



2017 BUSINESS REPORT

SMART SOLUTIONS  
DELIVERED BY  
TALENTED TEAMS



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## VISION

Luc Themelin  
CHIEF EXECUTIVE OFFICER

# AN EXCELLENT YEAR, IN ALL RESPECTS



*2017 was a very good year for Mersen.*

which is built on three pillars – geographical and sectoral balance, customized, high-value-added solutions, and internal excellence.

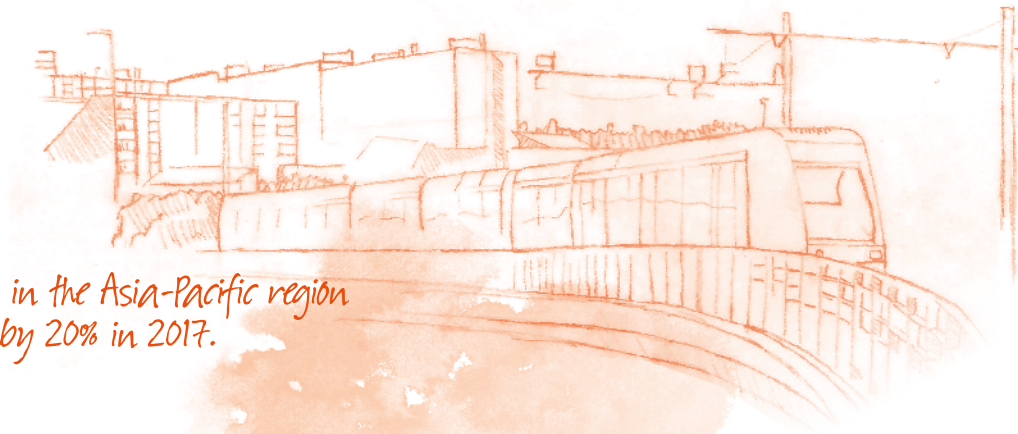
**The growth recorded by both of Mersen's two segments must give you confidence in your strategy?**

It certainly does. Our Advanced Materials segment achieved growth of nearly 10% in 2017 and our Electrical Power segment grew by 6%. We have gained ground in all of the markets that we've identified as promising, which now account for 40% of our consolidated sales and are still growing. The solar installations market, for example, is being driven by China, which is investing heavily in renewable energies. Other fast-growing markets include electronics – which generates business for both of our segments and where demand is constantly increasing thanks to digital technology and all things electric – and transportation, particularly urban transportation, which is thriving with new projects and renovation work.

**Mersen's net income increased more than 12-fold in 2017. That's an excellent performance.**

Yes, 2017 was a very good year for us! The economic environment was certainly more conducive, but it was our dedicated teams and our global positioning that drove our performance well beyond the objectives set. Sales increased by 8% year-on-year to €809 million, operating income before non-recurring items amounted to €75 million, up 170 basis points from 2016, and net income multiplied by more than 12. These figures demonstrate the validity of our strategy,





*Our sales in the Asia-Pacific region increased by 20% in 2017.*

**How does the Asian market fit into the Group's strategy?**

In the current environment, it's a major growth driver. Our sales in the Asia-Pacific region increased by 20% in 2017. In China, South Korea, Japan and India, we are benefiting from massive demand for more sustainable solutions, whether in the renewable energies segment, in electronics or in the process industries. Our industrial presence and technological lead are major strengths in this region.

**You've chosen to position your production capacities close to your markets. Can you tell us why?**

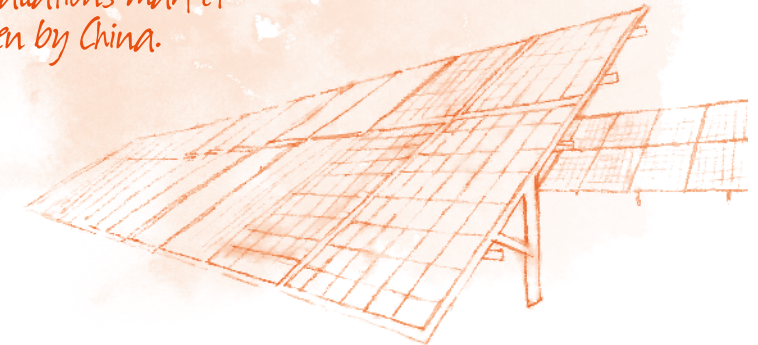
Being physically close to our markets makes it easier to forge strong ties with our customers. Our business model is very specific; we focus on niche segments and offer customized, very high-value-added small-series production. The close relations that we develop with our customers on site are therefore key success factors. Mersen plays an active role in developments that are critical for our customers. For example, for a smartphone

*For a smartphone manufacturer, we developed a special grade of graphite that can be used to make curved screens.*

**|| SALES INCREASED BY 8% YEAR-ON-YEAR. ||**

manufacturer, we developed a special grade of graphite that can be used to make curved screens. In China's booming solar market, we are the only supplier to offer graphite formulations and parts that meet the volume and quality requirements that enable manufacturers to produce efficient, cost-effective solar cells. We are also a preferred partner for semiconductor manufacturers and have the know-how necessary to address the technological breakthroughs that shape the electronics market. And alongside electric vehicle manufacturers, we are working on solutions designed to ensure battery safety, a major challenge for the industry.

*The solar installations market is being driven by China.*



**How does operational excellence contribute to driving the Group's growth?**

We have taken significant steps since 2015 to enhance our organization and optimize our day-to-day operations, on every site and for every process. Our efforts have paid off, as can be seen from the very good results achieved in 2017. We are now pursuing further improvements with the Mersen Excellence Journey, an efficiency plan aimed at fostering excellence in all areas - sales, innovation, HR, operations and production. Our goal is to get all employees to contribute to a collective culture of continuous improvement, each at their own level.

