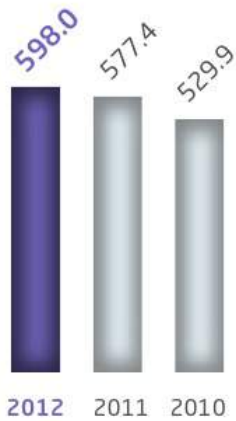


30
SALES
OFFICES

15
MANUFACTURING
SITES

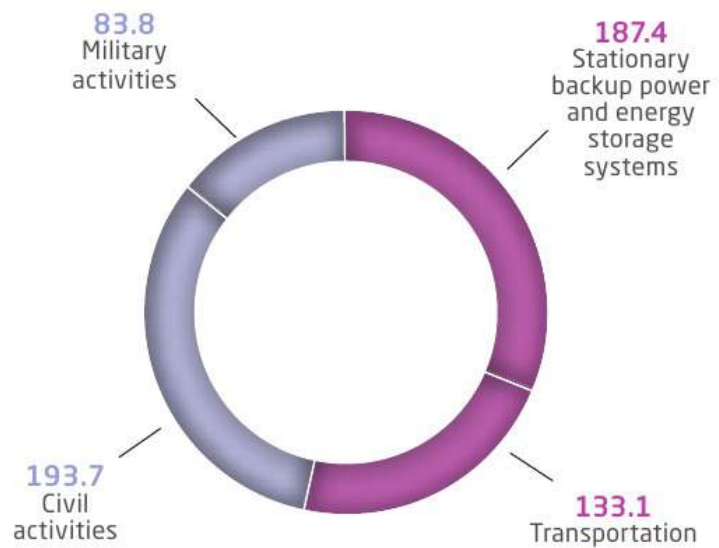
RESULTS 2012

SALES*
(in € million)



* Excluding SNBs
(Small Nickel Batteries)
sold by the Group.

2012 CONSOLIDATED SALES BY MARKET SEGMENT
(in € million)



CONSOLIDATED SALES BY ACTIVITY
(in € million)



€598m
SALES IN 2012

ACTIVITIES

Saft's business is divided into two divisions:

INDUSTRIAL BATTERY GROUP

The Industrial Battery Group (IBG) manufactures rechargeable batteries for transport, stationary backup power and energy storage.

SPECIALTY BATTERY GROUP

The Specialty Battery Group (SBG) builds primary and rechargeable batteries for civil and military activities.

INDUSTRIAL BATTERY GROUP

Nickel-based batteries represent the traditional expertise of Saft's Industrial Battery Group (IBG). On the foundations of this long heritage, the Group has successfully developed lithium-ion technology in order to meet the ever diversified requirements of its customers, whose applications benefit from the smaller, lighter, longer-life and versatile batteries that Li-ion offers.

IBG is now going that extra mile in satisfying customer needs by offering not only systems integration, for example in energy storage systems, but also full turnkey solutions that include services such as installation, commissioning and training across all its markets and segments.

€320.5m

SALES IN 2012*

*EXCLUDING SALES OF SMALL NICKEL BATTERIES (SNB)

53.6%

OF GROUP SALES



SAFT IS
THE LEADING SUPPLIER
OF BATTERIES FOR
THE AVIATION MARKET,
WITH BATTERIES
ONBOARD 2/3 OF
THE WORLD'S FLEET OF CIVIL
AND MILITARY AIRCRAFT.

MAIN APPLICATIONS

Aircraft safety and starting systems, high-speed trains, urban transport networks, backup power systems for oil and gas plants and industrial facilities, power generation and distribution systems, storage for renewable energy systems, telecommunications networks, motive power, trucks, buses, scooters and sports cars.

Saft's Industrial Battery Group had an eventful 2012. During the year Jacksonville was ramping up production and shipping new products, while the second manufacturing line was commissioned. In addition, the new, state-of-the-art factory in India was completed, doubling manufacturing capacity in a market that is growing rapidly. It was also decided to open a subsidiary in Russia.

On the product side, the new Super-Phosphate™ battery is now on the market, as is the high and low temperature nickel-based SRA cell range for railway applications.

