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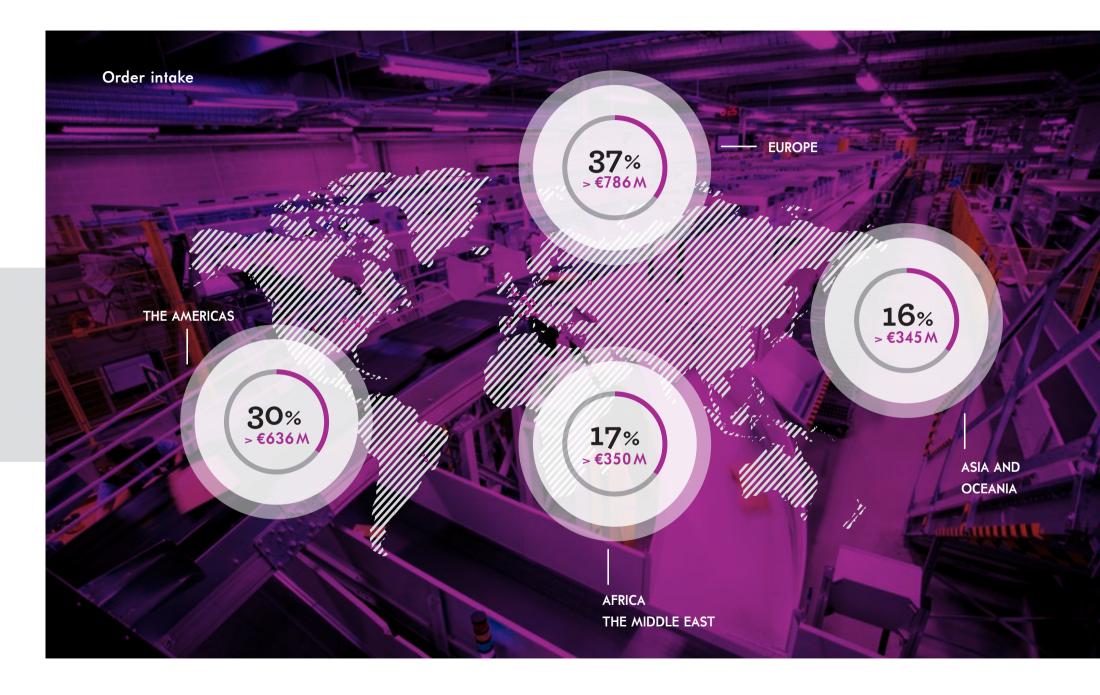
# FIVES, AN INDUSTRIAL **ENGINEERING GROUP**

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.

A NETWORK OF OVER €1,896м 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.



<sup>\*</sup> 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



Frédéric Sanchez

# 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.

A new order intake record

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.

After two difficult years in 2015 and 2016, which saw falling oil

"The outlook for 2020 is positive."



#### Innovation: digitalization and additive manufacturing

Fives 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.

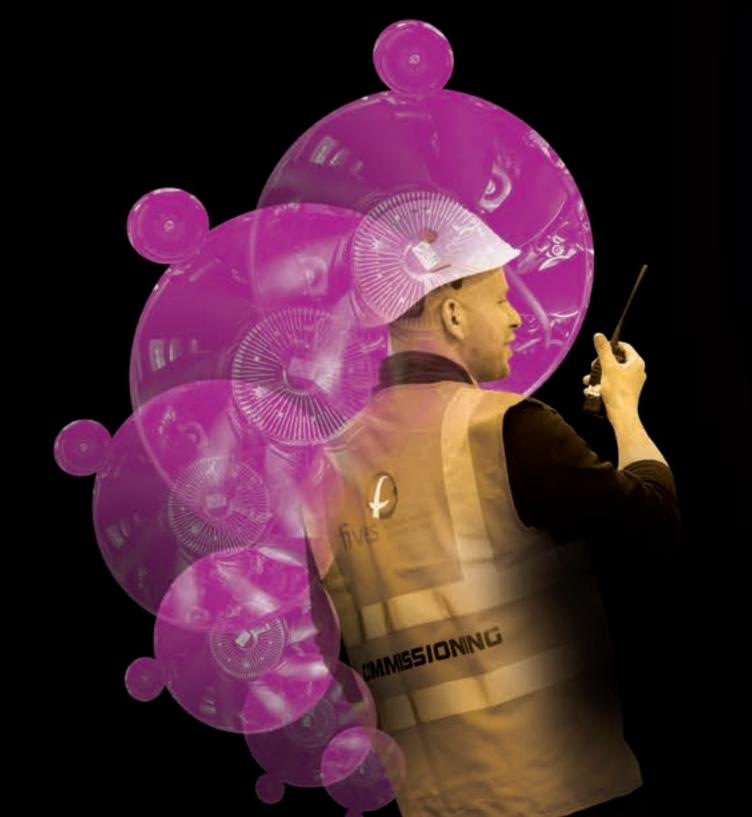
#### Internationalization: new markets, new requirements

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 - 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.



# MILESTONES

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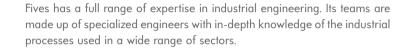
MILESTONES | OUR EXPERTISE

# **DESIGNING AND SUPPLYING**

# HIGH-PERFORMANCE SOLUTIONS AND SERVICES

"An⁄industrial engineering group with multi-sector expertise,"

# **MULTI-SECTOR** AND INTERNATIONAL EXPERTISE ALUMINIUM



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.



- Optimization: maximizing production process efficiency.
- Evolution: adapting equipment and production processes to new

To ensure that it has a worldwide presence where its customers are, the Group has created dedicated organizations on five continents.



# **FIVES** RECORD ORDER INTAKE

"In 2017, Fives achieved a record order intake level of over 2 billion euros for the first time in its history,"



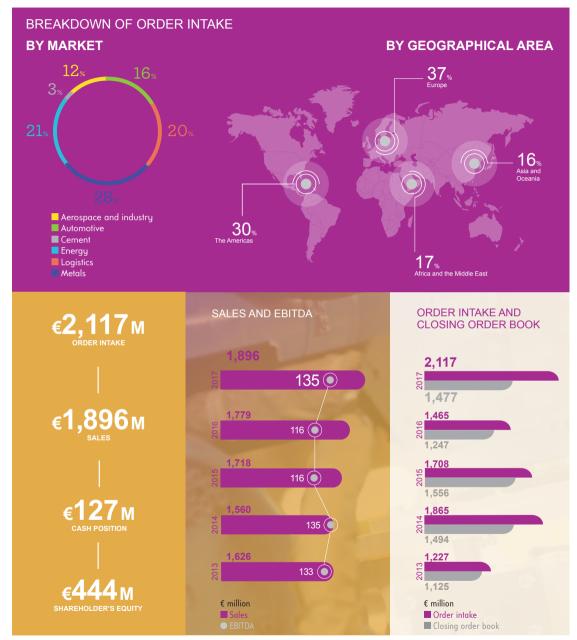
Suresh Abye Chief Financial Officer

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 came 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
- 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.



