FIVES, AN INDUSTRIAL ENGINEERING GROUP

Fives designs and supplies machines, process equipment and production lines for the world’s largest industrial players in the aerospace, aluminium, automotive, cement and minerals, energy, glass, logistics and steel sectors.

€1,896M
SALES

€2,117M
ORDER INTAKE

8,700
CLOSE TO
EMPLOYEES

A NETWORK OF OVER
100 LOCATIONS IN ABOUT
30 COUNTRIES

Fives’ international network is based on operational units which include commercial, industrial, R&D and service structures. This network is supplemented by regional offices and subsidiaries which support the development of Fives’ businesses in local markets by providing their country expertise: understanding of the industrial sector, regulatory monitoring, relations with institutions, sourcing, creation of local parts, etc.

* Brazil, China, India, Indonesia, Japan, Mexico, the Middle East, Russia & CIS, Southern Africa, Thailand and Turkey.
INNOVATION AND INTERNATIONALIZATION
TWO ESSENTIAL DRIVERS TO SUPPORT FIVES’ AMBITION

A new order intake record
After two difficult years in 2015 and 2016, which saw falling oil and raw materials prices and an economic slowdown worldwide, including in emerging countries, 2017 brought a rebound in business for the Group. Fives also saw consolidation in its results, with a modest increase in its gross operating income.

With order intake at over 2.1 billion euros, the Group passed the symbolic bar of 2 billion euros in order intake for the first time in its history, setting a new record over 18% higher than the previous one. All of the Group’s businesses and geographic regions contributed to this outstanding performance, which naturally benefited from the return of global economic growth but was also fostered by the success of its disruptive innovations.

Innovation: digitalization and additive manufacturing
Fives is focused on innovation from very early on. The Group is now one of the top 30 French patent filers, with 52 new patents filed in 2017. With their demand for increased automation of their production lines, Fives’ customers are seeking to develop more flexible systems that are better for people and for the future while providing an optimal response to changing consumption habits. Fives strives to meet their expectations by providing digital solutions and new technologies. Integrating digitalization and process equipment has made Fives an essential supplier of high-capacity sorting centers for the leading global e-commerce players in China, Europe, the US, and Japan. Fives’ expertise in the field has also enabled it to move into new industries like furniture and interior design with its integrated solutions. For example, Fives has designed fully-automated kitchen units production solutions for Schmidt.

Innovation is also a growth driver for the future. With its investments in 3D metal printing, which makes it possible to design parts with unique geometry while avoiding the constraints of traditional machining, Fives is developing technologies that are set to revolutionize future production methods. In 2016, Fives partnered with Michelin to found AddUp, a joint venture specializing in the field, thus creating a growth driver for the next five to ten years.

Internationalization: new markets, new requirements
Internationalization is another growth driver for Fives. After its successful entry into the US and Chinese markets in the early 2000s, Fives set its sights on Japan a decade ago. With over 200 million euros in orders expected in Japan in 2018, following the record already set in 2017 (150 million euros), Japan now ranks as Fives’ third region, tied with China but behind the US and France. This success is emblematic of the quality of the Group’s technical offer and its ability to meet the expectations of Japanese customers, who are some of the world’s most demanding in terms of lead times, quality and performance. Fives’ successes in the country – in e-commerce, the automotive industry, steel and combustion systems, etc. – are a great reward for the men and women of the Group.

Exceeding the 2 billion euro mark in sales in 2019
The excellent 2017 year-end order book 2017, which stood at close to 1.5 billion euros, offers excellent visibility of Fives’ activity outlook for 2018 and 2019, a perspective reinforced by the fact that the first months of 2018 have followed the trend set in 2017. After exceeding 2 billion euros in order intake in 2017, in 2018 the Group should exceed the symbolic benchmark of 2 billion euros in sales for the first time.

“The outlook for 2020 is positive.”

Frédéric Sanchez
Chairman of the Executive Board

Frédéric Sanchez
Chairman of the Executive Board

2018 Report # 2017 financial year
Fives has a full range of expertise in industrial engineering. Its teams are made up of specialized engineers with in-depth knowledge of the industrial processes used in a wide range of sectors.

The Group’s core business is designing and supplying high-performance solutions based on the key process equipment and a vast array of proprietary technology. Fives offers equipment, machines, systems and services, as well as full lines or plants for key markets: aerospace, aluminium, automotive, cement and minerals, energy, logistics, and glass.

Since its creation over 200 years ago, Fives has developed promising technologies to build and support the industry of the future, with high energy and environmental performance. Today, Fives is recognized as a key player in growth markets, including e-commerce, composites, and additive manufacturing.

Managing production and assembly worldwide
Fives has its own industrial sites for assembly of key technologies, as well as a network of international service providers. Operational subsidiaries support its production activity in Brazil, China, India and Russia.
In 2017, the Group’s order intake reached a new record of 2.117 billion euros. At a time when investment is recovering worldwide, this performance comes thanks to both the logistics market, which is benefiting from the exceptionally dynamic e-commerce sector, and the metal and energy segments, where numerous projects were finally confirmed after struggles in 2015 and 2016, mainly due to the drop in oil and raw materials prices.

Operations also generated high cashflow levels, which were invested in two strategic sectors:

- logistics, with the acquisition of Syleps, whose solutions for the automation of warehouse internal logistics flows and logistics platforms will complete the Group’s portfolio;
- and additive manufacturing through AddUp, a joint venture with Michelin which specializes in 3D metal printing.

Finally, the order book, which stood at 1.477 billion euros at year-end, up more than 200 million euros over the previous year, gives an excellent level of visibility on the expected activity levels for 2018.
**INNOVATION**

Research and Development

Fives continued to file patents at an impressive pace with 52 new inventions registered in 2017. The number of patents continued to grow to reach 632 families and 2,169 patents or patent applications in force at the end of 2017. The number of new patents relating to equipment energy and environmental performances remains stable. Fives came 32nd in the Top 50 French first to file patents in 2017. (Source: INPI - the French National Institute of Industrial Property)

- **€34.9 M** SPENT ON R&D IN 2017
- **632** PATENT FAMILIES IN FORCE
- **2,169** CURRENT PATENTS

**ENVIRONMENT**

- **9 ITEMS OF EQUIPMENT** ARE ENGINEERED SUSTAINABILITY® BRANDED
- ** Aluminium, Cement | Minerals, Combustion, Intralogistics, Steel**

**SAFETY**

- **WORK ACCIDENTS**
  - 2017 featured an improvement in Group accident performance: the lost-time frequency rate reached a historically low level. The number of severe accidents was halved.

- **ENVIRONMENTAL CERTIFICATION**
  - **80%** OF FIVES' INDUSTRIAL SITES ARE ISO 14001 CERTIFIED

**HUMAN RESOURCES**

- **63** DIFFERENT NATIONALITIES
- **85%** OF MEN ARE ENGINEERS AND MANAGERS
- **15%** OF WOMEN ARE ENGINEERS AND MANAGERS

**RECRUITMENT**

At end 2017, Fives numbered nearly 8,700 employees, a workforce that remained stable across all geographical areas.

**PATENT FAMILIES IN FORCE**

- **Africa**
- **The Middle East**
- **Asia and Oceania**
- **The Americas**
- **Europe**

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ACQUISITION: SYLEPS

Fives has expanded its offering in intralogistics with the acquisition of Syleps (now Fives Syleps), which specializes in internal automated logistical flow solutions for warehouses and logistics platforms, dedicated to distribution, courier and food industries.

EVENTS

September
ADDITIVE MANUFACTURING: PARTNERSHIPS
AddUp, the joint venture between Fives and Michelin in metal 3D printing, signed several partnerships in 2017: a collaboration with Carmat in the medical field for the industrial development of their artificial heart project; a joint venture dedicated to industrial production project incubation in metal additive manufacturing for the Aerospace and Defense industries with SODECMAR.

RESEARCH AND DEVELOPMENT
RETAINING THE BENEFIT OF TECHNOLOGICAL PROGRESS
The INPI (French national institute of industrial property) revealed its 2017 list of the French entities that have filed the most international patents. Fives was in 32nd place.
By the end of 2017, Fives had filed 52 new patent applications, it now has a portfolio of 1,618 patents in 122 different categories. The company also looks to optimize investment in Research & Development (€149 million in 2017), with a 2% increase in research and development, which reflect Fives’ intention to propose innovative and efficient technical solutions.