TRANSPORTATION

Rail transport

Saft supplies railway and mass transit operators as well as train manufacturers primarily with nickel-based batteries for backup power for communication, lighting, air-conditioning and critical safety applications such as emergency braking and for door opening systems.

These were an increasing number of rail projects in 2012, particularly in China and emerging countries. In addition to its launch of the SRA cell range, an enhanced nickel-based solution for extreme temperatures, IBG also brought out its 250V modular onboard Li-ion battery for hybrid/regenerative traction resulting in energy efficiency and reduced environmental impact.

IBG received a number of rail transport contracts, including the supply of MRX battery systems for the Electrostar trainsets for Southern Railways in the south of England. These will be delivered as turnkey, installation-ready packages, complete with control equipment and interfaces to communicate with the train systems. MRX batteries will also equip the tram-train fleet in Karlsruhe, Germany, and the Pendolino high-speed trains in Finland. In addition, Saft will supply backup batteries for the Ankara (Turkey) metro network.

Aviation

Saft is the world's leading supplier of battery systems for the aeronautics industry, with its batteries onboard two thirds of the worldwide fleet of civil and military aircraft.

In military aviation, Saft continues to supply two advanced Li-ion battery types for Lockheed Martin's JSF strategic warfighter under Low Rate Initial Production contracts. Saft's advanced battery technology provides the high power, low weight and minimum volume to ensure mission readiness of this US air superiority fighter.

For civil aviation, one of the highlights of the year was also the beginning of deliveries to Boeing for onboard backup power to support the new 747-8 very large aircraft.

ENERGY STORAGE SYSTEMS

Energy Storage Systems (ESS) began to have major successes, thanks to a number of orders and deliveries in 2012 to some major customers – who need a reliable supplier with excellent technical know-how. Saft as a pioneer of Li-ion technology with its versatility of application is focusing on two principal ESS market segments: the integration of renewable energy sources (RES) into the grid, which is the most vibrant ESS segment today and small and residential ESS.

RES integration is fast evolving, especially on islands where intermittency of RES electricity generation is more and more critical, and it is also the case in the US and in Canada. In 2012 Saft has upgraded its solution for this market – the 1 MWh Intensium® Max 20 Li-ion battery system, built around modules/cabinets, assembled in a 20-foot container with built-in safety system and powerelectronics – and booked many contracts for such containerized solutions. For example, it has provided energy storage for the STORE project on the Canary Islands.

The Intensium® Max 20 containerised systems for this contract were manufactured at Saft's assembly facility in Bordeaux, France.

€133.1m

TRANSPORTATION SALES
IN 2012

€187.4m

STATIONARY BACKUP POWER AND ENERGY
STORAGE SYSTEMS SALES IN 2012



SAFT MSX BATTERIES
HELP KARLSRUHE (GERMANY)
TRAM-TRAIN TO RUN ON-TIME.
THE ONBOARD BATTERIES
PROVIDE EMERGENCY
BACKUP POWER
FOR THE VEHICLE'S
CRITICAL SYSTEMS.

IN 2012, SAFT ALSO LAUNCHED ITS FIRST ONBOARD LI-ION BATTERY SYSTEM TO CAPTURE AND STORE TRAIN BRAKING ENERGY.

The same range, this time manufactured at Saft's new plant in Jacksonville, Florida, has been delivered to support the "Hawaii Renewable Energy Storage System" project. Saft is also participating in another, very innovative project led by the South-Eastern Pennsylvania Transportation Authority (SEPTA), whereby the braking energy of trains is captured in a fully integrated, containerised Intensium® Max 20 Li-ion battery storage system and injected into the regional electric grid.

On the residential side, Saft is focusing initially on the German market, working with a network of installers and distributors to deliver Li-ion technology. For example, Saft is providing Li-ion smart storage solutions for Schüco's Energy Manager in-building PV energy storage systems. Saft is also co-operating with Nedap on photovoltaic energy storage. Success in the German market will act as a springboard for penetration into other countries.

IBG aims to continue its efforts to expand the range and size of its offerings to fit specific customer needs, develop integration skills and offer turnkey solutions including consulting and services.