MILESTONES | SUMMARY | NON-FINANCIAL INFORMATION

€34.9м 2,169

RESEARCH AND DEVELOPMENT

INNOVATION

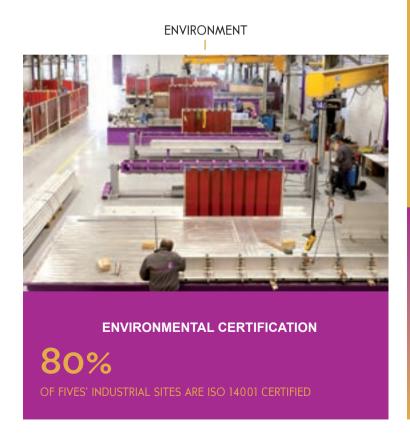
Fives continued to file patents at an impressive pace with 52 new inventions registered in 2017. The number of patents continued to grow to reach 632 families and 2,169 patents or patent applications in force at the end of 2017. The number of new patents relating to equipment energy and environmental performance remains stable. Fives came 32<sup>nd</sup> in the Top 50 French 'first to file' patents in 2017.

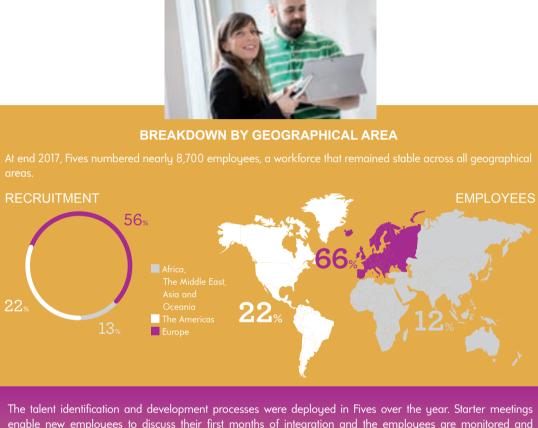
(Source: INPI - the French National Institute of Industrial Property)



ITEMS OF EQUIPMENT\* ARE ENGINEERED SUSTAINABILITY® BRANDED







**HUMAN RESOURCES** 

enable new employees to discuss their first months of integration and the employees are monitored and assessed at annual appraisals and by the career management committee (CEDRE). 77% of employees attended training courses over the year, 50% of which are technical and business training.

63 DIFFERENT NATIONALITIES

85% OF MEN

**15**% OF WOMEN

40% OF WOMEN ARE **ENGINEERS AND** MANAGERS

# **EVENTS**



# ACQUISITION: SYLEPS

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



#### ENVIRONMENTAL PERFORMANCE

**ENERGY TRANSITION** 

where the global temperature increases by 2°C. study aims to estimate the impacts of a 2°C increase by 2050 for Fives strategy and Group insights into its technologies and activities, as well as development

# 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.

#### **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).



#### 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 SOGECLAIR.



#### LOGISTICS

#### **BREAKTHROUGH IN E-COMMERCE**

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 Slovakia.



# **TERRITORIES**



## AFRICA AND THE MIDDLE EAST

#### BAHRAIN

#### Aluminium

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

### Secondary aluminium industry

Fives successfully commissioned the

## 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 **Cement** with Fives' proprietary disruptive innovations, including FlashCooling® rapid cooling technology and CELES EcoTransFlux® high flux induction technology.

Fives has established itself on the American market, securing two and an FCB TSV™ Classifier 6,500mm. 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

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

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.

## 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 on two terminals, including two GENI-Belt™, which can sort up to 24,000 parcels per hour.



# **EUROPE**

### FRANCE

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 La Janais, France, with a rate of 30 vehicles per hour, to be used in he assembly of the Peugeot 5008 model and the Citroën Aircross SUV in the future.

Safran renewed its confidence to the Group to maintain its plants in Gennevilliers s a sole supplier, and in Évry under contract for 50% of subcontracted

# FIVES' GOVERNANCE

Fives is governed by an Executive Board overseen by the Supervisory Board. The Executive Board has the most extensive powers to act on behalf of Fives under all circumstances, limited only by the company purpose and powers expressly vested by the Supervisory Board and shareholder meetings The Executive Board has two members: Frédéric Sanchez and Martin Doverne.

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 Parisøt.



Frédéric Sanchez Chairman of the Executive Board

Martin Duverne Member of the Executive Board

# 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 dialog on the strategies to implement within the Group, as well as 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.

> (From left to right, top to bottom) Daniel Brunelli-Brondex Country Director - India Sylvain Dulude Country Director - North America Frédéric Renaud Country Director - Italy Michelle XY Shan Country Director - China

Alain Cordonnier Head of the Cement Business Line **Denis Hugelmann** Head of the Automotive and Aerospace Business Lines Guillaume Mehlman Head of the Steel and Glass Business Lines Luigi Russo Head of the Combustion and Intralogistics Business Lines Hugues Vincent Head of the Aluminium Business Line

> Suresh Abye Chief Financial Officer Xavier Becquey Head of Operational Performance Jean-Marie Caroff Head of International Development Arnaud Lecoeur General Counsel Yannick Leprêtre Head of Innovation and Digital Paule Viallon Head of Human Resources

# THE EXECUTIVE COMMITTEE





# OURPRIORITIES

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# **UNDERSTANDING**

# INDUSTRY TRANSFORMATION TO BETTER SERVE CLIENTS

Adapting to transformations to seize opportunities.



# Fives is a partner to manufacturers, supporting them in the development and optimization of their activity

For over 200 years, Fives 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 global car manufacturers, Fives 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 adjustment 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.

# Starting from the challenge of the customer

Ernesto Gabrielli, Business Unit Development Manager

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

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

Fives continues to develop a wide range of services meeting the specific needs of its clients, whether helping them to operate their production unit optimizing 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.





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. Fives CortX, a newly created Group company, provides an offer adapted to all industrial sectors, which combines production data valuation and control of industrial processes. Thanks to adapted digital tools, Fives CortX enables manufacturers to collect and process objective information, on which they can base decisions.

2018 Report # 2017 financial year

# INNOVATION: FUELING THE GROUP'S GROWTH

Developing equipment and services for the industry of the future.