**How do you see the Group's future, in 2018 and beyond?**

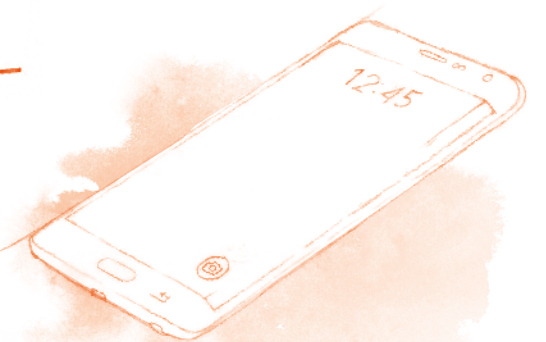
Mersen is now firmly set on an upward track, aligned with that of the world's fast-growing markets. Setting the dividend at €0.75 per share reflects both the excellent performance achieved in 2017 and our confidence in the future. In 2018, we are targeting like-for-like sales growth of between 3% and 6% and a current operating margin of between 9.6% and 10.1%, representing

*9.2% operating margin before non-recurring items.*

*€40m in net income.*

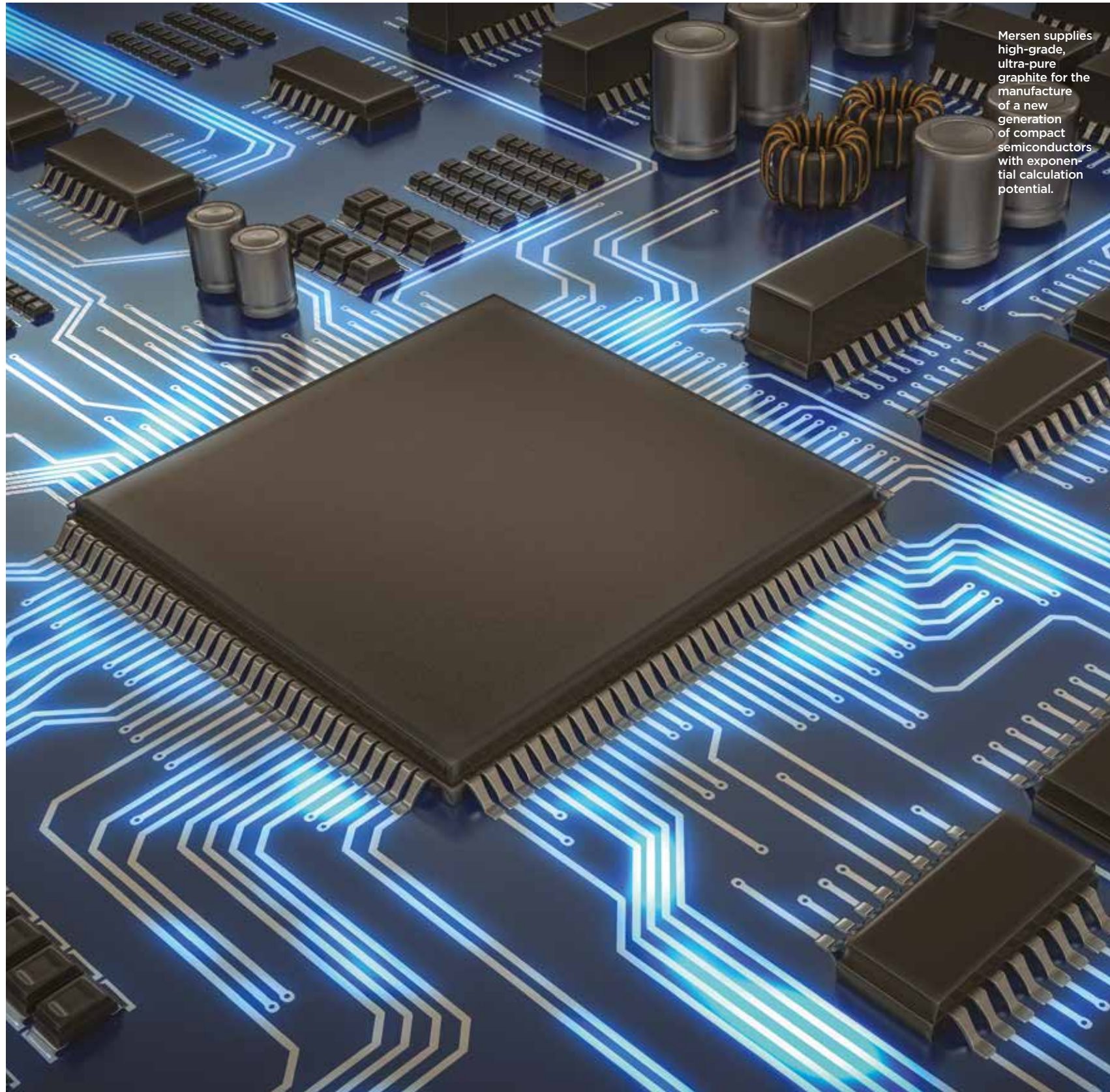
*A dividend of €0.75 per share, up 50%.*

a further improvement on 2017. We will also continue to benefit from the extremely dynamic economy in Asia. To capture future growth, we intend to roll out a significant capital expenditure program in 2018, investing between €45 and €50 million. Lastly, the substantive work to be carried out under the Mersen Excellence Journey plan will be fundamental in achieving our goals, enabling us to rank as the best in our fields of expertise and markets, and driving further, sustainable improvements in our competitiveness. All of these factors give us good reason to be particularly optimistic about Mersen's future.



**|| WE HAVE GAINED GROUND IN ALL OF THE MARKETS THAT WE'VE IDENTIFIED AS PROMISING, WHICH NOW ACCOUNT FOR 40% OF OUR CONSOLIDATED SALES. ||**





Mersen supplies high-grade, ultra-pure graphite for the manufacture of a new generation of compact semiconductors with exponential calculation potential.

MERSEN INSIDE

## SUPPORTING TECHNOLOGICAL PROGRESS ACROSS THE GLOBE

Mersen technologies and products are central to the developments that drive progress in industry and society. They provide the foundation for a world that is safer, more reasonable in its consumption of resources and more responsible about managing its impacts.

### ADDRESSING THE CHALLENGES CREATED BY TECHNOLOGICAL BREAKTHROUGHS

**Reconciling power and miniaturization**  
Progress in digital technology and communications is creating demand for products that are increasingly compact and ever more powerful. Mersen develops ultra-pure graphite components that meet the extremely demanding requirements of semiconductor manufacturers.

**Contributing to electric vehicle safety**  
In this fast-expanding market, the challenges for carmakers are many and varied. Drawing on its expertise





Mersen develops hybrid devices, busbars and other protection and connection components that meet the requirements of high-power batteries.

in energy management, Mersen is developing solutions to ensure the safety of electrical circuits in the high-power electric vehicles of the future.

**Enhancing the reliability of robotics**

The transition from automation to robotics is giving rise to new challenges related to the maintenance and energy performance of the associated tools. Mersen develops sophisticated cooling, bus bar and electrical protection systems that increase the reliability of production

lines, and in particular the servomotors controlling the robots.