STATIONARY BACKUP POWER

Industrial standby

The IBG division develops and manufactures nickel-based batteries to guarantee backup power. Markets include oil and gas, power generation and distribution, as well as railway signalling systems.

In this segment, the nickel-based maintenance-free Uptimax, introduced in 2011, is now shipping to customers, and the rack-mounted Li-ion Intensium® Flex battery system is being developed for backup power supply for data centres.

Telecommunications networks

The role of batteries for telecommunications network backup is to provide power in case of grid failure.

Saft's Sales in this segment continue to grow in 2012, both in nickel-based and Li-ion technologies.

In addition to penetrating the wireless telecom market in North America, Saft has registered a number of sales for its Evolion® Li-ion batteries, launched in 2011. Of particular interest is its application in hybrid diesel generators for off-grid Base Transceiver Station applications. This concept integrates a variable speed diesel DC generator with the Evolion® battery; the generator simultaneously charges the battery and powers the site load. When the battery has been fully charged the generator shuts down and the battery takes over as the primary source of power. This approach offers major savings in fuel consumption and also reduces CO₂ emissions.

SPECIALTY BATTERY GROUP

Saft's Specialty Battery Group (SBG) is acknowledged as the world's leader in the design, development and manufacture of high-performance primary lithium and lithium-ion (Li-ion). Battery systems meeting customer needs in the civil and military electronics industry, defence and space industries.

Saft is the leading provider of Li-ion batteries for space and defence and also supplies silver-based batteries for conventional defence applications such as electric torpedoes.

By delivering state-of-the-art technology, reliability, long life and outstanding performance, SBG's solutions have a significant impact on the effective, long-term operation of its customers' products. SBG's success, therefore, is the result of a strong relationship with customers, based on quality, support and value.

€277.5m
SALES IN 2012

46.4%
OF GROUP SALES

In 2012, SBG made a number of important investments during the year, including the launch of the TLM high power, small format, primary lithium technology targeting medical, and telematics, naval product development, expanded test facilities for space-related solutions, as well as longer-term work on developing the next-generation space cell.

Among the highlights of 2012 for SBG were a solid performance in the metering market, a record performance in the oil and gas exploration sector, with batteries for tools needing to withstand high temperature. Also of special note is the first order in the promising civil marine segment.

CIVIL ACTIVITIES

Civil electronics

With its two major brands, Saft® and Tadiran®, the Saft Group in 2012 continues to be the world's leading supplier of primary lithium technologies for the main targeted market segments. With their high performance, long life, reduced weight and high reliability, lithium-based batteries are used to power a wide variety of key applications.

The civil electronics sector was one of the key businesses for SBG. Saft maintained its focus on delivering products that meet its customers' needs. For example, Saft has launched its rapid response product range in its Tadiran® brand which minimises any voltage drop at the beginning of discharge after storage, making it a highly competitive solution with improved reliability for long life applications.

Saft is engaged with most major meter manufacturers, who appreciate the high reliability of the Saft Group's batteries. The major growth in smart metering has been in North America, in the last few years, where Saft is clearly the market leader. The next wave is expected in Europe, where major programmes have been initiated. The smart electricity meter market, especially in China, has matured.

In the oil and gas industry, Saft batteries support vital systems in onshore and offshore production in oil drilling and well completion applications, as well

as oil and gas exploration and pipeline inspection. They are used in a variety of applications where their versatility provides a combination of reliability, resistance to harsh environmental conditions, long life span and minimum maintenance needs. In some applications, such as measurement while drilling (MWD), Saft lithium batteries perform in some of the most severe environments, where temperatures can exceed +100°C, pressures are extreme and vibration and shock loadings are severe. Development focus will be on very high temperature products, which should contribute to further growth in this sector in the coming years.

2012 was a record year for battery sales to the oil and gas industry, thanks to advanced electro-chemistry efforts and continued improvement of the Saft Li-ion offering, as well as emphasis on new customers, markets and applications.