# OUR OBJECTIVE

ACCELERATE THE **DEVELOPMENT** OF INNOVATIVE
AND COMPETITIVE TECHNOLOGIES TO BUILD THE PLANT OF **THE FUTURE** 

MORE EFFICIEN

MORE FLEXIBL

ORE ENVIRONMENTALLY FRIENDLY AND SOCIALLY RESPONSIBLE





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.

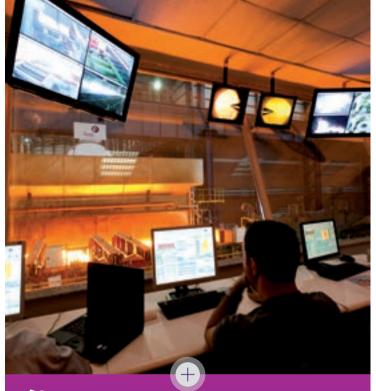
The Group develops and implements new equipment and services which are the result of its expertise in industrial processes and its ability to innovate in the newest technologies: digital (sensors, artificial intelligence), automation (robotics), new materials (composites) and new processes (3D printing).

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.

# 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
SPENT ON R&D IN 2017



# arowth

# Adjacent innovation, a source of

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 intrapreneurship initiative supported by a team from Intralogistics business line. It places the Group at the forefront to provide digital solutions (IoT, machine learning, process optimization, predictive maintenance).

**2,169**CURRENT PATENTS

PRODUCTS ARE ENGINEERED SUSTAINABILITY® BRANDED

# **CONTROLLING RISKS** AND MAXIMIZING PERFORMANCE

"Maintaining proximity, agility and business sense.



**Xavier Becquey** Head of Operational Performance



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.





#### 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 strategic program's four priorities (Operational Excellence). This approach results in the completion of several transformation projects, with optimization of workshop flows and the development of visual management as central themes.

The improvements are significant. Exchanger welding and head manufacturing 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/ 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.

# Providing specific operational support

# Project management example

A Group-level Project Performance 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 complicated projects, a complete review of subsidiary progress in project management and joint work to implement action plans in order to secure performance.

# **HUMAN RELATIONS** AND DIGITALIZATION

"To attract new skills to innovate and create the factory of the future."



Paule Viallon Head of Human Resources



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

David Zak, 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 reinforces 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 sectors 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, HR, 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.





Fives&Me, the new people management system has been developed to take the HR Process to the next level which suits the digital era. The modern tool enables the business by accelerating employee related process and the decision.

Though the Indian business portfolio in the Fives group is comparatively less consequential, the preference and importance given to implement this tool in Indian entities was no lesser which motivated and excited the Indian HR team to work relentlessly in construction and deployment of the tool, and successfully Fives&Me has been deployed in Fives Indian entities during October 2017.

This successful implementation enables Indian entities in bringing alignment of all HR processes and systems in line with Fives philosophy and also enables managers to have access to the information about his team members and the organization.

The employees were trained to use the tool and I am happy to note that it provides opportunity to employees to exhibit his profile. The recent appraisal process in Fives&Me was well appreciated by both employees and managers as it has enabled real dialogue between them.

In my view, Fives&Me is not a HR tool but a Business tool as it delivers people related information for the organization benefit.



# OUR BUSINESS

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Cement and minerals • 38

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Glass • 46

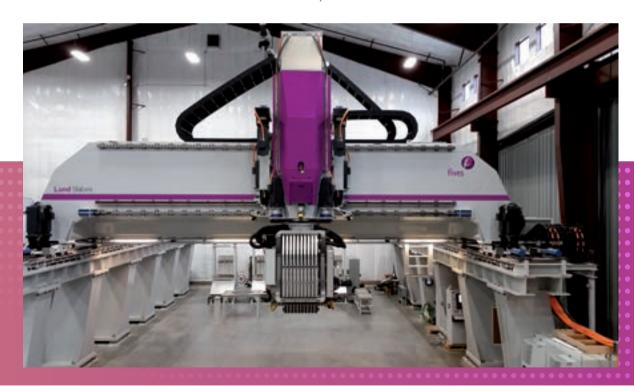
Logistics • 48

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.



+ MORE DETAILS

www.fivesgroup.com

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,

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

Services: evolution of new production lines, rebuild/retrofit 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

HELICOPTERS - AIRCELLE -ALSTOM - AMADA -ARCONIC - ARIANE GROUP - AVIC - BAE HELICOPTER - BOEING -BOMBARDIER - CAMERON CATERPILLAR - COMAC -DASSAULT - DCNS - FUJI **HEAVY INDUSTRIES - FIGEAC** AERO - FORD - GE - GETRAG FORD - GKN AEROSPACE -GROUPE PSA - HARBIN -AVIATION - JOHN DEERE LAUAK - LEONARDO -LOCKHEED MARTIN -MAGELLAN AEROSPACE -MITSUBISHI HEAVY INDUSTRY - PRATT & ROYCE - ROLLVIS - SAAB AERO - SAFRAN - SAGW -SKF - SNCF - SONACA -SPIRIT AEROSYSTEMS -STELIA - TAI - TRIUMPH AEROSTRUCTURES - UBM (Ural Boeing Manufacturing)



# 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).
- Contract from Ural Boeing Manufacturing for the design and supply of a fifth 5-spindle x 5-axis Cincinnati XT Profiler dedicated to titanium machining in Russia.
- Order for a Liné Machines Powermill V Trim and Drill machine to be installed in Triumph Aerostructures Red Oak facility (Texas, USA), which specializes in the manufacturing and assembly of large major composite and metal integrated airframe 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 HONGDU Commercial Aviation.
- 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.



# **ALUMINIUM**

# FIVES GLOBAL OFFER

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



+ MORE DETAILS

www.fivesgroup.com



#### Raw materials

Liquid pitch marine terminal.

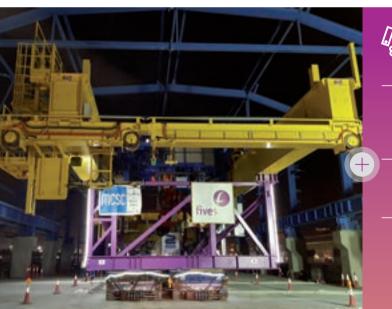
#### Reduction

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

Bath processing units - Green Anode Plants - Firing and Control Systems (FCS) for anode baking furnaces - Fume Treatment Centers (FTC) for anode baking furnaces - Carbon butts recycling units - Furnace Tending Assembly (FTA) machines - Anode rodding shops - Anode stacking cranes and anode handling systems.