**IMPROVING PROCESSES TO MAKE CUSTOMERS MORE COMPETITIVE**

As manufacturers strive to improve their performance by reducing production costs, optimizing energy efficiency and extending the lives of consumables, they can rely on Mersen to provide comprehensive solutions to meet their insulation, heat recovery and power conversion needs. Mersen's isostatic

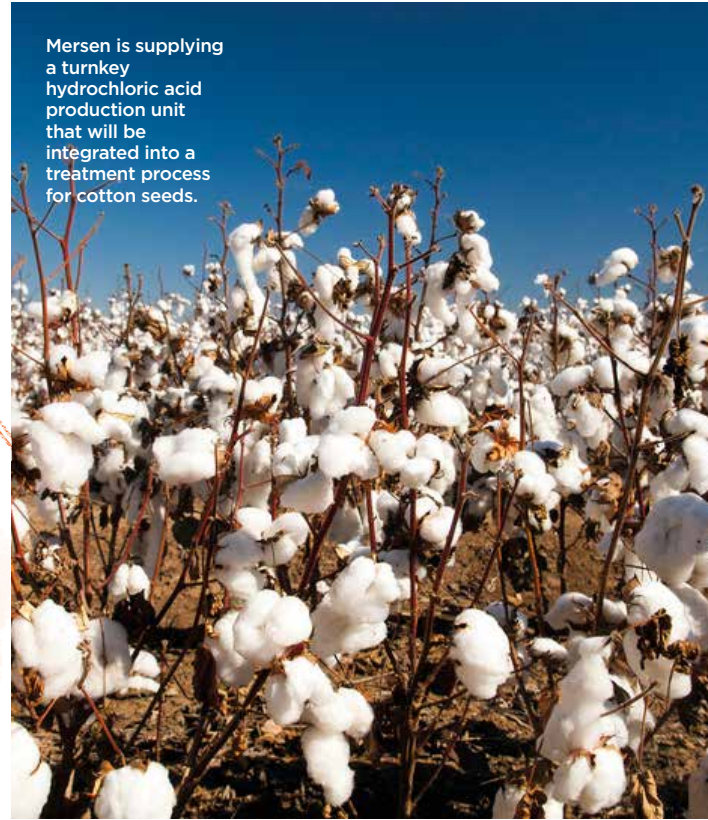
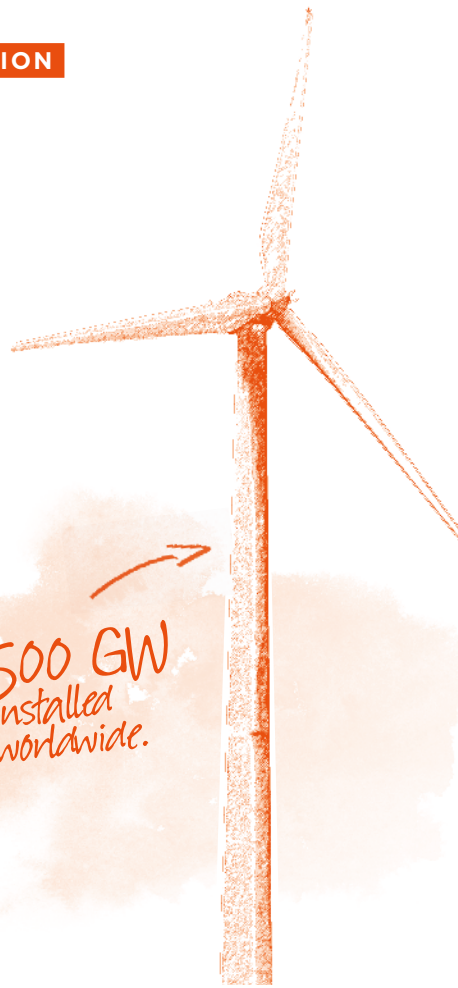
*Mersen solutions protect servomotors.*



Mersen supports the entire solar cell production process, from polysilicon to ingot pulling (graphite parts and insulation components), as well as electrical protection (surge protection devices, fuses) and power conversion (cooling devices, busbars and fuses).



500 GW installed worldwide.



Mersen is supplying a turnkey hydrochloric acid production unit that will be integrated into a treatment process for cotton seeds.



The Group supports all industries in optimizing their performance.

graphite, for example, is renowned for improving the efficiency of the solar cell manufacturing process. The Group also develops turnkey equipment for the chemicals industry and was notably chosen in 2017 for its expertise in this area by Australia's Cotton Seed Distributors.

**SPEEDING UP THE DEVELOPMENT OF THE GREEN ECONOMY**

Mersen focuses its innovation capabilities on researching solutions that foster growth in green industries. With a strong presence in the renewable energies market, Mersen contributes to progress in photovoltaics and to the manufacture of generators for wind turbines and serves as a business partner to manufacturers of hydroelectric generators. The Group also plays a key role in the development of clean, collective urban transportation solutions by improving the performance and reliability of infrastructure and equipment.



Mersen offers protection, collection, transmission and conversion solutions that improve the performance and reliability of urban transportation equipment.