In 2012, Saft worked on further improving its positioning in other existing and emerging markets in the civil electronics field. Saft is developing new Li-ion products for the workstation on wheels medical market with a product launch in March of 2013. Saft is also well positioned for the e-call automotive systems and working on further strengthening its position in the emerging M2M and wireless sensor markets.

Space

Saft is the world's leading company for the design, development and manufacture of Li-ion batteries for satellites used in communications, scientific and defence applications and is continually breaking new ground in this area. Satellites represent the major share of Saft's space activity. However, the company also equips satellite launchers, where it has pioneered solutions based on lithium-ion technology combining lighter weight with improved thermal management. Saft remains the only manufacturer with a complete range of battery technologies for the space market.

In 2012, Saft won a large number of satellite orders and reached the milestone of more than 1 MWh of

€193.7m

CIVIL ACTIVITIES SALES
IN 2012

€83.8m

MILITARY ACTIVITIES SALES
IN 2012



Sافت HAS OVER
40 YEARS' EXPERIENCE
IN THE DESIGN, DEVELOPMENT
AND MANUFACTURE
OF ONBOARD BATTERY SYSTEMS
FOR SATELLITES AND LAUNCHERS.

MAIN APPLICATIONS

Utility meters, electronic toll collection, oil and gas exploration, military communications systems, satellites, torpedoes, space launchers, military hybrid vehicles, small submarines, marine, missiles, night-vision goggles, GPS systems, medical equipment, asset tracking, sonobuoys.

Li-ion batteries in space and more than 85 satellites launched since 2002.

In 2012 Saft's efforts resulted in increase breadth of sales in Asia and in South America. These new customers are expected to continue to grow and make Saft's portfolio stronger through diversified customer base. Continued success in Europe via the major suppliers, such as Astrium, Thales Alenia Space and others maintains Saft's leadership position in geostationary satellite batteries. Saft's successful efforts in Low Earth Orbit satellite batteries in the 2011 are continuing in spite of stiffer competition from small suppliers in the market.

Saft was awarded a contract to provide Li-ion batteries for the first two R-series Geostationary Operational Environmental Satellites (GOES-R and GOES-S) for NASA and NOAA (National Oceanic and Atmospheric Administration). Saft will supply its high-energy Li-ion batteries, which meet the unique capacity and temperature requirements for the GOES-R satellite programme. Qualified to endure the rigours of long life operation in space, the batteries are capable of providing power for the satellite's critical functions throughout its 15-year life span. This is Saft's largest ever satellite contract to date.

Saft was awarded a contract from Boeing to build Li-ion battery packs for four new 702SP communications satellites. Saft will deliver multiple batteries for each satellite from its Cockeysville, MD factory. With this new order Saft is the clear market leader for batteries for the GEO satellite market.

We have launched programs targeting both mid- and long-term requirements for space batteries in order to continue to support our customers.

MILITARY ACTIVITIES

Saft is a leading designer, developer and manufacturer of high-performance lithium solutions for military applications. These batteries power equipment ranging from communications systems, night-vision goggles to thermal-imaging cameras, missile launchers and military vehicles.

Saft maintained its leadership position thanks to a number of important orders. For example, its advanced Li-ion energy storage system will support the technology development phase of the U.S. Army's Ground Combat Vehicle (GCV) programme. Comprised of ultra-high-power Li-ion cells, the Li-ion energy storage system will support the vehicle's hybrid electric drive system.

The Group also delivered its new enhanced e6T Li-ion battery system, for engine starting and silent watch functions, to the US Marine Corps and the US Army, the first e6T battery system to be delivered to both branches of the US military. The order for the Marine Corps was placed in conjunction with its Improved Battery System (IBS) programme, which aims to demonstrate advanced technologies to improve existing platforms.