#### Casthouse

Holding and melting furnaces -Heat treatment 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<sup>TM</sup> Pot Tending Machines (PTM).
- Renewed confidence of Trimet for upgrading one of the existing ECL™ Furnace Tending Assembly (FTA) and supplying a new machine, as part of the modernization program in 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

ANGANG STEEL - BHP EMIRATES GLOBAL ALUMINIUM (EGA) -HINDALCO - HYDRO -MA'ADEN ALUMINIUM - RIO



# **AUTOMOTIVE**

# FIVES GLOBAL OFFER

Fives designs, manufactures and installs equipment, machining systems, automated production systems and fluid filling systems primarily for the automotive industry, and other industries, as well as related services.



+ MORE DETAILS

www.fivesgroup.com



— Automation

— Filling | Sealing

— Grinding | Ultra Precision— Cutting Tools | Abrasives

— Maintenance

#### EQUIPMENT AND AUTOMATED SYSTEMS WITH HIGH PRODUCTION RATES FOR:

Foundry

Machining

**Automation** 

Assembly

Integration of industrial processes

Production of wooden panels

# Main customers

ALFING KESSLER - ALSTOM -ARCONIC - ATLANTIC - AUDI BAJAJ MOTORS - BAOSTEEL BOMBARDIER -CATERPILLAR -CLAAS - COPELAND -COSKUNOZ - CUMMINS -FIAT POWERTRAIN - FAW -FORD - FOURNIER HABITAT FUDA - GENERAL MOTORS -INGERSOLL RAND - JAGUAR JOHN DEERE - LEXMARK-MAHLE - MERCEDES-BENZ -MERCEDES-BENZ TECHNOLOGY -GROUPE PSA - RENAULT SAAB - GROUPE SATEBA - SAULNIER DUVAL SCANIA - SEAT - SGM -SIEBENWURST - SKODA -TOYOTA - VALLOUREC -



# 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 30 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.

# **CEMENT AND MINERALS**

# FIVES GLOBAL OFFER

The Fives offer covers from design, supply to turnkey delivery and installation of process equipment, grinding plants (cement and minerals) and complete cement plants, and associated services.



+ MORE DETAILS

www.fivesgroup.com



Process equipment for the cement industry and mineral grinding (FCB Kiln, FCB Zero-NOx Preca, FCB Preheater, FCB By-pass system, FCB Horomill®, FCB FLAG™ station, FCB B-mill, FCB Rhodax® 4D, FCB VIF™ Crusher, FCB TSV™ Classifier, FCB Flash dryer, FCB Aerodecantor).

Engineering and clean combustion **systems** for rotary kilns, calcination and drying processes (Pillard NOVAFLAM®, Pillard ROTAFLAM®, Pillard HeatGen System™, etc.).

Gas treament equipment (TGT®, Sonair™ filters and EAD™ dry-scrubbers) for kilns, coolers and mills.





# 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 6,500 mm.
- 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.

#### Main customers

ARMSTRONG CEMENT -ARGOS - BUZZI-UNICEM -MOCTEZUMA - CEMEX -COOPERATIVA LA CRUZ AZUI ELEMENTIA - GCC - GICA -HEIDELBERG CEMENT -IMERYS - ITALCEMENTI -LAFARGEHOLCIM -MITSUBISHI - NGHE AN CEMENT CO - OCP - QATAR NATIONAL CEMENT GOBAIN BRYANT - SINOMA TITAN - VICAT - VINACONEX VINAINCON - VOTORANTIM



# **ENERGY**

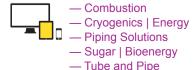
# FIVES GLOBAL OFFER

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.



+ MORE DETAILS

www.fivesgroup.com

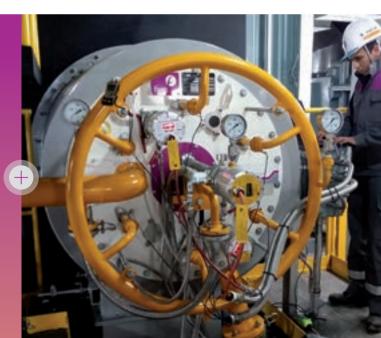


# COMBUSTION

**Combustion systems** designed for electric and thermal energy production and for industrial processes.

# Proven core technologies

- 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



### Main customers

LIQUIDE - AK STEEL -ASARCO - BAOSTEEL -CERREY - CHEVRON ELLWOOD GROUP -COFELY - ENI - ERAMET -MOBIL - GE POWER - GNA INDUSTRIES - JSW STEEL -KOBESTEEL - KWB - LINDE MAPNA GROUP - MICHELIN NATIONAL GYPSUM - NEMAK ALUMINIUM - NEREFCO -NOOTER ERIKSEN -OWENS CORNING -SAIPEM - SAMARCO -SAMSUNG - SCOT FORGE -SNECMA MOTORS -SOLVAY - RENAULT - TATA -TECHNIPFMC - TECNIMONT TEREOS - TESORO -VALMET - U.S. STEEL

# SUGAR AND BIOENERGY

Equipment and complete plants primarily used in sugar and bioethanol production. **Advice** for optimizing production.



# Numerous projects in Asia and Russia and recognized expertise in consulting

- 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 centrifugals FC1550, 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 centrifugals FC1300 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
- 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

ACUCAR GUARANI - CENTRAL AZUCARERA DE LA CARLOTA - EASTERN SUGAR AND CANE - KORACH PHOL - PANTALEON - PT PLANTATIONS - PT WELTES ENERGI NUSANTARA -SOMDIAA - SUCDEN -SUTECH - UNITED SUGAR ROBINA CORP. - WILMAR

# **CRYOGENICS**

#### INDUSTRIAL EQUIPMENT PRIMARILY USED IN ENERGY PRODUCTION:

Brazed aluminium plate-fin heat exchangers (for air separation units, gas treatment plants, ethylene production or liquified natural gas).

Cryogenic piston and centrifugal pumps (for air separation units, hydrocarbon production and distribution of any liquified gas).



## $\mathcal{I}$ 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
- 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 SP 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 122-ton cold box for S-OIL including complex assembly of brazed aluminium heat exchangers for an ethylene recovery unit.
- Penetration of the American market in the cryogenic pumps sector, with orders for Air Products, Praxair and Air Gaz.
- Delivery of an LNG contract for the exchangers market with Air Liquide Vysotsk in Russia.



AIR LIQUIDE - AIR PRODUCTS - ARAMCO - CB&I DAELIM - DOW CHEMICAL - ENTERPRISE -EXXONMOBIL - GAIL - GS KBR - KPIC - LG - LOTTE -LYONDELLBASELL - OPD -ORPIC - PETROCHINA -QATARGAS - RELIANCE -S&B - SABIC - SAIPEM -E&C - TECHNIPFMC - TOTAL TOYO E.C. - WARTSILA







# 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, on-site 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 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 -GENERAL ELECTRIC - GRT SIMOREP - SNECMA -STORENGY - TEREGA -

# 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.

technology

Automation.