# RESPONDING LOCALLY IN 35 COUNTRIES AROUND THE WORLD

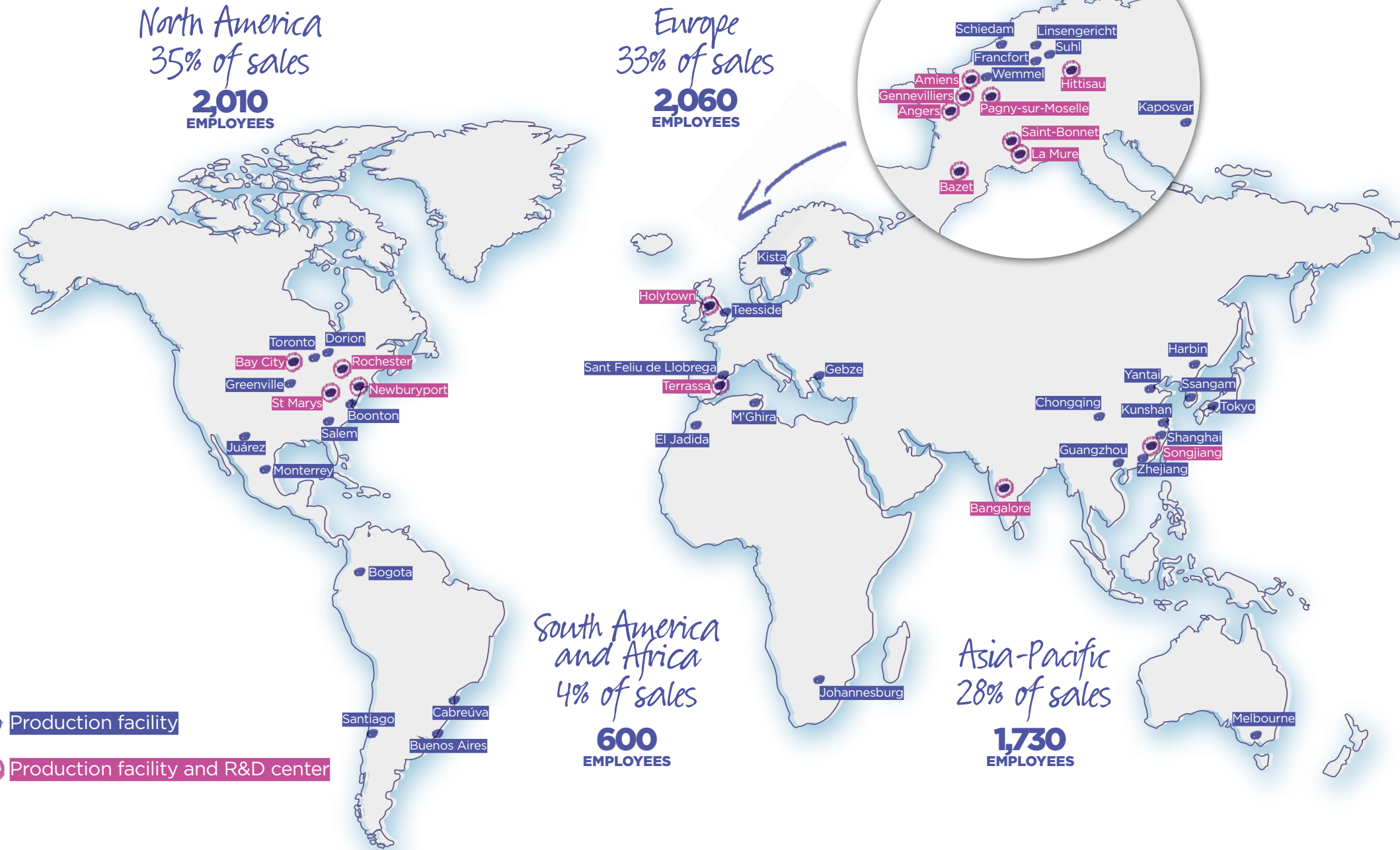
## KEY FIGURES

  
**6,400**  
EMPLOYEES

  
**50**  
MAJOR  
PRODUCTION  
FACILITIES

  
**35**  
COUNTRIES

  
**15**  
R&D CENTERS



# A VALUE-CREATING BUSINESS MODEL

**40%** of sales in support of green growth.

Mersen contributes to the development of environmentally responsible activities and has also a reduced environmental footprint in its production facilities.

The value created by the Group is a combination of its financial, non-financial and business performance. It is shared by numerous stakeholders and contributes to society in general through Mersen's products and services and also through the jobs, purchases, dividends and other benefits that the Group generates.

**90%** of production facility managers are local recruits familiar with the challenges on the ground.

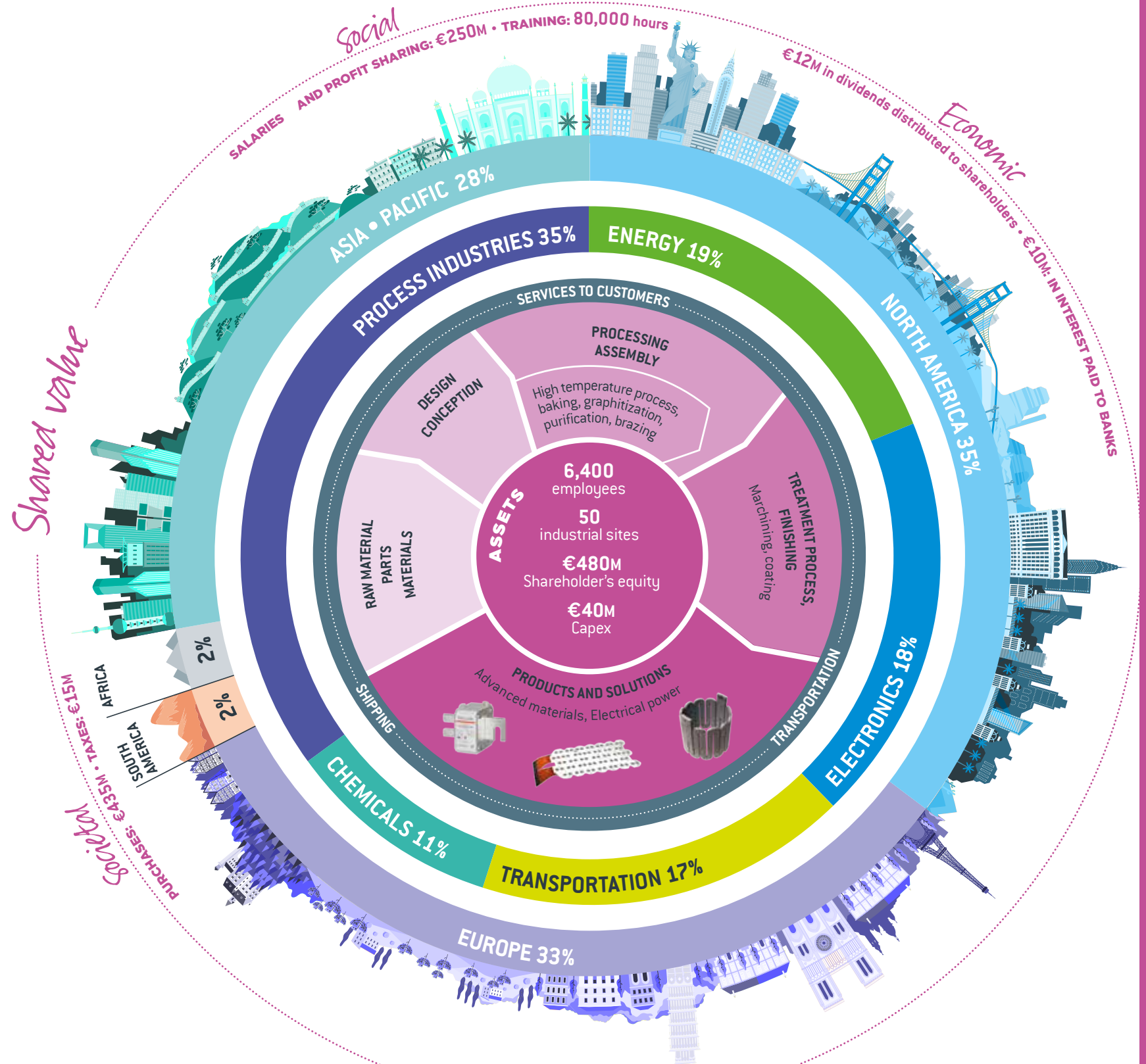
## EXPERT & LEADER IN 2 AREAS OF EXPERTISE

### ADVANCED MATERIALS

- Graphite Specialties
- Anticorrosion Equipment
- Power Transfer Technologies

### ELECTRICAL POWER

- Electrical Protection & Control
- Solutions for Power Management





# A CORPORATE GOVERNANCE STRUCTURE BUILT ON BALANCE AND TRANSPARENCY

Based on the balance and separation of power and aligned with the AFEP-MEDEF corporate governance code for listed companies, Mersen's corporate governance structure ensures that the company is managed with transparency, integrity and diligence.