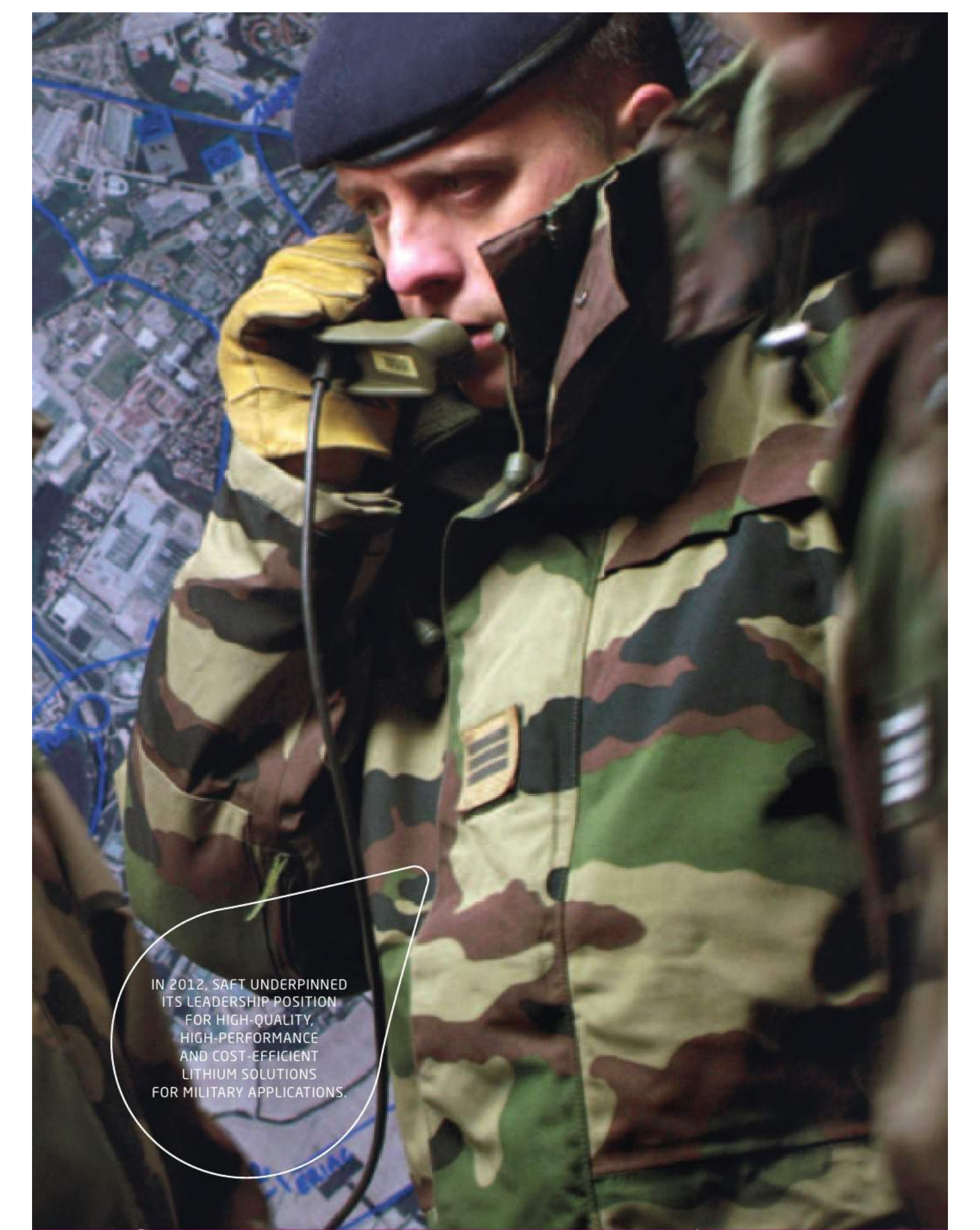
Saft has also been selected to equip the new French Soldier of the Future systems with Li-ion battery systems to power infrared night vision equipment, infrared binoculars, radio systems, GPS and the osteophonic systems. Another Saft success in the military sector is the 5-year contract from the US Defense Logistics Agency (DLA) to supply the US Army, Navy, Air Force and Marine Corps with BA5590 lithium sulphur dioxide (Li-SO₂) batteries.

ASB GROUP

Saft holds a 50% share in this thermal battery specialist company in a joint venture with the French defence and aerospace group, EADS. The ASB Group manufactures thermal batteries for tactical missiles and smart weapons. It has two subsidiaries: MSB in Scotland and ATB in the United States.