RENEWABLE ENERGY
PROMOTING BIOGAS
Fives and its experts in cryogenic processes supported the start-up WAGA ENERGY in the development of an industrial process to purify biogas produced by non-hazardous waste storage facilities. The system (the “wagabox”) is used to optimize local resources and produce energy as part of a circular economy initiative.

ENVIRONMENTAL PERFORMANCE
ENERGY TRANSITION
Fives has finalized a strategic analysis of changes to its different activities in a world where the global temperature increases by 2°C. With the support of Carbone 4 (a firm specializing in corporate carbon strategy), this study aims to estimate the impacts of a 2°C increase by 2050 for Fives strategy and activities. The study, which is part of the energy transition approach, gave the Group insights into its technologies and activities, as well as development opportunities to explore.

AEROSPACE
Fives received an order from Boeing for the design and supply of eight additional Stringer Forming Cells to support the continued ramp up of the 777X Composite Wing Center in Everett (Washington State, USA).

Fives obtained and implemented four contracts from a major e-commerce company at very short notice, including three sorting centers in the US and France, and a returns management center in Slovenia.

MILESTONES
HIGHLIGHTS
THE AMERICAS

THE UNITED STATES

Automotive steel
Fives won a major order in the US for the design and supply of a NeoKoil® continuous hot dip galvanizing line (CGL) dedicated to the prime quality automotive industry. This line will be equipped with Fives’ proprietary disruptive innovations, including FlashCooling® rapid cooling technology and CELES EcoTransFlux® high flux induction technology.

Cryogenics
Fives has established itself on the American market, securing two symbolic orders: one from CB&I, whose end customer is Total, for a 400-ton cold box to be used for ethylene processing and the other from UOP Russel, for 24 natural gas treatment units.

AUTOMOTIVE

Fives received an order from A123 Systems for the design and supply of two state-of-the-art lithium-ion battery assembly lines (lithium iron phosphate) in China and the Czech Republic.

MEXICO

Cement
Fives obtained contracts from Cooperativa La Cruz Azul S.C.L. for the engineering, supply, construction and commissioning of two raw meal grinding plants on a turnkey basis in the Hidalgo Oaxaca Lagunas plants, for the line 5 project. Each grinding plant will be fitted with an FCB Horomill® 4,000mm grinding mill and an FCB TSV™ Classifier 6,500mm.

Fives successfully started-up the FCB grinding mills and the FCB kiln on the Tula2 complete production line, that was delivered on a turnkey basis in Mexico. All performance tests were achieved.

AFRICA AND THE MIDDLE EAST

Bahrain
Aluminium
Aluminium Bahrain B.S.C. (Alba) concluded three contracts with Fives as part of its ambitious project for line 6 of its smelter: one Green Anode Plant (GAP), two Gas Treatment Centers (GTC), and 12 Hot Tending Machines (HTM).

Secondary aluminium industry
Fives successfully commissioned the new GARMCO aluminium remelting/slab casting facility, while reaching 1,000,000 man hours without LT.

ASIA

Japan
Logistics
One of the main Japanese express courier operators, a longstanding client of Fives, chose the Group for the supply of four parcel sorting systems for the two terminals, including two GENI-Belt™, which can sort up to 24,000 parcels per hour.

Europe

France
Logistics
Fives received an order from a major international player in the courier industry for the mechanization of its first European hub, located on the site of Paris-Charles-de-Gaulle airport. This order consisted of supplying a fully-automated parcel sorting center, comprising three GENI-Belt™.

Automated production systems
PSA Group chose Fives to supply the handling facilities for the new vehicle assembly line in Rennes, France, with a rate of 350 vehicles per hour to be used in the assembly of the Peugeot 508 model and the Citroën Aircross SUV in the future.

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Maintenance
Safran renewed its confidence in the Group to maintain its plants in Gennevilliers as its sole supplier, and in Evry under contract for 50% of subcontracted maintenance in France.

ASSOCIATIONS

Fives has been a member of the European Amsterdam Process Industry’s Association (EAPIA) since 1988. EAPIA brings together 30 industrial companies from across Europe that work in the mining, metal and chemical industries. The Group also works closely with the International Association for the Development of Technology (IATI), which brings together companies and organizational bodies working on technology development projects around the world.
FIVES’ GOVERNANCE

Fives is governed by an Executive Board overseen by the Supervisory Board. The Executive Board has the most extensive powers in the best interests of Fives under all circumstances, limited only by the company’s purpose and powers expressly vested by the Supervisory Board and shareholder meetings.

The Executive Board has two members: Frédéric Sanchez and Martin Duverne.

The Supervisory Board exercises permanent control over the management of the company by the Executive Board. It has seven members: Philippe Reichstul, Jacques Lefèvre, Dominique Gaillard, Lise Fauconnier, Antonio Marcegaglia, Jean-Georges Malcor and Laurence Parisot.

THE EXECUTIVE BOARD

Frédéric Sanchez
Chairman of the Executive Board

Martin Duverne
Member of the Executive Board

To support it in its decision-making, the Executive Board has introduced an Executive Committee and five Country Coordination and Steering Committees:

As the body responsible for consultation, recommendation and implementation, the Executive Committee examines the proposals put forward by the Country Coordination and Steering Committees as well as the Functional Departments, considers issues submitted to it and supports the Executive Board in reaching those decisions that fall within its scope of competence.

Its members include the members of the Executive Board and the Group’s key operational and functional directors as well as the Country Directors. The Country Coordination and Steering Committees are responsible for conducting a broad dialogue on the strategies to implement within the Group, as well as for the operational priorities and cross-cutting policies to focus on for each geographic zone. They define the methods for implementing these topics in the various subsidiaries.

In addition to the members of the Executive Committee, they are made up of Chief Executive Officers (or equivalent positions), functional directors for Fives or Country Directors. The Country Coordination and Steering Committees are chaired by the Country Directors for North America, China, India and Italy, and the Chairman of the Executive Board for France.

THE EXECUTIVE COMMITTEE

2018 Report # 2017 financial year
OUR PRIORITIES

Customer / Service • 22
Innovation • 24
Operational performance • 26
Human resources • 28
OUR PRIORITIES
CUSTOMER/SERVICE

UNDERSTANDING INDUSTRY TRANSFORMATION TO BETTER SERVE CLIENTS

Pives is a partner to manufacturers, supporting them in the development and optimization of their activity. For over 225 years, Pives has been a leading partner of the largest global manufacturers, aware of their expectations and issues arising from their investments. The Group is always looking to get closer to its clients - before, during and after project implementation - in order to highlight solutions that respond to their long-term needs and challenges.

The Group’s agile organization allows it to adapt to transformations and anticipate new market trends to better seize opportunities.

As a supplier to the largest car manufacturers, Pives is a leading observer of trends in this sector: vehicle personalization, electric engines and lighter materials to limit environmental impact and increased mobility are just some of the issues which have an effect on a plant’s core operations. These issues are development opportunities for the Group: the design of increasingly flexible production systems, particularly adjustments systems, upgrading solutions to manufacture and monitor the quality of thinner and stronger steels, transforming production lines in order to produce hybrid and electric engines and the corresponding batteries, developing new bonding assembly techniques, etc.

Developing services to ensure continued performance of the production unit throughout its life cycle

Pives continues to develop a wide range of services meeting the specific needs of its clients, whether helping them to optimize their production unit, upgrading it or developing it in 2017. Service turnover grew by 10%.

Background work has taken place to optimize the Group’s operational performance in spare parts.

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Starting from the challenge of the customer

Ernesto Gabrielli, Business Unit Development Manager

Pives is recognized as a leading provider of grinding and ultra-precision solutions. At Pives, general reflection was conducted on the business to identify new market opportunities, which showed that the bearings market had market potential for Pives’ grinding business.

We carried out interviews with bearing manufacturers to better understand the underlying forces driving this market and to develop products and solutions accordingly. It allowed us to identify two main trends: first, today’s production process of bearings is quite rigid, requiring long stops of the lines as items of a different nature need to be produced – these are constraints that reduce the overall line efficiency and market reactivity. Second, this process requires big investments at first setup, justified only by large volumes that are not always guaranteed by the market.