Since 2016, Mersen has been managed by a Board of Directors and a Chief Executive Officer, who is supported by an Executive Committee.

**The Board of Directors** determines the Group's business strategies and ensures that they are implemented. Its responsibilities are described in the Internal Rules of the Board of Directors and it is assisted in the decision-making process by three specialized committees.

**The Chief Executive Officer** manages the company under the Board of Directors' control. He acts on behalf of Mersen in all circumstances and represents the company in its dealings with third parties.

**The Executive Committee** manages Mersen's operational affairs. Its members meet every month to review the Group's financial performance and decide on action plans in line with its strategic priorities.

### A new Chairman and Directors

At the Annual General Meeting of May 18, 2017, shareholders approved Olivier Legrain's appointment as Chairman of the Board of Directors, to replace Hervé Couffin. The Board of Directors also welcomed three new members, including a Director representing employees.

## EXECUTIVE COMMITTEE



**LUC THEMELIN**  
Chief Executive Officer



**ESTELLE LEGRAND**  
Group Vice President, Human Resources



**THOMAS BAUMGARTNER**  
Chief Financial Officer



**GILLES BOISSEAU**  
Group Vice President, Electrical Power



**CHRISTOPHE BOMMIER**  
Chief Technology Officer



**THOMAS FARKAS**  
Group Vice President, Strategy and Development



**JEAN-PHILIPPE FOURNIER**  
Group Vice President, Operational Excellence



**ÉRIC GUAJIOTY**  
Group Vice President, Advanced Materials



**DIDIER MULLER**  
Group Vice President, Asia and Latin America

## MEMBERS OF THE BOARD OF DIRECTORS

AT DECEMBER 31, 2017



**OLIVIER LEGRAIN\***  
Chairman of the Board of Directors

**ISABELLE AZEMARD**

**YANN CHARETON**  
**PIERRE CREUSY**  
(Director representing employees)

**MICHEL CROCHON\***

**CATHERINE DELCROIX\***

**CAROLLE FOISSAUD\***

**DOMINIQUE GAILLARD**

**EDWARD KOOPMAN**  
**BÉNÉDICTE LEVINSON\***

(permanent representative of Fonds Nobel)

**HENRI-DOMINIQUE PETIT\***

**THIERRY SOMMELET**  
(permanent representative of Bpifrance Investissement)

**ULRIKE STEINHORST\***

\*Independent Directors.

## 3 SPECIALIZED COMMITTEES

### AUDIT AND ACCOUNTS COMMITTEE

Chairman: Henri-Dominique Petit

Members: Yann Chareton, Michel Crochon, Catherine Delcroix, Carolle Foissaud, Thierry Sommelet

### GOVERNANCE AND REMUNERATION COMMITTEE

Chairman: Ulrike Steinhorst

Members: Isabelle Azemard, Pierre Creusy, Dominique Gaillard, Olivier Legrain, Bénédicte Levinson, Henri-Dominique Petit

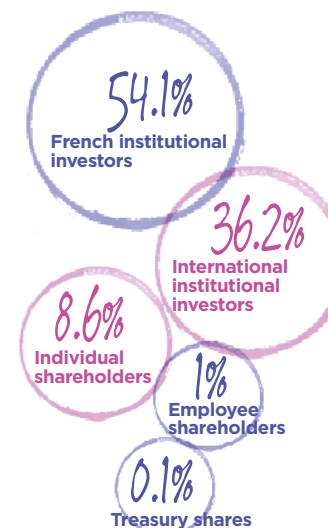
### STRATEGY COMMITTEE

Chairman: Michel Crochon (since December 12, 2017)

Members: Pierre Creusy, Catherine Delcroix, Dominique Gaillard, Edward Koopman, Olivier Legrain, Thierry Sommelet, Ulrike Steinhorst

## OWNERSHIP OF THE SHARE CAPITAL

AT DECEMBER 31, 2017





# EMBEDDING OUR ETHICAL PRACTICES TO CREATE AN EXEMPLARY MODEL

The secret behind Mersen's sustained success in every country where it operates undoubtedly lies in its high-quality, trust-based relations with stakeholders. That's why the Group has chosen to conduct its business and operations in accordance with demanding ethical standards that are aligned with international guidelines. In 2017, Mersen reaffirmed its commitments to these values and principles.

The Group's code of ethics serves as a binding commitment for its signatories, both individually and collectively, whether they are corporate officers or employees. It also confirms Mersen's compliance with local and international laws and regulations, particularly those relating to working conditions, competition and money laundering. Furthermore, the Group has made two commitments – to help advance technological progress and to contribute to improving living standards in local communities.

An Ethics & Compliance Department is responsible for identifying and limiting the risks of non-compliance in order to prevent damage to the Group's image, culture or financial solidity. The new department is also responsible for raising awareness of ethics and compliance issues among employees. A dedicated committee guides the department's decisions and approves its recommendations.



## IN LINE WITH THE UN GLOBAL COMPACT

The United Nations Global Compact promotes 10 universal principles in order to build societies that are more stable and respectful of human rights and international standards in the areas of labor, the environment and the fight against corruption. A signatory since 2009, Mersen refers to the Global Compact's principles to guide its policies and initiatives. Each year, Mersen posts a "Communication on Progress" (COP) on the Global Compact website, which provides an update on the initiatives undertaken by the Group.