85

SATELLITES LAUNCHED WITH LI-ION
BATTERIES SINCE 2002



IN 2012, SAFT UNDERPINNED
ITS LEADERSHIP POSITION
FOR HIGH-QUALITY,
HIGH-PERFORMANCE
AND COST-EFFICIENT
LITHIUM SOLUTIONS
FOR MILITARY APPLICATIONS.

SAFT WON A FIVE-YEAR CONTRACT FROM THE US DEFENSE LOGISTICS AGENCY
FOR LITHIUM PRIMARY BATTERIES.

INNOVATION & COMMITMENTS

RESEARCH & DEVELOPMENT

Innovation is key at Saft and enables the Group to maintain its technological leadership.

SUSTAINABLE DEVELOPMENT

The Group sets the highest sustainability standards in the industry, continually improving its environmental track record.

RESEARCH & DEVELOPMENT

If Saft has succeeded in establishing itself as a world leader in cell and battery systems, it is in large part thanks to the company's long-term commitment to research and development. Saft's R&D effort has multiple facets - basic electrochemistry research, new materials, improved production processes, design, development and enhancement, systems and software, data management, maintainability, and more.

A major portion of Saft's R&D work is dedicated to creating new, cost-competitive products meeting specific customer application needs and offering very near-term benefits. Today's R&D successes are the springboard to future competitiveness.

€53.8m
INVESTED IN R&D
IN 2012

9%
OF GROUP SALES
INVESTED IN R&D IN 2012



TO MEET THE DEMANDING
NEEDS OF ITS CUSTOMERS
IN THE SPACE SECTOR,
SAFT IS CONTINUALLY BREAKING
NEW GROUND WITH INNOVATIVE
TECHNOLOGIES, SUCH AS
THE LI-ION SUPER-PHOSPHATE™.

BUILDING ON ITS MANY YEARS' EXPERIENCE DEVELOPING NEW TECHNOLOGIES
AND ENHANCING EXISTING SOLUTIONS, SAFT'S RESEARCH TEAMS DETERMINE
THE MAJOR PRODUCT DEVELOPMENT DIRECTIONS.

In 2012, Saft again invested more than €50 million in research and development, representing 9% of sales. R&D headcount further increased to 447. During 2012, 10 patents were filed, adding to Saft's portfolio of patent families of around 140.

Li-ion technologies, the major growth area for Saft, represent some 70% of the Company's R&D investment, in the quest for new chemistries and new cell formats for next-generation solutions. Primary lithium represents another area of significant growth opportunities for Saft in the future. Therefore the R&D team also works on improving traditional primary lithium products as well as bringing new products to market. R&D engineers continue to enhance Saft's nickel-based products to bring greater benefits to customers.

LI-ION, A PROMISING FUTURE

Thanks to its R&D advances, Saft is now a multi-chemistry lithium-based battery provider. Our lithium-ion chemistries are now in production and shipping from our manufacturing sites in Jacksonville and Cockeysville (USA), Bordeaux and Poitiers (France), and most recently Nersac in France since January 2013. So today, Saft is meeting multiple needs with multiple technologies.

Other Li-ion chemistries are in and coming out of the pipeline. Considerable development effort has gone into the Super-Phosphate™ lithium-ion technology, including software to predict and manage performance, lifetime and safety. Industrialisation is planned to be completed during 2013.

CELL AND SYSTEM DEVELOPMENT

Of Saft's overall R&D investment, around 10% is dedicated to long-term research, where the Company continues to focus on new materials, new chemistries and new processes. This will lead to improved performance and lower cost products for the future. In addition research is also expanding the work on models and algorithms to support system development.

In the shorter term, the R&D teams have further intensified its systems development activity to integrate power electronics and software so as to offer customers complete, customised solutions. The Systems Development Unit (SDU) is the fastest growing team in Saft's R&D community, and a SDU unit has been created at the Jacksonville plant, whose engineers have the task of integrating specific US needs into the systems. SDU continues to work on several programmes to improve the system content of Energy Storage Systems, offering more energy and more power at a more competitive price in the market. In further developing systems, the R&D teams enable Saft to deliver more content to more applications, and therefore expand the product portfolio.