# Main customers

BORUSAN - EVRAZ -FUNDIA - GERDAU - GRUPPO JINDAL STEEL & POWER -MARCEGAGLIA - MARUICHI OMK - PADANA TUBI -POSCO - PROLAMSA -SEVERSTAL - SHOUGANG GROUP - STEEL DYNAMICS -SUMITOMO CORPORATION TATA STEEL - TENARIS -TMK - TOSÇELIK -WUHAN IRON AND STEEL -



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.

# **GLASS**

# FIVES GLOBAL OFFER

Fives provides specialty glass and flat glass production lines, equipment and associated services.



+ MORE DETAILS

www.fivesgroup.com



#### PRIUM® THERMAL EQUIPMENT AND PRODUCTION LINES FOR:

Automotive, architectural, solar and ultra-thin glass: melting furnaces, tin baths and annealing lehrs.

Specialty glass (fiber, cosmetic, pharmaceutical, etc.): melting furnaces, conditioning equipment, feeders, boosting and ancillary equipment.





# Fives' Prium® technologies preferred by customers 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
- 11 orders for annealing lehrs from various glass producers worldwide.

#### Main customers

ASAHI GLASS COMPANY -

AVIC - BA VIDRO -BORMIOLI - CARDINAL FLOAT GLASS - CHINA GLASS CRISTALLERIE SAINT LOUIS -CTG - DÜZCE CAM -HOLOPHANE - USHI - KAVEH NIPPON ELECTRIC GLASS -NSG - OBEÏKAN GLASS PFG - PITTSBURGH CORNING EUROPE - POLTAVA MEDICAL SEVES - SGD PHARMA -SICECAM - SCHOTT -SWAROVSKI - TAISHAN FIBER GLASS - TAIWAN GLASS - TO GLASS USA - VALMIERAS STIKLA SKIEDRA - VERALLIA VERESCENCE - VIVIX -XINGXIN - XINYI GLASS -YAOHUA GLASS GROUP



# **LOGISTICS**

# FIVES GLOBAL OFFER

Fives designs and supplies internal automated logistical flow solutions for various markets such as food industry, distribution, e-business, postal and courier and manufacturing industry.



+ MORE DETAILS

www.fivesgroup.com



automated handling singulators. and sorting systems: design and installation of tailormade logistics solutions and associated services.

OPR® (Order Picking Robotic) technology: order fulfillment and mixed palletization solution. systems.

solutions: multi-level shuttles and storage and retrieval

proprietary software solutions to run logistics processes: ERP, WMS, WCS, MES.

CAPM.

Systems maintenance.



# The trust of major players in e-commerce, courier and dist 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.

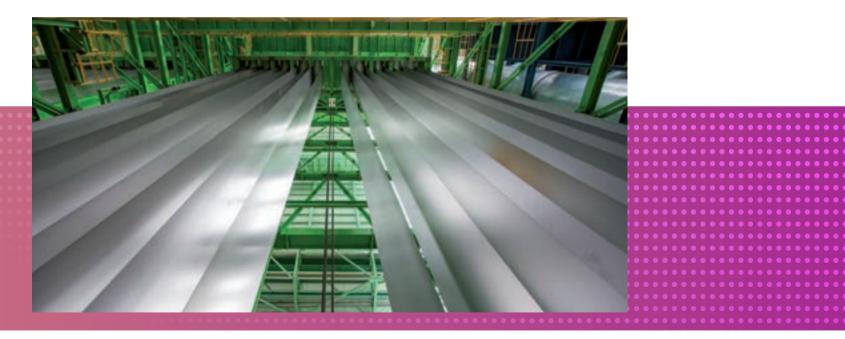
### Main customers

AEROPORTS DE PARIS -ARATA - ARAYMOND -BENETTON - BCS -BONDUELLE - CANADA POST CORPORATION -CAMPOFRIO - CANPAR -CHRONOPOST - C-LOG -CORREOS - COLIPOSTE -**DECATHLON - DEUTSCHE** (CHRONOPOST COLISSIMO) - EURODEP -FEDEX - FEDEX GROUND -ENTERPRISE - HAPPYCHIC -SERVICE- KOREAN EXPRESS - LA POSTE - LDLC LECLERC - MANGO -MICHELIN - MNG KARGO - NIPPON EXPRESS -POCZTA POLSKA POSTNORD - PUROLATOR -SCACHAP - SCHENKER AB - SCHNEIDER ELECTRIC - SDA EXPRESS COURIER - SEA MALPENSA AIRPORT - SEINO - SLOVENIA POST - SNATT LOGISTICA -SONEPAR - STIHL - SYSTEM LOGISTICS - TOLL IPEC -TEMPO ONE - TNT EXPRESS U LOG - UNITED AIRLINES - UPS - USPS -VIAPOST - YAMATO

# STEEL

# **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.



+ MORE DETAILS

www.fivesgroup.com



#### A RANGE OF SOLUTIONS INCLUDING:

Metallurgical and process expertise.

Eyeron<sup>TM</sup> real-time quality management systems for fully integrated steel production sites from the steel shop down to the cold roll mill and fully automatic control systems of coil annealing and galvanizing lines.

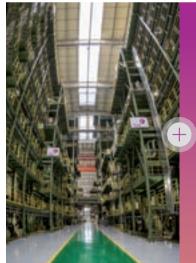
Design and supply of technologies and equipment for cold processing: cold rolling mills and strip processing lines (mechanical, surface treatment, furnaces, induction solutions. cooling and post treatment technologies).

Reheating and heat treatment technologies, including reheating furnaces and induction heating solutions.

Long product straightening.

Strip processing line automation sustems.

A full range of services, including upgrades and support to plant operations.



# A successful year in Asia and North America

- 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.

#### Main customers

ACFRINOX GROUP - AK

CHENGDE - BENXI IRON & STEEL - BLUESCOPE STEEL BORCELIK - CSN - ERDEMIR ESSAR STEEL - EVRAZ -STEEL - JISCO - LUSOSIDER -MARCEGAGLIA - MASTEEL NLMK - NORTH AMERICAN OUTOKUMPU - POSCO -SAIL - SALZGITTER -USIMINAS - US STEEL -**VOESTALPINE - WUHAN IRON** & STEEL - YUSCO



# OUR COMMITMENTS

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Health and Safety • 58

Energy and environmental performance • 60

# A RESPONSIBLE GROUP







footprint of Fives and its customers



Promoting fair practices in the marketplace



**WORKFORCE** 



Incorporating CSR priorities into the organization of all Fives entities



### ETHICS AND COMPLIANCE

**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



# **HUMAN RESOURCES**

15% women, 40% of women are engineers and managers

**77**% of employees attended a training course during the year



# HEALTH AND SAFETY

Frequency rate of 3.74 (employees + temporary staff) Severity rate of **0.151** 

**59** lost-time accidents



# ENERGY AND ENVIRONMENTAL PERFORMANCE

9 products are Engineered Sustainability® branded

80% of industrial sites were ISO 14001-certified

RATING

eco adis

# **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

# 2016

Group Safety Golden Rules

# 2017

### 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



of the EcoVadis panel with a score of 75 out of 100 for constant progress for six his "Gold" level.