**NANCY PLOWS**  
HUMAN RESOURCES  
MANAGER AT THE  
ST. MARYS FACILITY  
(UNITED STATES)

## MANAGEMENT CULTURE

*"All of the operators at the St. Marys facility have just been given training on the new code of ethics. It was a challenge to organize because the plant is operated around the clock, with teams working in shifts. The training was therefore provided in small groups, using the Mersen Academy e-learning portal. The idea was to stimulate discussion and devise group responses to the questions in the e-learning module. The exercise improved team cohesion, because all of the participants were united by the same values of respecting human rights, people and the environment. And they were all sensitized to the importance of demonstrating exemplary behavior at all times in relations with our stakeholders."*

*3,600 employees have completed code of ethics training.*

## CODE OF ETHICS UPDATED AND IMPLEMENTED

Mersen's code of ethics was updated in July 2017 in response to new development challenges. Clarifications were added in relation to supplier selection, the Group's reputation, the accuracy of financial statements and the possibility of proceedings being initiated in the event of a breach. The code of ethics is available, in 14 languages, via the Group's intranet and on the Mersen website. All Group employees must complete an e-learning module on the code of ethics to ensure that they have understood and adopted its principles. Application of the code of ethics is one of the items verified during internal audits.



## KEY POINTS COVERED IN THE CODE OF ETHICS

The code of ethics governs the Group's relations with its ecosystem, which includes stakeholders and the environment. The Group and its employees, officers and directors are committed to the code's principles in the following areas:

- Relations within the Group**
  - Health & Safety
  - Harassment
  - Equal opportunities
  - Mutual respect
- Relations with our customers, our suppliers and our competitors**
  - Competition
  - Active corruption
  - Passive corruption
  - Data confidentiality
  - Conflicts of interest
  - Choice of suppliers
- Relations with our shareholders**
  - Fair presentation
  - Insider trading
- Asset protection**
  - Confidentiality
  - Use of corporate assets
  - Group's reputation
- Undertakings as a responsible business**
  - Accuracy of financial statements
  - Environment
  - Sustainable development
  - Donation and patronage



# PREVENTING RISKS TO SECURE OUR DEVELOPMENT

The Group's objective is to deploy a proactive, harmonized risk prevention culture worldwide, site by site, for all strategic, financial and operating risks. Strong internal control procedures are in place to help it achieve this objective.

The Risk, Internal Audit and Compliance Department uses various assessment procedures and action plans to drive continuous progress in risk prevention

32 sites audited in 2017.

and management. For example, risk mapping is updated every year, internal control guidelines apply to all employees who may be exposed to risk, and visits are organized to the Group's facilities. The guidelines provide a framework for the internal controls carried out on a site or a process via corporate audits or cross audits performed at the regional level.



IVAN HERRERO  
FINANCE AND  
IT DIRECTOR,  
UNITED KINGDOM

## RISK MAPPING UPDATE

Risk mapping is a way of ranking potential risks in accordance with three criteria - their impact and probability of occurrence and the level of control provided by the systems in place. Reviewed each year, the risk mapping process is based on numerous interviews with people in various positions and geographies and gives rise to carefully monitored action plans.



## CROSS AUDITS, DRIVING CONTINUOUS IMPROVEMENT

Initiated in 2010, cross audits are a flexible control procedure that serves to improve internal control and risk management at a regional level. Targeting a process or a specific aspect of a site or subsidiary, the audit is carried out by managers from another subsidiary in the same region. The cross auditors are all voluntary participants, trained in audit techniques, risk assessment and communication. Cross audits facilitate and encourage the sharing of best practices among subsidiaries. They also help to update the Group's risk map.

## CROSS AUDITS IN PRACTICE

### Where do cross audits fit in the internal control system?

Cross audits are designed to be less formal than traditional audits; they are conducted by peers and the emphasis is on dialogue and the sharing of best practices. The idea is to provide a fresh perspective not only to the teams being audited but also to those performing the audit. Thanks to this constructive cross-fertilization process, adjustments can be made more quickly.

### How do cross audits contribute to the continuous improvement process?

By auditing a process, we can identify the potential risks and implement an action plan almost immediately. At one site, for example, an audit of the purchasing process led the audited team to adopt a more systematic approach to the organization

of requests for proposals from suppliers. In addition to the potential financial saving, the new approach also reduces the risk of collusion with third parties.

### What are the advantages of this tool for the Group?

The audited teams and the auditors learn a lot from each other, so cross audits contribute actively to continuous improvement and team cohesion. They are also an excellent way to strengthen employees' sense of belonging and adherence to the internal control culture and to promote the sharing of best practices across the organization. For Mersen, cross audits clearly contribute to competitiveness and excellence. They facilitate the rapid deployment of the rules, procedures and behaviors necessary to enable us to be the best in all of our markets.

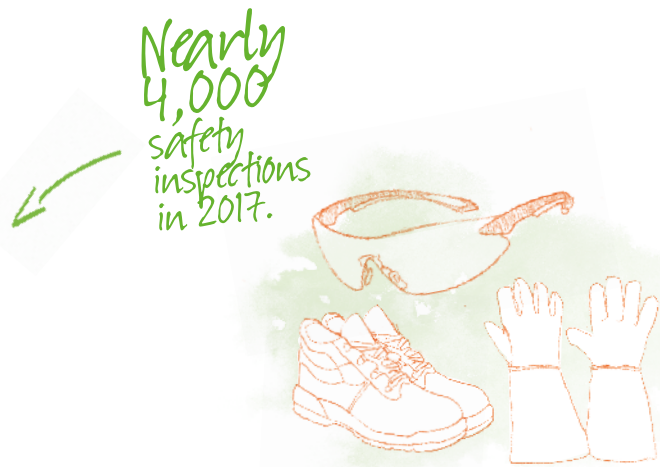
14 cross audits.  
A pool of 71 internal auditors.



# WORKING TOGETHER TO KEEP EVERYONE SAFE

The aim of Mersen's Health & Safety policy is to prevent accidents from happening by acting on their causes. Empowering employees to take responsibility, analyzing potential risks and driving continuous improvement are just some of the levers used to raise awareness of this prevention-based approach among employees. And the validity of the approach was borne out by the results in 2017.

Implemented by the Health & Safety, Environment and Industrial Risks Department, the Group's safety policy aims to strengthen employees' involvement in anticipating and detecting safety risks. The approach is supported by a wide range of resources, including training modules, internal control procedures and safety inspections. In addition, two specific methodologies - Fatal Risks Safety Inspections and Job Hazard Analyses - were deployed at all sites in 2017. The approach has been a success; regularly reviewing risks for every workstation has now become standard practice.



Nearly 4,000 safety inspections in 2017.