In the light of these elements, we are working to develop grinding solutions that bring flexibility to production facilities, which also allows higher opaquity of investments. This naturally leads to a reduction of warehouses in the bearing industry and a proliferation of customized products to fit specific end-user needs with short delivery.

We are happy to think ourselves as enablers of the change of our clients’ business model.

Digital technologies for high added-value services

Digital technologies help meet manufacturers’ expectations in terms of improved availability, responsiveness and flexibility of their production systems, as well as the quality of their end products. Pives, via CortX, a newly created Group company, provides on offer adapted high added-value services, which combines production data valuation and control of industrial processes. Through its adopted digital platform, Pives’ CortX enables manufacturers to collect and process objective information, on which they can base decisions.

2018 Report # 2017 financial year
22 • 23
INNOVATION: FUELING THE GROUP’S GROWTH

More efficient, more flexible and more environmentally-friendly and socially responsible, the industry has developed to take on new challenges. Fives accelerates the development of innovative and competitive technologies which meet this need.

The Group develops and implements new equipment and services which are the result of its expertise in industrial processes and its ability to innovate in the newest technologies: digital (sensors, artificial intelligence), automation (robotics), new materials (composites) and new processes (3D printing).

Digital provides quality, responsiveness and flexibility in production; the plant becomes smart throughout the equipment life cycle. Fives offers virtual commissioning solutions, real-time monitoring, production control, optimization of resource consumption and the logistics chain, and predictive maintenance used by manufacturers in all sectors: transport (SNCF), aerospace (Safran), postal sector (La Poste), steel, sugar, etc.

Adjacent innovation, a source of growth

Fives promotes adjacent innovation, which involves extending its “core expertise” to new business sectors in order to enter new markets. Within the Automation business line, Fives has created a new business line in the timber industry, with a team fully dedicated to this market as a result of its historic activity in the automotive sector. Fives CortX is the most successful example of this approach: this internal startup is the result of an entrepreneurship initiative supported by a team from Intralogistics business line (places the Group at the forefront to provide digital solutions (IoT, machine learning, process optimization, predictive maintenance).

Increasingly efficient R&D

Fives is always looking to speed up new product launch times whilst ensuring that the products remain appealing. To do this, the Group uses structured and agile processes at all its subsidiaries. This provides an opportunity for the most disruptive ideas and focuses R&D efforts on launching new products, whilst paying attention to how its equipment will be used.

€34.9 M

2,169

9

SPENT ON R&D IN 2017
CURRENT PATENTS
PRODUCTS ARE ENGINEERED SUSTAINABILITY® BRANDED

Our Priorities

Innovation

Developing equipment and services for the industry of the future.
Fives serves its clients through its eighteen business lines and its network of over 100 operational entities in highly diverse industries. An important issue for the Group in terms of growth is capitalizing on its expertise, whilst maintaining proximity, agility and business sense alongside its clients.

Fives works continuously on all drivers of operational performance to control operational risks and maximize performance for its clients (cost, quality, delivery times, technology provided).

This involves:
- the organization and implementation of human resources, with experts at a Group level to provide specific operational support to subsidiaries in fields such as project management, engineering, purchasing, quality and all those linked to contract execution;
- the implementation of a systematic approach to focus teams on best practices, through the development of training (classic training, virtual classes, tutorials, standards and guides), networking, supporting the implementation of efficient digital tools, deployment of recognized initiatives such as lean manufacturing, design to cost and purchase negotiation strategies.

Fives is promoting a culture and deploying operational tools.

Lean management example
Within the Cryogenics | Energy business line, the teams work in accordance with a Lean Management approach, which is one of the Group’s strategic programs: four priorities (Operational Excellence).

This approach results in the completion of several transformation projects, with optimization of workshop flows and the deployment of visual management on central themes.

The improvements are significant: within the Cryogenics business line, welding and heat treatment workshops have reduced transit time by 30% and gained 20% and 15% in productivity respectively. The cold box assembly workshop is in progress, with similar objectives.

Information systems: reinforcing Group standards and supporting businesses with specific developments

Specific development example
Information Systems performance has developed a turnkey plant costing application for the Cement | Minerals business line. This collaborative application capitalizes on sector expertise by modeling the entire structure of a cement plant. It allows much quicker and secure costing of all cement plant equipment, as well as the simulation of different possible options and parameters. This development implements efficient web technologies.

Project management example
A Group-level Project Management team has supported around ten companies for several months across all Group locations preparing for major projects, standardizing all processes linked to project management, support for completed projects, and a complete review of subsidiary projects in progress. Project management and joint work to implement action plans in order to secure performance.

Promoting a culture and deploying operational tools

Xavier Becquey
Head of Operational Performance

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The jobs of the future - what will tomorrow’s applicants look like?

David Zuk, Managing Director of Fives CortX, tells us about new jobs in the industry.

How do you see jobs in the industry evolving in the future?

Technological developments will dramatically change our sector owing to the increasing amount of data that can only be processed using artificial intelligence. The transition towards the industry of the future will require people who know how to optimize the use of our clients’ data and their equipment. This major transformation will require employees to adapt quickly to new and as yet unknown professions.

What needs have already begun to appear?

Digital technology is forcing the teams to accept a change of culture. Digitalization requires the need to work closely with our clients to help them express their needs to ensure we understand them. We need to develop new collaborative ways of working in order to bridge the gap between the technical sector and the IT era.

So what will the employee profile of the future look like?

The employees of the future will be those able to establish and maintain the link between the various project contributors, bring in new agile work methods suited to the industrial sector, and work in tandem with experts to optimize the most relevant data in a procedure or piece of equipment to produce the most effective predictive models.

All of our business areas will be affected by the need for new skills: sales, service and maintenance, data analysis, IT and cybersecurity, PR, etc.

E-learning

Fives leads an active training policy. Since 2013, more than 70% of employees have undergone training once a year (77% in 2017). The face-to-face training are supplemented by e-learning modules giving employees remote access to a multidisciplinary knowledge base of technical and sector-related knowledge (security, law, finance, reporting, etc.). Learning@Fives, the e-learning platform, allows Fives employees to manage their learning independently and actively. The platform gives them access to training around the world and at their own pace.

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OUR BUSINESS

Aerospace and industry • 32
Aluminium • 34
Automotive • 36
Cement and minerals • 38
Energy • 40
Glass • 46
Logistics • 48
Steel • 50
AEROSPACE AND INDUSTRY

FIVES GLOBAL OFFER

Metal cutting and machining solutions for large complex parts, as well as composite processing machine tools, designed for the aerospace and heavy manufacturing industries; maintenance solutions.

High-precision machines and high-performance composite processing systems: large vertical gantry mills and 5-axis horizontal mills, high-speed machining centers, profilers, stack routing machines, fiber placement and tape laying systems, boring mills and vertical turning lathes.

Breeching machines, automated drilling units and portable milling machines, flexible tooling and robotic solutions.

Services: evolution of new production lines, refurbishment of machine tools and other services such as: upgrading, repair, machine health checks, industrial transfer, production support, after-sales, technical assistance and customer support.

Maintenance: corrective and preventive maintenance solutions with contracts with performance objectives and maintenance engineering support services.

Main customers


Fives: a trusted partner for customers

Order from Boeing for the design and supply of eight additional Stringer Forming Cells to support the continued ramp-up of the 777X Composite Wing Center in Everett (Washington State, USA).

Order from Boeing for the design and supply of a 540-spindle, 5-axis Cincinnati XT Profiler dedicated to titanium machining in France.

Order for a 5-axis Cincinnati X and Y Profiler to be transferred to Triumph Aerospace's Red Oak facility (Texas, USA), which specializes in the manufacturing and assembly of large major composite and metallic integral aircraft systems for military and commercial aircraft programs.

In China, delivery of two horizontal-spindle Forest-Liné Aerostar 2 for aluminium machining to Harbin Aircraft; and commissioning of the first horizontal-spindle Liné Machines Powermill Ti dedicated to titanium machining at Harbin Commercial Aeronautics.

Renewed trust from Safran to maintain its plants in Gennevilliers as a sole supplier, and in Évry under contract for 50% of subcontracted maintenance in France.
FIVES GLOBAL OFFER

Fives’ offer covers a wide range of equipment and aluminium plant production workshops in the electrolysis, carbon and foundry sectors.