# Providing a safe and motivating

working environment

# **SECURING** OPERATIONS IN A CONSTANTLY **CHANGING ENVIRONMENT**

**▲upstream and** secure operations while keeping a pragmatic



**Arnaud Lecoeur** General Counsel

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

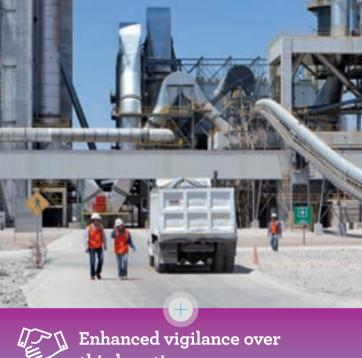
One of the main challenges of the prevention of corruption is to proportion the actions to risks and stakes, in order to secure the business activities while accompanying the operational staff in their efforts. It is therefore first of all about identifying the risks, building the appropriate action 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.



# third parties

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.

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

# A NEW SAFETY AMBITION FOR 2020

We can only

achieve our

2020 objectives

fully committed

to pursuing the
initiatives under

way and if we

change how

we think about

Safety."



Martin Duverne
Member of the Executive Board

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 2009, the Group recorded a frequency rate of 11.30). Unlike in 2015 and 2016, there were no fatality in any Fives' activities (including subcontractors), 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 dynamic of the Group 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).

# 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.



# 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 tatality (including subcontractors)
- No severe accidents
- Reduce the accident frequency rate to 2.5 or help
- Halve the number of accidents with lost-time (LTI) in Fives' workshops

# FROM ENERGY AND ENVIRONMENT CONCERNS TO STRATEGY CHALLENGE

on the two **environmenta** levers: eco-design the environmental impact of its own



50

PEOPLE WERE TRAINED ON ECO-DESIGN AND THE INTERNAL LIFE CYCLE ANALYSIS TOOLS IN 2017

OF ELIGIBLE SUBSIDIARIES ARE INVOLVED IN THE **ENGINEERED SUSTAINABILITY®** ECO-DESIGN PROGRAM

PRODUCTS HOLD THE ENGINEERED SUSTAINABILITY® BRAND AT THE END OF 2017

80%

OF THE GROUP'S INDUSTRIAL SITES ARE ISO 14001-CERTIFIED 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 Sustainabilitu® 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 bu EY in 2013.

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

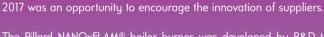
- On one side, by working to obtain or renew the Engineered Sustainability® brand on products considered strategic for their markets, given that the brand expires automatically after three years if it is not renewed.
- And on the other, by opening up the method to subsidiaries which want to (re)design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

Fives was also involved in a study to evaluate the benefits of eco-design carried out by the ADEME (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 around within the Group

Fives is continuing its work on achieving the target it has 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 14001 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



Supplier innovation

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 oper 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 out intellectual property, and achieve competitive manufacturing costs while optimizing the supply chain: this optimization was another challeng for the market launch of this burner" says Pierre André Jarniac, th Combustion Business Purchasing & Supply Department manager.

Upstream work with other industrial companies made it possible to Aurélie Gonzalez, Innovation Program Manager for Process, Energ & Environment, "our work on eco-design has shown that working friendly equipment."

Team<sup>2</sup> (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.



# INDICATORS

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# INDICATORS | FINANCIAL INDICATORS

# **FINANCIAL**

#### ORDER INTAKE BY GEOGRAPHICAL AREA

BY MARKET

#### 2015 2016 2017 € million 635.9 482.0 635.6 Americas 364.0 328.8 345.2 Asia and Oceania 532.5 550.2 **785.6** Europe 175.4 104.1 350.6 Middle East & Africa Total 1,707.8 1,465.1 2,117.0 Contribution from mature economies 62% 64% 67% Contribution from emerging countries 38% 36% 33%

# SALES

BY GEOGRAPHICAL AREA			
€ million	2015	2016	2017
Americas	521.1	567.3	561.8
Asia and Oceania	369.0	384.8	357.7
Europe	511.6	570.0	679.3
Middle East and Africa	316.5	257.1	297.3
Total	1,718.2	1,779.2	1,896.1
Contribution from mature economies	58%	60%	61%
Contribution from emerging countries	42%	40%	39%

## ORDER BOOK

2017	€ million
561.8 357.7 579.3 297.3	Americas Asia and Oceania Europe Middle East and Africa

BY GEOGRAPHICAL AREA

1,779.2	1,896.1	Total
60%	61%	Contribution from mature economies
40%	39%	Contribution from emerging countries

BY MARKET		

Total	1,707.8	1,465.1	2,117.0
Holding and sourcing co.	5.2	15.2	4.5
Aerospace and industry	342.6	266.6	255.9
Cement	232.7	84.4	75.5
Energy	334.9	301.0	445.1
Metals (aluminium and steel)	259.2	201.0	584.8
Logistics	218.7	210.0	420.3
Automotive	314.5	386.9	330.9
€ million	2015	2016	2017

DI NUMET			
€ million	2015	2016	2017
Automotive	333.0	318.5	376.3
Logistics	179.2	238.7	299.8
Metals (aluminium and steel)	277.9	274.9	318.8
Energy	364.5	375.5	399.1
Cement	318.5	278.0	211.7
Aerospace and industry	240.0	285.2	278.7
Holding and sourcing co.	5.1	8.4	11.7
Total	1,718.2	1,779.2	1,896.1

# BY MARKET

Total	1,555.9	1,246.7	1,476.6
Holding and sourcing co.	4.5	11.0	3.3
Aerospace and industry	237.8	222.9	189.5
Cement	447.6	249.5	113.0
Energy	250.5	175.9	215.8
Metals (aluminium and steel)	262.2	186.6	438.3
Logistics	165.2	143.8	319.8
Automotive	188.1	257.0	196.9
€ million	31.12.15	31.12.16	31.12.17

31.12.15 31.12.16 31.12.17

400.9 317.0 355.8

359.6 312.0 281.2

394.4 369.9 537.0

401.0 247.8 302.6

1,555.9 1,246.7 1,476.6

45% 47% 59%

55% 53% 41%

#### SUMMARY OF CONSOLIDATED FIGURES

2016	2017
1,779.2	1,896.1
383.0 (299.8) 8.8 (2.3)	395.6 (307.2) 24.9 (4.3)
89.7 64.1	109.0 86.5
115.6 6.5 %	135.0 7.1%
49.1 (13.9) 35.2 (31.1) (0.1) 4.0 3.2	84.2 (44.0) 40.1 (30.2) (8.0) 1.9
	1,779.2  383.0 (299.8) 8.8 (2.3)  89.7 64.1  115.6 6.5%  49.1 (13.9) 35.2 (31.1) (0.1) 4.0

# **NON-FINANCIAL**

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, which is an increase of nearly 4% compared with the previous year. However, 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 total workforce. The progressive change in the level of qualification was made possible by significant recruitment in recent years - 976 permanent contracts in 2017 - unfortunately this did not lead to further female recruitment.