## TRAINING & PREVENTION: METHODS THAT WORK

To consolidate its safety culture, Mersen provides e-learning modules in several languages and has introduced reporting tools that target potentially hazardous situations and the detection of near misses. Safety inspections, for example, consist in a brief audit of part of a production workshop or process, which often leads to the implementation of improvement plans. Deployed at all sites for the first time in 2017, the Job Hazard Analysis (JHA) process is a prevention tool that focuses on employee participation. Employees are asked to identify all of the risks specific to their workstation and then to participate in taking preventive measures.



## BEST PRACTICES: HEALTH & SAFETY WEEK

Every year, numerous Mersen sites around the world organize special weeks to raise awareness of individual and collective health and safety issues. The topics addressed depend on each site's specific challenges and might relate to workplace safety, food hygiene or even accidents in the home. The workshops organized during the week are often led by experts from outside the Group. Events like these help foster a culture of prevention across the organization.

LTIFR: 1.4

TRIR: 4.1

LTIFR: Number of lost-time occupational accidents per million hours worked.  
TRIR: Number of occupational accidents with or without lost time per million hours worked.



# SHARING OUR CULTURE AND VALUES TO DEMONSTRATE OUR DISTINCTIVENESS

Mersen's actions and the way in which the Group fulfills its ambitions are driven by its values: excellence, collaboration, people-conscious, agility and entrepreneurial spirit, and partnering with our customers.

Devised through discussions between human resources and management, these values are the keystones of Mersen's corporate culture and the glue that binds together more than 6,000 employees. They also serve as a guide for the day-to-day practices and behaviors of Mersen's teams. To make sure that the values are embraced by all employees, their deployment was carried out in two phases. In 2016, value-sharing workshops were organized at every site around the world and a vast online survey was carried out to assess their fit with onsite practices and to define action plans where necessary. The Group has also undertaken a growing number of initiatives aimed at nurturing team spirit and promoting discussion which include training modules and more opportunities for mobility between professions, positions and research centers.

62% Average employee engagement rate.

## "VALUES THAT PROVIDE MEANING"

*"At our facility in Cabreuva, Brazil, embracing the Mersen values changed the way we see our operations and our business. Using a method based on brainstorming and discussion, everyone was able to talk about the values and appreciate how they apply to their own role within the Group. The improvement plans now under way are also anchored by these values. Today, everyone makes an effort to bring the values to life, particularly the value of collaboration. We've introduced monthly information meetings, for example, and initiated training on providing feedback. Our goal for 2018 is that all teams are exposed to the same level of information."*



SILVANA MACHADO  
GENERAL MANAGER,  
BRAZIL



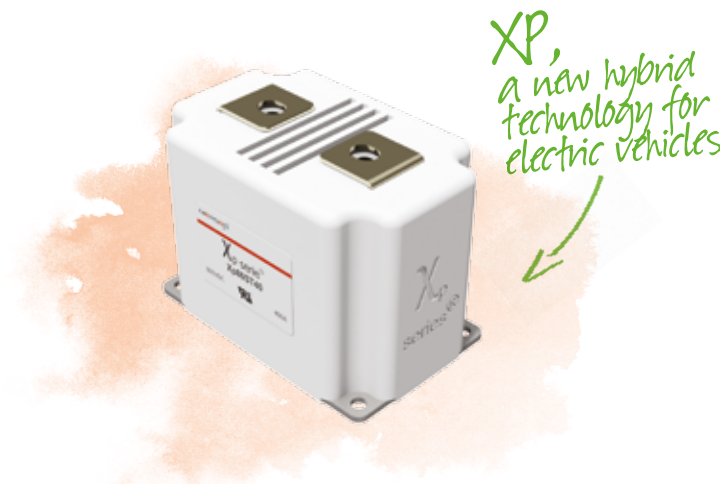
## PROFESSIONAL COMMUNITIES TO FOSTER COLLECTIVE INTELLIGENCE

To further its culture of collaboration, Mersen has introduced global, multicultural "professional communities" covering the fields of human resources, safety and machining. The aim of these cross-border organizations is to share information and best practices and to define avenues for improvement through regular meetings and the use of collaborative tools.



## A FIRMLY ESTABLISHED CULTURE OF INNOVATION

One of its distinctive features and a key asset in a competitive market, Mersen's culture of innovation is nurtured by its proximity to customers, the contribution of its marketing teams and the ties forged with the world of academic research. Created in 2016, the Technology, Research, Innovation and Business Support Department guides the Group's innovation efforts, both on a day-to-day basis and over the long term. In addition to monitoring technological developments, the department's main role is to foster a spirit of collaborative innovation in order to avoid resources being spread too thinly and optimize time-to-market for new products. One of its aims is to encourage collective problem-solving. It does this by building bridges between the research and development units and fostering dialogue across the organization.



XP, a new hybrid technology for electric vehicles.



*More than 1,000 employees had received training in problem solving at end-2017 to support the continuous improvement process.*

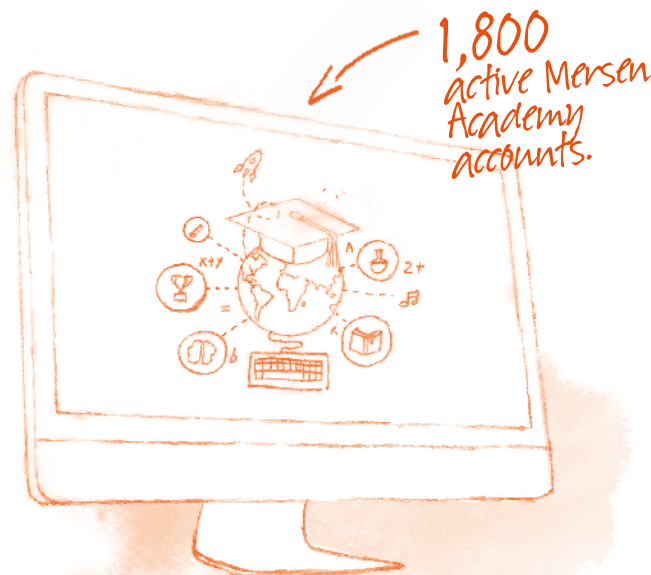


**TRAINING  
ENHANCING SKILLS AND  
UNITING EMPLOYEES**

Training provides employees with the tools they need to grow professionally, advance within the Group and prepare for their future responsibilities. It also gives Mersen the opportunity to highlight priority and strategic topics and to disseminate the Group's culture. Training is primarily provided through the Mersen Academy, an e-learning portal that offers high-quality general training and tailored job-specific training. Managers can also use the portal to access numerous modules adapted to their roles. In addition, Mersen supports employees who are working toward a diploma or other qualification.