OUR BUSINESS

SECTORS

ALUMINIUM

Raw materials
- Liquid pitch marine terminal.

Reduction
- Gas Treatment Centers (GTC) - Pot Tending Machines (PTM) - Pot equipment - Potroom cranes and transfer systems.

Carbon
- Bath-processing units - Green Anode Plants - Firing and Control Systems (FCS) for anode baking furnaces - Furnace Treatment Centers - FCSC for anode baking furnaces - Carbon butts melting units - Furnace Tending Assembly (PTM) machines - Anode cooling shop - Anode stacking shops and anode handling systems.

Casthouse
- Holding and molten furnaces - Melting furnaces - Casthouse water cooling systems - Global casthouse solutions.

Successes in primary and secondary aluminium
- Signature of three contracts on a turnkey basis with Aluminium Bahrain B.S.C. (ALBA) and Bechtel, EPCM, as part of the Bahrain aluminium smelter expansion project (line 6), including a 55 tph Green Anode Plant, two Gas Treatment Centers (GTC) and 12 new generation ECL™ Pot Tending Machines (PTM).
- Renewed confidence of Trimet for upgrading one of the existing ECL™ Furnace Tending Assembly (FTA) in one furnace at its Saint-Jean-de-Maurienne smelter (France).
- Successful commissioning of the new GARMCO aluminium remelting/slab casting facility, in Bahrain, in the secondary aluminium industry, while reaching 1,500,000 man hours without LTI. The casthouse now produces aluminium slabs from clean and post-consumer aluminium.

Main customers
- ALBA - ALCOA - ALUMINOR - AMG - ANGANG STEEL - BHP BILLITON - CENTURY ALUMINIUM - CHALCO - EMIRATES GLOBAL ALUMINIUM (EGA) - HINDALCO - HYDRO - MA’ADEN ALUMINIUM - RIO TINTO - RUSAL - SOHAR ALUMINIUM - TRIMET - VEDANTA

www.fivesgroup.com

+ MORE DETAILS

2018 Report # 2017 financial year
Recognized technologies

- Orders from A123 Systems for the design and supply of two advanced lithium-ion battery assembly lines capable of producing a volume of 500,000 units per year, in China and Czech Republic.
- Contract from PSA Group to supply the handling facilities for the new vehicle assembly line in Rennes La Janais, France, with a rate of 25 vehicles per hour, to be used in the assembly of the Peugeot 5008 model and the Citroën Aircross SUV in the future. The site will feature the latest innovations for improved ergonomics and optimal quality.
- Award of several contracts from Daimler for suspension filling equipment on Tuscaloosa site (USA), combo machines for test operations on the braking and air conditioning systems on Victoria site (Spain), and commissioning of the Rapidcharge® machines on the Dusseldorf site (Germany).
- First order in China for two Vertical Single Disc grinders. This new product was developed with the support of Daisho to complete the machine offering on the transmission and gearboxes, an automotive segment that is expected to grow significantly during next years along with hybrid vehicles sales.
Major successes in Mexico and a breakthrough in the US and Ukraine

- Contracts from Cooperativa La Cruz Azul S.C.L. for the engineering, supply, construction and commissioning of two raw meal grinding plants on a turnkey basis, in Mexico. The first grinding unit, with a capacity of 280 tph will be installed at Hidalgo plant, for the line 10 project. The second plant, with a capacity of 300 tph will be installed at Oaxaca Lagunas Plant for the line 5 project. Each grinding plant will be fitted with an FCB Horomill® 4,000mm grinding mill and an FCB TSV™ Classifier 6,500mm.

- First success in the United States at Giant for the revamping of a cement grinding plant including a new FCB TSV™ Classifier and a new TGT® Filter.

- Contract signed with Vatutinsky Kombinat Vognetryviv, an Imerys subsidiary, for the revamping of its kiln in its refractory chamotte plant located in Cherkassy, Ukraine.

- Successful start-up of the FCB grinding mills and the FCB kiln on the Tula2 complete production line, that was delivered on a turnkey basis in Mexico. All performance tests were achieved.

- Delivery of Pillard NOVAFLAM® kiln burners and Hot Gas Generators for six greenfield cement plants in Egypt.
FIVES GLOBAL OFFER

Fives designs and manufactures a variety of industrial equipment for the energy sector, primarily in high-performance industrial combustion systems, tube and production finishing equipment, cryogenics equipment for hydrocarbon processing and air separation, and bio energy and sugar industries. Plus, on the piping solutions segment, the Group is involved in maintenance contracts as well as some new construction projects.

FIVES ENERGY OFFER

- Award of a major contract from the world leader in specialty forgings for an automated thermal processing facility, including Level II automation and material movement.
- Agreement for supplying more than 50 ultra-low NOx Pillard NANOxFLAM® burners to be installed into different heating facilities in the Tianjin province, following the certification obtained for the Chinese market.
- Orders for the supply of Regenerative Thermal Oxidizers (RTO) to Aluminium end-users in Bahrain and China.
- Commissioning of the ductile iron pipe annealing furnace implementing North American TwinBed® II regenerative technology, at ACIPCO.
- Delivery of 25 flares in the United Arab Emirates to petrochemical end-user ADCO.
- Revamping of a 120-meter high elevated flare at the ENI plant in Taranto, Italy.
Numerous projects in Asia and Russia

- Renewed confidence from Mitr Phol, the fifth global producer, with an order for a 53,000 sq. m Cail & Fletcher falling film evaporator station for its new plant in Amnat Charoen (Thailand).
- Contract with Korach Industry for 11 Cail & Fletcher ZUKA® batch centrifugals 1750 S and six Continuous centrifuges PC500, ten years after supplying the centrifugals for its other production lines.
- Order from integrator Su-Enco for 16 Cail & Fletcher ZUKA® batch centrifugals 1750 S and five Continuous centrifugals FC1300, as part of a new 3,000 TS/D sugar refinery planned for the United Sugar Mills group in Bangladesh and eight Continuous centrifuges PC500 for the new PT Rejoso Manis Indo plant in Indonesia.
- New projects with Kristall LLC for delivering two Cail & Fletcher High capacity (150 TS/H) Cail & Fletcher multitube dryer-coolers to support the development of its planned cutting-edge plant in Kirsanov (Russia).
- The expertise of Fives Sugar Consulting chosen by Tereos for a study on improving sugar extraction yields and overall production on the Bucy-le-long site, in France.

Main customers


Cryogenic piston and centrifugal pumps for air separation units, hydrogen production and distribution of any liquefied gas.

Main customers


Proven success in plate exchangers and cryogenic pumps

- Order for a 400-ton cold box to be used for ethylene processing from TOTAL USA through EPC CB & I Oil & Gas.
- As part of the partnership with UOP Russel LLC, 24 orders of natural gas treatment units in the USA, including 14 which have already been delivered.
- Major order from the Chinese group S-P Chemical in ethylene processing, including eleven cold boxes, two columns, a horizontal tank and other equipment for heat exchangers.
- A major contract for the Uthmaniyah - Hyundai gas treatment project for the Sultanate of Oman.
- In the ethylene processing sector, supply of a 140-ton cold box as part of the LOTTE Chemical project for South Korea, and a 224 ton cold box for S-OIL including complete assembly of brazed aluminium heat exchangers for an ethylene recovery unit.
- Award of the American market in the cryogenic pumps sector, with orders for Air Products, Praxair and Air-Gas.
- Delivery of an LNG contract for the exchangers market with Air Liquide Yansida in Russia.

Brazed aluminium plate-fin heat exchangers for air separation units, gas treatment plants, ethylene production or liquefied natural gas.
INDUSTRIAL PIPING

HIGH-PERFORMANCE INDUSTRIAL PIPING:

- Engineering, supply.
- Manufacturing and assembly of highly technical piping (new construction or refurbishing).

A diversified presence in multiple industries:

- Contract signed for new work as part of the ITER project in Cadarache (France), including the preparation, ex-works assembly, and acceptance testing of cryogenic lines pre-fabricated on the customer site. The initial assembly phase is slated to last one year.
- On the gas market, order from Téréga for modernizing the gas switching stations on the pipe between the Lussagnet and Sauveterre de Guyenne (France) sites, followed by a new order for modernizing the gas switching stations in South-West France.
- In the expansion joints sector, an order from Galp for the manufacture and supply of 12 expansion joints for the Sines refinery in Portugal.
- Finalization of expansion joints and air chamber assembly for Borealis on the Grandpuits site (France).