The proportion of women in the Group remains low, at 15% of the total workforce. However, it should be noted that they are represented at the same proportion within the management committees and management positions. It can be observed that they are well represented in the most qualified groups - nearly 40% of them are Engineers and Managers - and therefore they have a good level of access to responsibilities.

#### SOCIAL INDICATORS

	2015	2016	2017	The Americas	France	Europe excl. France	Asia and Africa*
Employees	8,298	8,365	8,666	1,847	4,479	1,274	1066
Workforce at the end of the year from acquisitions completed	d						
in the year	641	60	0	0	0	0	0
Workforce at the end of the year in companies entering the							
consolidated scope	69	7	228	0	228	0	0
Number of new hires (all types of contracts)	989	961	976	302	422	120	132
Workforce by gender							
Percentage of men	84%	84%	85%	86%	85%	86%	80%
Percentage of women	16%	16%	15%	14%	15%	14%	20%
Percentage of engineers and managers among women	37%	39%	40%	31%	50%	18%	36%
Share of women in management - total	14%	14%	14%				
Share of women among CEOs	2%	1%	1%				
Share of women in Management Committees	14%	16%	14%				
Share of women managers who report directly to							
a management committee member	15%	14%	15%				
Number of nationalities	61	60	63				
Employees by category							
Engineers and managers	42%	44%	45%	43%	45%	34%	58%
Technicians, designers and supervisors	26%	25%	26%	16%	32%	23%	17%
Staff	11%	11%	10%	15%	6%	17%	13%
Operators	19%	18%	17%	25%	13%	24%	11%
Alternates	2%	2%	2%	1%	3%	2%	0%
Employees by age range							
Less than 20	0%	0%	0%	0%	0%	0%	0%
From 20 to 29	14%	13%	13%	13%	13%	10%	16%
From 30 to 39	26%	27%	27%	16%	29%	22%	40%
From 40 to 49	25%	25%	25%	18%	27%	28%	28%
From 50 to 59	27%	27%	26%	31%	26%	31%	13%
60 and more	8%	8%	8%	21%	4%	8%	3%

<sup>\*</sup>Including the Middle East and Australia

The very frequent recruitment did not lead to an increased workforce as it mostly offset a similar level of departures, something which 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 fives 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 Stein - from the Steel division - and the main "recipient" subsidiary was Fives Cail 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.

	2015	2016	2017	The Americas	France	Europe excl. France	Asia and Africa*
						Trance	AITICU
Employees by length of service							
Less than 5	36%	37%	38%	39%	36%	34%	48%
From 5 to 10	23%	24%	23%	17%	24%	24%	29%
From 11 to 15	10%	11%	10%	7%	12%	8%	11%
From 16 to 20	8%	8%	8%	6%	9%	11%	4%
From 21 to 25	6%	6%	5%	6%	5%	8%	4%
From 26 to 30	5%	6%	6%	7%	6%	8%	1%
From 31 to 35	4%	3%	3%	4%	3%	4%	1%
From 36 to 40	5%	4%	4%	8%	4%	2%	0%
41 and more	2%	2%	2%	7%	1%	1%	0%
Employees by region							
The Americas	22%	22%	21%				
France	52%	51%	52%				
Europe (excluding France)	15%	15%	15%				
Asia and Africa (including the Middle East and Australia)	12%	12%	12%				
Employees by business sector							
Aluminium	10%	10%	10%				
Steel	11%	9%	8%				
Cement	8%	7%	6%				
Energy	28%	27%	26%				
Logistics	5%	7%	10%				
Automotive	16%	18%	18%				
Aerospace and industry	17%	19%	18%				
Others	4%	4%	4%				
Skills and mobility management							
% of employees reviewed by the CEDRE** career							
management committee	46%	56%	50%				
% of employees receiving regular appraisal interview	66%	69%	64%				
% of employees having attended at least one training	00 /0	07/0	U-7 /0				
course	74%	73%	77%				
	126	164	129				
Number of employees shared between the companies							
Number of people who underwent a starter meeting***	470	454	528				

<sup>\*</sup>Including the Middle East and Australia

<sup>\*\*</sup>CEDRE: career management committee (Human resources evaluation and development committee)

<sup>\*\*\*</sup>Starter meetings: assimilation reports completed 6 to 18 months after new hires arrive

#### INNOVATION INDICATORS

	2015	2016	2017
R&D expenditure in € million	36.2 <sup>1</sup>	36.7	34.9 <sup>2</sup>
Breakdown of R&D expenditure			
Costs of patents and trademarks	9%	9%	9%
Standard design and formalization of know-how	9%	11%	9%
Continuous improvement of products and processes	24%	21%	23%
Development of new products and processes	44%	46%	44%
Research and radical innovation activities	13%	13%	15%
Patents and trademarks			
Number of patents and patent applications in force	1,948	2,032	2,169
Number of patent families in force	582	611	632
Number of first patent applications (new patented inventions)	50	45	52
Number of first patent applications relating to energy and environmental performance	11	7	7
Percentage of patents relating to energy and environmental performance	22%	16%	13%
Number of "product" trademarks registered	111	126	134
The eco-design program			
Number of products carrying the Engineered Sustainability® brand	9	10	9
Number of products currently being analyzed	7	6	8
Number of subsidiaries participating in the program	14	12	13
Percentage of eligible subsidiaries participating in the program	39%	33%	32%
Number of people trained in eco-design in 2016	98	17	50
Fives Innovation Awards			
Number of subsidiaries taking part in the Group Innovation Award contest	46	46	46
Percentage of Group employees invited to compete for the Group Innovation Award	79%	79%	79%
Number of ideas submitted for the Group Innovation Award	481	528	504
Research and test centers			
Number of research and test centers <sup>3</sup>	28	29	29
France: 17, the Americas: 6, Europe (excluding France): 4, Asia: 1			

<sup>1</sup> Reprocessing of the 2015 data, calculated excluding subsidies and research tax credit (total value €35.5 million with subsidies included).