**A CONTINUED  
COMMITMENT  
TO EXCELLENCE**

Operational excellence is one of Mersen's strategic pillars. The program launched in 2015 is designed to engage every employee in creating value for customers in order to achieve sustainable, profitable growth while continuously improving performance. As is often the case, the initial benefits were achieved on the ground, in the Group's production facilities, with improvements in product quality and delivery times. In late 2016, Mersen extended the program to its innovation and sales processes. The initiatives undertaken as part of the program include a wide-reaching project that helped to improve sales and marketing practices in several European countries.



**INDUCTION: A KEY  
MOMENT FOR  
CONVEYING THE  
GROUP'S CULTURE**

Mersen recognizes the importance of the induction process and its impact on employees' performance and well-being within the Group. New hires therefore benefit from purpose-designed induction programs such as "I Become Mersen", which includes the appointment of a mentor, as well as e-learning modules on ethics and safety. New managers in each region are invited to a two-day induction seminar, the "New Comers Event", which includes a visit to one of the Group's production facilities. And for the employees of acquired companies, Mersen has developed a specific induction program called "We Become Mersen". This program was rolled out at Mersen Hatan in China during 2017.

**OPEN EXPERTS,  
LEADING THE WAY  
TO EXCELLENCE**

To consolidate its technological excellence, Mersen has decided to set up a cross-disciplinary community of "Open Experts", aimed at increasing cooperation among its technical teams and showcasing skills that are crucial to the Group's future. Employees are selected based on several criteria: their level of expertise, their management skills and their behavioral skills. Their integration into the Open Experts community is determined during their annual appraisal and then validated by the careers committee. Launched in late 2017, the first round of Open Experts comprised 11 employees.



# MANAGING RESOURCES RESPONSIBLY TO SECURE THE FUTURE

Rising to the major challenges facing the planet and helping customers address environmental issues are key objectives that guide Mersen's unrelenting development of products that use less energy and fewer resources.

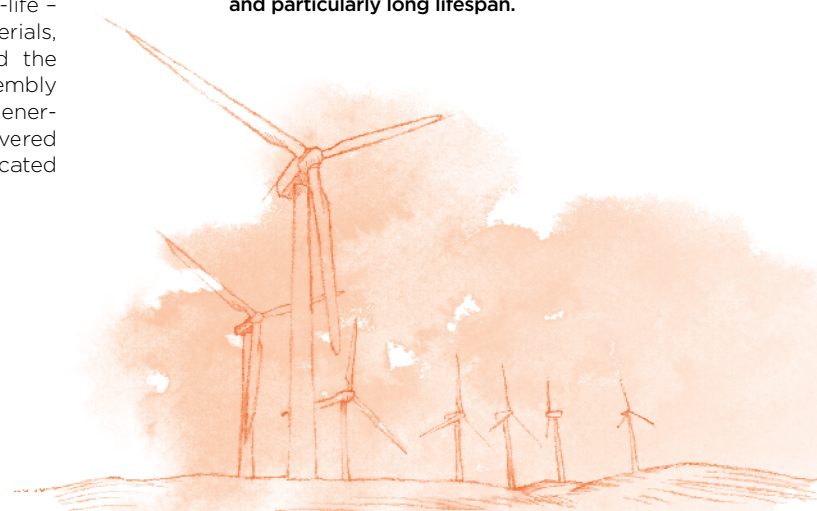
Around 40% of the Group's consolidated sales are generated in segments that contribute to sustainable development, including solar and wind energy, urban transportation and power conversion. Mersen solutions help to reduce domestic and public electricity consumption, particularly at industrial facilities. They help to protect facilities, extend their useful lives and optimize their efficiency, while limiting energy loss during transmission to the point of consumption. In addition, the Group is careful to limit the environmental impact of its production operations - from design to end-of-life - through its selection of raw materials, the use of lighter packaging and the reduction of the number of assembly stages and the volume of waste generated. Production scrap is also recovered for reuse or recycling through dedicated channels wherever possible.

*Wafer carrier for LED manufacturing.*



## SUPPORTING THE SEARCH FOR ENERGY EFFICIENCY

Because of the cost reductions and energy savings it generates, energy efficiency is now seen by manufacturers as an essential growth driver. With solutions such as furnace insulation and heat recovery systems, Mersen is a benchmark player in this segment. It also supplies components that are central to speed variation systems and thus optimize the yield of industrial facilities. Its graphite-based solutions and high-performance materials are also critical in the manufacture of LEDs, which are renowned for their energy efficiency and particularly long lifespan.



## CHINA TAKING ENVIRONMENTAL REGULATIONS TO HEART

**China has decided to tackle environmental issues head on. What are the repercussions for the country's businesses?**

*The government has adopted the United Nations Millennium Development Goals (MDGs) and the ambitious environmental objectives derived from those goals have resulted in strong regulatory pressure.*

**What measures have you taken to deal with the new constraints?**

*Mersen has always set high standards in China. To meet these new challenges, information and training are essential. As the environmental coordinator for China, I keep the sites informed about the new regulations on a monthly basis and assist them in identifying any compliance issues and devising appropriate solutions.*

## MORE AND MORE WASTE RECYCLED OR REUSED

The Group's production facilities ensure that their waste and emissions are recycled as much as possible, in accordance with each site's specialty. For example, the graphite powder from graphite block drilling is reused to manufacture tubes or sold on to the steel production industry. For several years, Mersen has also been behind a recycling system for used fuses and industrial brushes, which consists in collecting end-of-life products from customers and recycling the metals. Similarly, some sites have introduced systems that recover waste heat, which is then reinjected into the heating network or reused as a source of energy.

*42% of waste recycled in 2017.*



**IRIS QU**  
ENVIRONMENTAL COORDINATOR CHINA

*Senior managers and operators receive in-house training on environmental standards and the heads of HSE from all of the sites in China come together each year to share best practices.*

**What improvements have you observed at Mersen sites?**

*Today, all of the Group's sites in China are capable of identifying areas that are not compliant with the regulations and are taking corrective action, in liaison with the public authorities. Most of them have achieved the "zero risk" objective.*

## ANTICIPATING THE IMPACTS AS EARLY AS POSSIBLE

Trained in ecodesign, Mersen's research and development teams incorporate environmental criteria into their approach right from the innovation phase. When measuring the impact of a product (water and air pollution, depletion of natural resources, etc.), its entire life cycle is taken into account. This approach encourages teams to start thinking very early on about numerous factors, including the use of raw materials that are easy to recycle, the volume of waste that will be generated and the best way to optimize logistics and end-of-life product management.



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