Main customers

ARIANE GROUP - BOREALIS - CLEMESSY NUCLEAIRE - EDF - FRAMATOME - GALP - GENERAL ELECTRIC - GRT GAZ - ONET TECHNOLOGIES - SIMOREP - SNECMA - STORENGY - TEREGA - VERMILION - WEIR

TUBE AND PIPE

- Mill to finishing expertise.
- Design and supply of welded tube mill lines.
- Finishing equipment for both seamless and welded tube and pipe.
- Handling and packaging solutions for any types of tubes.

Robopack, the new breakthrough technology

Development of the patented Robopack technology for beveling and packaging applications, following the acquisition of the intellectual property and know-how of Imec Engineering’s Tube and Pipe division. Robopack is a robotic machine with a modular configuration, which brings increased productivity, as well as reduced labor cost and energy consumption. Robopack is being delivered to several clients in Europe and Latin America.

Main customers

Fives’ Prium® technologies preferred by customers

‒ Contract with Sisecam Elyaf Sanayi A.S., which produces E-glass reinforcement fiber products, to design melting furnace and distribution forehearth (conditioning) systems. The furnace will be amongst the largest in the world for this type of product.

‒ Design and supply of a full Prium® Pre mix combustion system for glass fiber production to Valmiera Glass for its inaugural US production facility based in Dublin (Georgia, USA). This will provide accurate combustion control for eight lines of specialist glass fiber production dedicated to space, automotive and Oil & Gas industries.

In addition, supply of high performance cooling Prium® VariCool electrode holders to fully support the electrical boosting system of the new fiberglass furnace.

‒ Supply and commissioning of a new Prium® Forehearth at Holophane Lighting Products based in central Ohio, USA. This forehearth solution has been specifically tailored for borosilicate production needs.

‒ 11 orders for annealing lehrs from various glass producers worldwide.

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The trust of major players in e-commerce, courier and distribution

- Implementation of four contracts from a major e-commerce company at very short notice, including three sorting centers in the US and France, and a returns management center in Slovakia.

- Order from a major international player in the courier industry for the mechanization of its first European hub, located on the site of Paris-Charles-de-Gaulle airport (France).

- Contract from one of the main Japanese express courier operators, a longstanding client of the Group, for the supply of four parcel sorting systems on two terminals, including two GENI-Belt™, which can sort up to 24,000 parcels per hour.

- Launch of three initial projects in progress as part of a framework agreement signed with ITM LAI (Les Mousquetaires – Intermarché Group) to provide several fresh produce sorting platforms.

- Commissioning of the third of six automated logistics platforms equipped with the OPR® (Order Picking Robotic) mixed palletization solution at the distributor Système U.
OUR BUSINESS
SECTORS

FIVES GLOBAL OFFER
The Fives’ offer to steel producers meets several needs: providing process expertise and operational support to optimize performance (costs and product quality), and developing breakthrough technologies to meet the new needs and applications of the steel market, in particular high value-added steel grades.

STEEL

A RANGE OF SOLUTIONS INCLUDING:
- Metallurgical and process expertise.
- Eyeron™ real-time quality management systems for fully integrated steel production lines from the steel shop down to the cold roll mill and fully automatic control systems of coil annealing and galvanizing lines.
- Design and supply of technologies and equipment for cold-processing cold rolling mills and strip processing lines (mechanical, surface treatment, furnaces, induction solutions, coiling and post treatment technologies).
- Long product straightening.
- Reheating and heat treatment technologies, including reheating furnaces and induction heating solutions.
- A full range of services, including upgrades and support to plant operations.
- Design and supply of technologies and equipment for cold processing: cold rolling mills and strip processing lines (mechanical, surface treatment, furnaces, induction solutions, cooling and post treatment technologies).
- Reheating and heat treatment technologies, including reheating furnaces and induction heating solutions.
- Long product straightening.
- A full range of services, including upgrades and support to plant operations.

— Major order in the US for the design and supply of a NeoKoil® continuous hot dip galvanizing line (CGL) dedicated to the prime quality automotive industry. This line will be equipped with Fives’ proprietary disruptive innovations, including FlashCooling® rapid cooling technology and CELES EcoTransFlux® high flux induction technology.
— Contracts signed, mainly in Asia and North America, for the design and supply of various high flux induction heating solutions such as CELES CELINE for lines and finishing mill dedicated to the production of billets, and CELES EcoTransFlux™ for lines dedicated to the production of Advanced High-Strength Steels.
— Design and supply of two Stein Digit@l Furnace®, each equipped with AdvanTek® burners and the Virtuo® Edge-R system, for Dolvi Works, in India.
— Revamping of the DMS cold rolling mill 20HI dedicated to stainless steel strips on Aperam plant, in France.
— Commissioning of POSCO’s seventh continuous galvanizing line equipped with the latest generation Stein Digiflex® vertical annealing furnace, in Korea, and of continuous galvanizing lines equipped with Stein Digiflex® for Baosteel in China.
— Metallurgical and process expertise. 
— Eyeron™ real-time quality management systems for fully integrated steel production lines from the steel shop down to the cold roll mill and fully automatic control systems of coil annealing and galvanizing lines.
— Design and supply of technologies and equipment for cold-processing cold rolling mills and strip processing lines (mechanical, surface treatment, furnaces, induction solutions, coiling and post treatment technologies).
— Metallurgical and process expertise.
OUR COMMITMENTS

A responsible group • 54
Ethics and compliance • 56
Health and Safety • 58
Energy and environmental performance • 60
“2018 will be a pivotal year for the Group’s Corporate Social Responsibility program.”

93% of Group companies distributed the Code of conduct to their employees
93% of companies have undergone a corruption risk analysis within the past year
93% of companies have undergone a corruption risk analysis within the past year

2018 Report

54  •  55

CSR AT FIVES

2008
Launch a structured Corporate Social Responsibility (CSR) program

2011
Voluntary decision to publish the first Annual and CSR report

2012
Creation of the Engineered Sustainability® eco-design program and launch of Fives’ ISO 14001 process for industrial sites

2015
Business Ethics program enhanced

2016
Group Safety Golden Rules deployed

2017
Launch of the new 2020 Safety objectives

THE UNITED NATIONS GLOBAL COMPACT

In 2011, Fives became an official signatory of the United Nations Global Compact, affirming its membership in a global business community that believes in respect for Human Rights, workplace standards, the environment and anti-corruption.

“While our markets and the Group are undergoing major transformations, we are more than ever keen to evolve and grow in respect of common and shared values by placing the people, the environment and integrity at the center of our concerns. Each year, officially reporting on our actions through the UN Global Compact allows us to assess, improve and strengthen our commitments to sustainable development.”

Frédéric Sanchez
Chairman of the Executive Board

FIVES’ 4 COMMITMENTS

ENVIRONMENT
Minimizing the environmental footprint of Fives and its customers

ECONOMICS
Promoting fair practices in the marketplace

WORKFORCE
Providing a safe and motivating working environment

GOVERNANCE
Incorporating CSR priorities into the organization of all Fives entities

THE UNITED NATIONS GLOBAL COMPACT

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OUR COMMITMENTS
ETHICS AND COMPLIANCE

SECURING OPERATIONS IN A CONSTANTLY CHANGING ENVIRONMENT

Risk is an integral part of Fives’ business, whether related to export conditions or international transactions requiring commercial intermediaries. In this context, appropriate means of prevention, control and audit are key.

Business ethics: identify the risks to better target efforts
One of the main challenges of the prevention of corruption is to proportion the actions to risks and stakes, in order to secure the business activities while accompanying the operational staff in their efforts. It is therefore first of all about identifying the risks, building the appropriate action plans and keeping everyone’s attention on these subjects, through training and sensitization.

The year 2017 was a decisive year for French companies with the coming into force of the Sapin II Law, which affects the means of prevention, training, warning and punishment.

Export rules: implementation of a flexible and responsive system
The geopolitical context requires all companies to be increasingly careful, especially with regards to export rules. Within the Fives group, a network of referents has been set up in order to bring back to the central teams (legal, international development, customs and logistics) the elements making it possible to ensure compliance with the export rules.