Turnkey solutions, which customers increasingly demand, are high on the priority list of Saft R&D. Much of the focus here is on maintainability. With systems that have a service life of 20 years or more, maintenance is important. Maintainability needs to be integrated in initial design – so that the electronics are easily accessible for service technicians and safe to handle. This requires new and more stringent modular design criteria that the R&D engineers are developing for future products.

140

PATENT FAMILIES

10%

R&D INVESTMENT ARE DEDICATED
TO LONG-TERM RESEARCH

SUSTAINABLE DEVELOPMENT

In designing and manufacturing products that contain chemicals, Saft strives to make efficient use of resources and reduce the environmental impact to a minimum. This is achieved by improving performance, extending lifetime and reducing the weight and footprint of the products. It can also be enhanced by saving energy and minimising the CO₂ emissions of its factories.

Saft supports end-of-life battery recycling and the use of recycled materials. These actions are all included in programmes Saft has introduced to preserve the environment.

31 COUNTRIES
COVERED BY THE SAFT
"TAKE-BACK" PROGRAMME

13%
REDUCTION IN ENERGY USAGE
ACROSS ALL MANUFACTURING
SITES SINCE 2005 AT GROUP LEVEL



SAFT ONBOARD BATTERIES
ENABLE TRANSPORT OPERATORS
TO CAPTURE, STORE
AND RE-USE BRAKING ENERGY,
RESULTING IN REDUCED
ENVIRONMENTAL IMPACT
AND A CONTRIBUTION
TO SUSTAINABLE CITIES.

SAFT IS FULLY AWARE OF ITS RESPONSIBILITIES IN TERMS OF PRODUCT STEWARDSHIP AND RESOURCE PRESERVATION; CONSEQUENTLY, IT HAS INITIATED A VERY PRO-ACTIVE ENVIRONMENTAL PROTECTION POLICY.

Saft continues to make every effort to protect people and the planet, while bringing benefits to the users of its products. The Group uses a set of Key Performance Indicators (KPIs) to monitor its environmental performance. These KPIs assist the Group in monitoring the impact of its activity on the environment and the results of the Group's efforts. In most cases, these KPIs show the Group is making good progress. In addition, all Saft sites in Europe and China are now ISO 14001 certified.

The Company contributes to protecting the environment through its end-of-life programmes, where Saft is fully compliant with national laws. An important element is the Saft "take-back" programme. For many years, Saft has encouraged, on a voluntary basis, that used Saft nickel-based batteries be returned by end users to bring-back points for recycling. Now that this is an EU wide requirement, Saft goes beyond the legal demands. The programme has been extended geographically to cover 31 countries, well beyond the EU-27 area.

RE-CYCLE AND LIFE CYCLE

Recycling has long been a policy at Saft. All products are recycled back into the manufacturing process. With nickel-based batteries, for example, recycled cadmium is used to produce new batteries, while nickel is re-used either in batteries or in other industries.

The Group also carried out a full Life Cycle Assessment (LCA) on primary lithium batteries for metering devices. LCA involves measuring impacts at different phases of a component or system life to detect where improvements are needed to reduce (inter alia) CO₂ emissions or energy usage. This can lead to changes in design or materials or in the manufacturing process. Saft is the first battery supplier to conduct such an LCA, and utility companies appreciate the initiative.

PLANTS AND PRODUCTS

In 2012, Saft has completed a greenhouse gas audit, on its French sites, in compliance with French law. This audit covers direct emissions and indirect emissions linked to energy. The Group is considering to voluntarily and progressively extend this process to all other industrial sites.

Saft has embarked on a practice of eco-design. Product developers are co-operating with recyclers to understand the constraints and costs of design to recyclers. Developers are seeking to include recycling-related constraints in initial design without impacting products performance. For example, Saft's Systems Development Unit is investigating mechanical design alternatives to determine the best way to dismantle products at end-of-life.

HEALTH AND SAFETY

The Group makes every effort to fully comply and exceed legal health and safety requirements to reduce risks and uses a number of indicators which demonstrate risks are controlled. These indicators continue to show progress year on year.



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