Manage customs operations to reinforce competitiveness
In a constantly evolving international regulatory context, the good management of customs operations provides companies with a considerable competitive edge. Formerly considered declarative, accounting and too technical, customs become forward-looking, strategic and allows operators to make substantial savings (optimization of sourcing, procedures allowing rapid customs clearance, logistical gains, etc.). Teams of specialists assist Fives’ subsidiaries at all stages of their projects to secure the flow of goods and streamline the logistics chain.

All of the tools used to select, validate, monitor and contract with commercial intermediaries were updated in 2017, giving rise to global information for sales teams. Third-party information sharing and external due diligence were also strengthened.

93% OF COMPANIES HAVE UNDERGONE A CORRUPTION RISK ANALYSIS WITHIN THE PAST 24 MONTHS

Arnaud Lecoeur
General Counsel

“Our mission is to identify risks upstream and secure operations while keeping a pragmatic approach in support of Fives subsidiaries.”

Enhanced vigilance over third parties

2018 Report # 2017 financial year

56 • 57
OUR COMMITMENTS
HEALTH AND SAFETY

A NEW SAFETY AMBITION
FOR 2020

After significantly improving its Health and Safety performances since the implementation of a Group program in 2009, Fives is now redefining its ambition by setting new Safety targets to achieve by 2020.

2017: a historic milestone for the Group
After a mixed year in 2016, 2017 saw an improvement in the Group’s Safety performances. The frequency rate of lost-time accidents hit a historic low of 3.74 in 2017. The Group recorded a frequency rate of 11.20. Unlike in 2015 and 2016, there were no fatality in any Fives’ activities (including subcontractor), and the number of severe accidents was halved from seven in 2016 to three in 2017.

2020 Fives Safety Ambition: a shared commitment
In 2017, the Executive Committee, the Executive Board, and business lines management committees were mobilized to set new Safety goals to achieve for the Group and for each of its entities. These objectives were then broken down into specific action plans for each Group company. This new ambition aims to maintain the dynamics of the Group’s improvement of Safety practices and culture to develop a strong Safety culture shared by all. Targets were set in terms of Safety culture (using the Bradley curve) and results (including the frequency rate of lost-time accidents).

2020 Safety Objectives
These objectives were set for Group employees and temporary workers (2016 reference year).

- Enhance the Safety culture, with reference to the Bradley curve:
  - Achieve the “Independent” maturity status at Group-level
  - No companies with “Reactive” status
  - Reach “Interdependent” status for some Group companies

- Improve the safety results:
  - No fatality (including subcontractors)
  - No severe accidents
  - Reduce the accident frequency rate to 2.5 or below
  - Halve the number of accidents with lost-time (LTI) in Fives’ workshops

Group Safety Golden Rules: improving the safety culture
In 2016, Fives launched the deployment of the Group Safety Golden Rules, which cover the ten main at-risk activities that can cause severe accidents on its sites and workshops. These rules apply to all Group activities and all personnel under Fives’ responsibility (Fives employees, temporary staff, and subcontractors).

The year 2017 showed that close to 90% of all accidents (lost-time, severe or potentially severe) which occurred in the Group’s activities were directly related to poor compliance with the Group Safety Golden Rules. The initiatives which are under way to implement stricter compliance with these rules should significantly reduce the number of severe and potentially severe accidents and continue the trend towards improving behaviors and creating safer work environments.
Fives designs and manufactures equipment for a range of industries, some of which are energy-intensive and major emissions generators. Environmental concerns, energy performance, and operational performance are increasingly linked. Fives supports its customers by working on the two environmental levers within its scope: eco-design and control of the environmental impact of its own industrial sites.

An innovation and continuous improvement process focused on eco-design

Launched in 2012, Fives Engineered Sustainability® eco-design program combines operational excellence with high environmental performance. This voluntary innovation approach covers both environmental issues (energy, emissions, material consumption) and safety as well as operational performance (operating costs, flexibility, productivity). The entire program is based on the ISO 14062 eco-design standard and was independently certified by EY in 2013.

In 2017, deployment of the Engineered Sustainability® program continued in two areas:

- On one side, by working to obtain or renew the Engineered Sustainability® brand on products considered strategic for their markets, given that the brand expires automatically after three years if it is not renewed.
- And on the other, by opening up the method to subsidiaries which want to (re)design their products with this global approach without necessarily aiming to obtain the Engineered Sustainability® brand.

“An innovation and continuous improvement process focused on eco-design”

Supplier innovation

2017 was an opportunity to encourage the innovation of suppliers

The Pillard NANOxFLAM® boiler burner was developed by R&D to achieve the lowest NOx emissions on the market. A multidisciplinary team involving R&D, the Design Office, and Purchasing worked with suppliers using a collaborative, iterative approach with open specifications to foster innovation during the industrialization phase.

“This efficient and cooperative approach made it possible to continue to innovate on the burner’s design and performance, enhance our intellectual property, and achieve competitive manufacturing costs while optimizing the supply chain: this was another challenge for the market launch of this burner” says Pierre André Jarniac, the Combustion Business Purchasing & Supply Department manager.

Upstream work with other industrial companies made it possible to incorporate new materials into generators for inductors. According to Aurélie Gonzalez, Innovation Program Manager for Process, Energy & Environment, “our work on eco-design has shown that working with our suppliers on new materials can reduce the generators’ impact thanks to higher yields, modular design, and more user-friendly equipment.”

Fives works on the two environmental levers: eco-design and control of the environmental impact of its own industrial sites.

Fives was also involved in a study to evaluate the benefits of eco-design carried out by the ARENM (French Environmental and Energy Management Agency) on a panel of 10 French companies. Its results confirmed the economic, organizational, and reputational benefits of eco-design.

An environmental approach that continues to gain ground within the Group

Fives is continuing its work on achieving the target it set in 2012: all Group’s industrial sites must implement an environmental management system and obtain ISO 14001 certification. At end of 2017, 80% of the target sites were ISO 14001-certified (including new industrial sites acquired after 2012).

Thanks to the new eco-design requirements that were included in the ISO 14062 standard in 2015, synergies were developed between the Group’s eco-design and ISO 14001 programs. Training on the internal Life Cycle Analysis tools and support for the subsidiaries were provided to help them make eco-design an opportunity for differentiation.

—

Team 2 (the competitive cluster for environmental technologies applied to materials) aims to create a French label for recycling equipment manufacturers, based on Fives’ eco-design program.

At the 2017 World Efficiency Solutions tradeshow, an international gathering for the resource-efficient and low-carbon economy, Fives presented its Engineered Sustainability® program, as well as several high environmental performance technologies.
## Financial Indicators

### Order Intake

<table>
<thead>
<tr>
<th>Region</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>635.9</td>
<td>364.0</td>
<td>532.5</td>
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<tr>
<td>Asia and Oceania</td>
<td>482.0</td>
<td>328.8</td>
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<tr>
<td>Europe</td>
<td>175.4</td>
<td>164.1</td>
<td>151.6</td>
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<tr>
<td>Middle East &amp; Africa</td>
<td>635.9</td>
<td>364.0</td>
<td>532.5</td>
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<tr>
<td><strong>Total</strong></td>
<td>1,707.8</td>
<td>1,465.1</td>
<td>2,117.0</td>
</tr>
</tbody>
</table>

### Contribution from mature economies vs. emerging countries

<table>
<thead>
<tr>
<th>Region</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>62%</td>
<td>38%</td>
<td>64%</td>
</tr>
<tr>
<td>Asia and Oceania</td>
<td>67%</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>62%</td>
<td>38%</td>
<td>64%</td>
</tr>
</tbody>
</table>

### Sales

<table>
<thead>
<tr>
<th>Region</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>521.1</td>
<td>369.0</td>
<td>511.6</td>
</tr>
<tr>
<td>Asia and Oceania</td>
<td>567.3</td>
<td>384.8</td>
<td>570.0</td>
</tr>
<tr>
<td>Europe</td>
<td>699.3</td>
<td>502.5</td>
<td>597.5</td>
</tr>
<tr>
<td>Middle East &amp; Africa</td>
<td>561.8</td>
<td>357.7</td>
<td>439.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,718.2</td>
<td>1,779.2</td>
<td>1,896.1</td>
</tr>
</tbody>
</table>

### Contribution from mature economies vs. emerging countries

<table>
<thead>
<tr>
<th>Region</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>58%</td>
<td>42%</td>
<td>60%</td>
</tr>
<tr>
<td>Asia and Oceania</td>
<td>61%</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>58%</td>
<td>42%</td>
<td>60%</td>
</tr>
</tbody>
</table>

### Summary of Consolidated Figures

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>€ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1,779.2</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>1,896.1</td>
<td></td>
</tr>
</tbody>
</table>

### Summary of Consolidated Figures

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>€ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1,779.2</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>1,896.1</td>
<td></td>
</tr>
</tbody>
</table>
### Social Indicators

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employees</strong></td>
<td>8,298</td>
<td>8,683</td>
<td>8,666</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workforce at the end of the year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisitions completed</td>
<td>841</td>
<td>843</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workforce at the end of the year in companies entering the Group</td>
<td>5,440</td>
<td>5,783</td>
<td>5,285</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of new hires (all types of contracts)</td>
<td>939</td>
<td>941</td>
<td>974</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Workforce by gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of men</td>
<td>64%</td>
<td>64%</td>
<td>60%</td>
<td>64%</td>
<td>64%</td>
<td>61%</td>
<td>63%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of women</td>
<td>36%</td>
<td>36%</td>
<td>40%</td>
<td>36%</td>
<td>36%</td>
<td>37%</td>
<td>37%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of engineers and managers among women</td>
<td>37%</td>
<td>39%</td>
<td>43%</td>
<td>37%</td>
<td>35%</td>
<td>34%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Share of women in management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of women among CEOs</td>
<td>12%</td>
<td>11%</td>
<td>15%</td>
<td>14%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of women on Management Committees</td>
<td>24%</td>
<td>23%</td>
<td>28%</td>
<td>24%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of women in Management Committees</td>
<td>24%</td>
<td>23%</td>
<td>28%</td>
<td>24%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of women among directors</td>
<td>10%</td>
<td>10%</td>
<td>12%</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of nationalities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 and more</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>4%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 40 to 49</td>
<td>14%</td>
<td>13%</td>
<td>12%</td>
<td>10%</td>
<td>9%</td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 30 to 39</td>
<td>25%</td>
<td>27%</td>
<td>25%</td>
<td>24%</td>
<td>26%</td>
<td>24%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 20 to 29</td>
<td>22%</td>
<td>23%</td>
<td>19%</td>
<td>22%</td>
<td>25%</td>
<td>24%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 20</td>
<td>8%</td>
<td>9%</td>
<td>12%</td>
<td>11%</td>
<td>10%</td>
<td>11%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employees by age range</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 20</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 20 to 29</td>
<td>14%</td>
<td>17%</td>
<td>13%</td>
<td>12%</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 30 to 39</td>
<td>25%</td>
<td>27%</td>
<td>21%</td>
<td>25%</td>
<td>24%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 40 to 49</td>
<td>25%</td>
<td>23%</td>
<td>21%</td>
<td>22%</td>
<td>27%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 50 to 59</td>
<td>27%</td>
<td>27%</td>
<td>30%</td>
<td>30%</td>
<td>27%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 and over</td>
<td>8%</td>
<td>9%</td>
<td>2%</td>
<td>4%</td>
<td>2%</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Non-Financial Indicators

The Group’s progress on social and environmental issues, innovation and ethics is monitored year-round for analysis and strategic purposes. Our reporting system is designed so that we can track progress on the Group’s initiatives and keep all Fives stakeholders informed of these changes.

The HR (social indicators) and Innovation reports cover the financial consolidation scope, Health, Safety, Ethics and Environmental data, on the other hand, is based on headcount and activity criteria which may lead to differences in scope.

The Group workforce reached 8,666 employees at the end of 2017, an increase of nearly 4% compared with the previous year. This growth is mainly due to the acquisition of the company Syleps which has 228 employees in France, providing the Group with support in Logistics. With an equivalent scope, the workforce remains stable.

The share of engineers and executives in the overall workforce has increased steadily for several years reaching 45% in 2017, nearly half of the workforce. The progressive change in the level of qualification was made possible by significant recruitment in recent years – 97% permanent contracts in 2017 – unfortunately this did not continue in the next few years due to the age structure. This recruitment had a direct effect on the years of service: 40% of our workforce has had a direct effect on the years of service: 40% of our workforce has less than five years of service.

The proportion of employees brought on during Starter meetings, monitored and assessed during interviews and through the career management committee (CEDRE), and trained - 50% of them were trained in techniques and business – demonstrates the positive deployment of talent identification and development within Fives. This is a key deployment in the context of significant staff renewal.

Finally, in line with previous years, the resource pooling process continued with 129 employees seconded in 2017. The main “source” subsidiary was Fives Italia from the Steel division - and the main “recipient” subsidiary was Fives Ciel in the Energy division. By supporting Group entities in accordance with their workload, the seconded employees are a real asset to optimize Group resource allocation.

The very frequent recruitment did not lead to an increased workforce as it mainly offset a similar level of departures, so the overall workforce should continue in the next few years due to the age structure. This recruitment had a direct effect on the years of service: 40% of our workforce has less than five years of service.

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INDICATORS

Non-Financial indicators

The Group’s R&D & Development effort was generally at the same level in 2017 compared with the previous two years, if we consider the 2015 and 2016 years restated with reclassification of part of the R&D costs.

The proportion of the R&D budget dedicated to developing new products/processes returned to the 2015 level whilst the budget allocated to radical research and innovation increased by 2%, which underlines the Group’s intention to offer innovative and high performance technical solutions to its clients.

Fives continued to file patents at an impressive pace with 32 new patented inventions in 2017. The number of patent families and the number of patents continued to grow to reach 632 patent families and 1,948 patents or patent applications in force at the end of 2017. The number of new patents linked to equipment energy and environmental performance remains stable.

The results of the Group’s 2017 innovation contest remained at a very high level, with over 500 ideas suggested by employees to improve the environmental and operational performance of Fives products. EY continued to be deployed in 2017 in two areas: on the one hand, by working to obtain the Engineered Sustainability® brand for their products: on the market. Including this product, nine products currently have the Engineered Sustainability® brand.

In 2017, a branded product expired and was intentionally not renewed following a market reorientation (in favor of the aluminum recycling market in this case). Also in the aluminium sector, a product is currently having its brand renewed, by extending its perimeter to the entire aluminium emissions on the market. Including this product, nine products currently have the Engineered Sustainability® brand.

In addition, three subsidiaries are continuing to work to obtain the Engineered Sustainability® brand for their products:

- the FCB Horomill® workshop for cement plants in its “new material” use,
- the ultra-low NOx Pillard NANOxFLAM® burners for industrial boilers,
- the oxy-fuel machine as an oxygen carrier for car air conditioning.

Other subsidiaries have started work to (re)design products with the Fives eco-design methodology and tools: detecting nitrogen leads for employment; using these fluids, power generators for air conditioning and the part handling system to adjust crankshafts.

Furthermore, the change to the ISO 14001 environment management standard version used by 40 Group sites was an opportunity to revitalize eco-design training. The new version explicitly includes eco-design requirements, which led to the training of nearly 40 people from different Group subsidiaries in the Fives Life Cycle Analysis (SLCA) tool.
The corruption prevention program launched by the Group in 2014 continues to be deployed. 2017 saw the start of team training, following risk analysis in 2016. In 2018, these risk analyses should be updated, including newly acquired entities and continuing training.

Efforts have mainly been made on updating rules and working documents regarding agents. The entire agent validation process was reviewed.

The Code of conduct is the main tool for dialog with all employees in terms of ethics. Changes to distribution of the Code of conduct - 97% of companies in 2016 and 93% of companies in 2017 - are due to the integration of new subsidiaries which have not immediately included the Code of conduct in their internal processes.
After a mixed 2016, 2017 saw a significant improvement in the Group’s accident performance. The last-accident frequency rate reached a historically low level. Fives did not report any fatal accident in its operations (including subcontractors) unlike 2015 and 2016, and the number of severe accidents fell by half.

However, the improvement in the Group’s accident performance is not even across all subsidiaries. The percentage of last-accident times has continued to increase for our workshops for three years, increasing from 41% in 2015 to 80% in 2017. Three companies with workshops represent nearly 40% of last-accident times alone for the entire Group. Specific actions continue to be put in place in workshops to make significant progress, both at a field level and management and executive level. The number of accidents has fallen at sites, but the latter are potentially more severe.

The definition of the 2018-2020 Safety ambition in 2017 applied to all players (executive committee, business sectors, subsidiaries) to get involved in this program and define strategic actions adapted to current and future problems at each level of the Fives Group (Corporate, business sectors, subsidiary). This program is established to:

- reinforce all Group tools and systems defined in recent years (such as the Fives Safety Golden Rules, the Field Safety Observation and Dialogue for management, managing accident causes and processes during activities, etc.),
- directly address current Press issues, such as the high number of accidents at our workshops or the potential severity of the latter at our sites,
- collectively and individually involve all players (Fives staff, temporary workers, subcontractors, etc.),
- improve and entrench monitoring and steering of actions and performances of all Fives levels of organization.

The progressive deployment of this program across all operations will allow the Group to improve its Safety culture and its practices, and as a result reduce the rate and severity of our accidents.

The increase in the number of ISO 14001-certified sites continued in 2017 with the certifications of Fives OTD 5-p. sites in Italy and Fives Machining Systems, the sites in the USA. The proportion of certified industrial sites has now reached 80%.

2017 was also a key year for the transition to the 2015 version of the ISO 14001 certification: although at the end of 2016, only 16% of sites in question had transferred, at the end of 2017, 54% of ISO 14001-certified sites had moved to the 2015 version. Actions have been carried out jointly by the Group’s CSR and Innovation departments to support companies with this transition, primarily through development of the life cycle guide, which was introduced in the 2015 version. This support will continue in 2018, to finally focus on harmonization between companies, a benefit from existing synergies. The sites are required to complete the transition to the new standard before September 2018 to retain their certification.

The Group’s energy consumption remained stable in 2017, despite the increase in the number of industrial sites (although there was a slight increase in fossil fuel consumption. This was offset by a slight decrease in electricity consumption, which was the base fuel for the sites, which can be explained by the opening of the existing markets.

As with previous years, site energy consumption is strongly influenced by changes to site level of activity as well as the climate. Actions will be carried out in 2018 to support the sites consuming the most energy, in order to implement energy indicators to consider these parameters to better control their consumption.

Water consumption and costs fell in 2017, due to less activity at certain sites, which better control their consumption.

For the sites moving to the new version of the ISO 14001 standard, the Group carried out in 2018 to support the sites consuming the most energy, in order to implement energy indicators to consider these parameters to better control their consumption.

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PROGRESS ON DEPLOYMENT OF THE GROUP CORPORATE SOCIAL RESPONSIBILITY PROGRAM

Since 2012, a yearly assessment of the progress done by the Group in the field of Corporate Social Responsibility is being carried out. This has enable Fives to improve its actions taken during 2017 and to set annual goals for 2018.

The following table (see pages 76-80) details the overall progress made by the Corporate Social Responsibility program of the Group and how that progress relates to the commitment made by Fives to respect and promote the 10 principles of the United Nations Global Compact.

Their correlation with the 10 principles of the UN Global Compact is indicated by “GC 1” (Global Compact 1) for the program that corresponds to Principle 1 of the United Nations Global Compact, and so on, as detailed below.

“While our markets and the Group are undergoing major transformations, we are more than ever keen to evolve and grow in respect of common and shared values by placing the people, the environment and integrity at the center of our concerns. Each year, officially reporting on our actions through the UN Global Compact allows us to assess, improve and strengthen our commitments to sustainable development.”

Frédéric Sanchez
Chairman of the Executive Board

THE 10 PRINCIPLES OF THE UNITED NATIONS GLOBAL COMPACT

**HUMAN RIGHTS**

- **GC 1.** Businesses should support and respect the protection of internationally proclaimed human rights; and
- **GC 2.** Ensure that they are not complicit in Human Rights abuses.

**LABOR**

- **GC 3.** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- **GC 4.** The elimination of all forms of forced and compulsory labor;
- **GC 5.** The effective abolition of child labor; and
- **GC 6.** The elimination of discrimination in respect of employment and occupation.

**ENVIRONMENT**

- **GC 7.** Businesses should support a precautionary approach to environmental challenges;
- **GC 8.** Undertake initiatives to promote greater environmental responsibility; and
- **GC 9.** Encourage the development and diffusion of environmentally friendly technologies.

**ANTI-CORRUPTION**

- **GC 10.** Businesses should work against corruption in all its forms, including extortion and bribery.
### Program: GC 7 - GC 8: Support Group performance improvement

- **Group energy and environmental management program**
  - EY awarded this program an insurance certificate in 2013.
  - A brand identifying best-in-class products in terms of the requirements of the ISO 14062 standard.
  - It is an innovation process that can lead to the award of the ISO 14001 certificate.
  - Internal eco-design program which meets (and exceeds) Engineered Sustainability®.

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<td>Continue eco-design training for transition to the 2015 version.</td>
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<td>80% of the Group's industrial sites ISO 14001 certified</td>
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### Program: GC 8 - GC 9: EY awarded this program an insurance certificate in 2013.

- A brand identifying best-in-class products in terms of the requirements of the ISO 14062 standard.
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### Program: GC 10: Responsible purchasing

- Incorporate our social responsibility goals into our relations with subcontractors and suppliers.
- Promote social responsibility

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**Note:** The information is based on the document provided, and the format has been adapted for clarity and readability.
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<td>Accident performance</td>
<td>- No fatality in the Group (including subcontractors).</td>
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<td>- The number of severe accidents fell from 7 in 2016 to 3 in 2017.</td>
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<tr>
<td>Safety culture targets</td>
<td>- Achieve the “Independent” maturity status at Safety culture targets for 2020.</td>
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<td>- No fatality (including subcontractors).</td>
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<td>- Have no company with “reactive” status.</td>
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<td>- Reach “interdependent” status for some Group companies.</td>
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<td>Gender equality</td>
<td>- Promotion of a training program on diversity, in particular with regards to hiring.</td>
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<td>- Promotion of the Group’s training catalogue on topics relating to race</td>
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<td>- Ongoing training</td>
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<td>- Draft and launch a guide to promote the presence of women employees in the Group.</td>
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<td>- Monitoring of the presence of women employees in the Group, as required by Human Resources.</td>
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<td>- Development of the healthcare plan in the USA.</td>
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<td>- Continuation of the Starter meeting and Career booster programs in all areas.</td>
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<td>Providing a safe and motivating working environment</td>
<td>Continuation of the resource pooling system</td>
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<td>Maintenance of know-how and employment within the Group</td>
<td>- Continuation of the resource pooling system</td>
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<td>Process existing in France since 2009.</td>
<td>Launch of mini surveys by certain subsidiaries to assess the effectiveness of action taken since the survey results in 2015.</td>
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<td>Sharing meetings held two or three times a year, to review the workload/underloads and make staff allocation decisions, ranging from several weeks to several months.</td>
<td>Launch of a new Group satisfaction survey in April 2018 with the initial results presented in June and a full analysis in September 2018.</td>
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<td>- The resource pooling process (an effective means of optimizing the allocation of Group resources) continued with 129 employees available in 2017. The main source subsidiary is Fives Stein from the steel division, while the main beneficiary division is Fives Cail, from Energy division.</td>
<td>- As with the other surveys, targeted action will be taken depending on the results.</td>
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<td>World employee opinion survey</td>
<td>- Continuation of the resource pooling system.</td>
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<td>An opinion survey conducted every three years among all Group employees, designed to measure satisfaction levels and any organizational malfunctions, and which gives rise to the implementation of action plans proposed by employee bodies.</td>
<td>Launch of the update of the entire Directives and Guidelines Manual:</td>
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<td>Incorporating CSR priorities into the organization of all Fives entities</td>
<td>Write and validate new Directives by the Executive Committee.</td>
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<td>Distribute best practices and Group Directives</td>
<td>Launch the platform to host them.</td>
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<td>Compilation of Directives and Guidelines covering all Group jobs, linked to internal control rules.</td>
<td>Launch the promotion campaign and support for the new version among the subsidiaries.</td>
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