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

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.

patented inventions in 2017. The number of patent families and the number of patents continued to grow to reach 632 patent families and 2,169 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 veru high level, with over 500 ideas suggested by employees to improve their products and processes, and to better respond to client requirements with innovative solutions with high added value.

Since 2012, the Group has relied on the Engineered Sustainability® ecodesign program, an innovation initiative developed internally to optimize the environmental and operational performance of Fives products. EY certified the program in October 2013. Engineered Sustainability® continued to be deployed in 2017 in two areas:

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

The Group's Research & Development effort was generally at the same In 2017, a branded product expired and was intentionally not renewed following a market reorientation (in favor of the aluminium 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 smoke treatment center, to reach the lowest levels of fluorine 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 for its "raw material" use,
- Fives continued to file patents at an impressive pace with 52 new the ultra-low NOx Pillard NANOxFLAM® burners for industrial boilers,
  - the CO<sub>2</sub> filling machine as a refrigerant for car air conditioning.

Other subsidiaries have started work to (re)design products with the Fives eco-design methodology and tools: detecting refrigerant leaks for equipment using these fluids, power generators for inducers, and the part handling system to adjust crankshafts.

Furthermore, the change to the ISO 14001 environment management standard version used by 46 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 Cucle Analysis (LCA) tool.

<sup>2</sup> In 2017, €1.6 million in R&D expenses were reclassified as gross margin. These expenses were not reclassified in 2016 and 2015. If they had, the restated R&D effort reflecting this reclassification in 2016 and 2015 would have been €34.6 million and €34.9 million respectively, instead of €36.2 million and €36.7 million.

<sup>3</sup> All of the subsidiaries conducting their own R&D product testing in designated locations are counted.

# INTRODUCTION TO THE DATA BY SITE AND THE STATISTICS ON

Corporate Social Responsibility (CSR) reporting covered all sites with an average workforce of 10 or more in 2017 and all sites with an industrial activity.

In 2017, the changes to the scope were due to several factors:

- the inclusion of Daisho Seiki Corporation and one of its subsidiaries in the automotive sector, acquired in
- the creation of three separate entities for activities which were included in other subsidiaries until now this is the case in the automotive sector in the USA and China and in the logistics sector in China,
- the removal of a company in France, in the carbochemistry sector, which ceased trading in 2017.

In addition to these changes, some agency sites were closed (these sites are changeable by nature as they are linked to a specific project) and mergers between several sites took place, which led to a reduction in the number of sites monitored, despite the addition of new subsidiaries to the perimeter. For information, unlike for HR and Finance reporting, this report does not include companies that did not conduct their business within the Fives group for the full year 2017. Therefore, Fives Syleps and its subsidiaries, companies acquired in 2017 in the logistics sector, were not included in the CSR reporting perimeter.



Fives' most recent acquisitions have again increased the proportion of CSR CROSS-SECTIONAL INDICATORS industrial sites in the Group, bringing it up to 45%. Comparatively, they represented less than a third of Group sites in 2010. Two thirds of these industrial sites are located in France and North America.

The Group HSE community continues to be reinforced with the arrival of seven additional people during 2017, with Safety being a priority for the Group.

	2015	2016	2017	The Americas	France	Europe excl. France	Asia and Africa*
Number of subsidiaries included in the scope of							
the CSR policy	59	64	68	15	19	15	19
Subsidiaries acquired in n-1 that entered							
the CSR scope in n	1	7	2				2
Subsidiaries newly included in the CSR scope	1	-2	2	1	-1		2
Total number of sites	98	102	100	21	37	19	23
Industrial sites	38	41	44	13	16	8	7
Offices	31	32	29	4	10	5	10
Combined sites, test centers and regional facilities	29	29	27	4	11	6	6
Management system							
Number of sites with ISO 9001 certification	61	69	71	11	33	15	12
Number of sites with pending ISO 9001 certification	7	4	1				1
Health, Safety and Environment (HSE) community							
Number of Group HSE representatives	59	60	67				
Number of Group HSE auditors	20	21	21				
Number of Group HSE audits conducted	20	18	13				
Percentage of companies audited (cumulative)	81%	73%	75%				
* Including the Middle East and Australia							

Including the Middle East and Australia

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.

	2013	2010	2017
Prevention of corruption			
Percentage of entities subject to a corruption risk analysis for the last 24 months	-	100%	93%
Percentage of which a formal risk analysis meeting was conducted	-	75%	70%
Percentage including an estimate of the level of risk	-	25%	23%
Code of conduct			
Number of languages into which the Group Code of conduct has been translated	13	13	13
Percentage of companies in which the Code of conduct has been distributed	88%	97%	93%
Percentage of employees accounted for by these companies	84%	94%	94%
Percentage of subsidiaries that hold an annual presentation of the Code of conduct involving at least 25% of the workforce	10%	22%	23%









### INDICATORS NON-FINANCIAL INDICATORS

After a mixed 2016, 2017 saw a significant improvement in the Group's accident performance. The lost-time 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 bu half.

However, the improvement in the Group's accident performance is not even across all subsidiaries. The percentage of lost-time accidents has continued to increase at our workshops for three years, increasing from 45% in 2015 to 80% in 2017; three companies with workshops represent nearly 40% of lost-time accidents 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 a 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 helped all players (executive committee, business sectors, subsidiaries) to get involved in this Group 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 Safetu Golden Rules, the Field Safetu Observation and Dialog for management, managing accident communication, safety processes during activities, etc.),
- directly address current Fives issues such as the high number of accidents at our workshops or the potential severity of the latter at
- collectively and individually involve all players (Fives staff, temporary workers, subcontractors, etc.).
- improve and entrench monitoring and steering of actions and performance at all Fives levels of organization.

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

#### HEALTH AND SAFETY INDICATORS

	2015	2016	2017
Number of industrial sites	38	41	44
Number of sites with safety certification*	25	29	29
Number of sites engaged in safety certification Percentage of industrial sites with safety certification Percentage of subsidiaries having written and distributed a Health and Safety Policy Number of FTE <sup>(1)</sup> Health and Safety staff in the Group	4 32% 83% 53.0	5 32% 89% 61.3	6 34% 87% 68.6
Accident statistics (employees + temporary employees) Number of severe accidents** Number of which were fatal	5 1	7 0	3
Number of lost-time accidents (≥1 day)	55	64	59
Percentage of lost-time accidents occurring on customer/subcontractor sites Percentage of lost-time accidents occurring in workshops Percentage of lost-time accidents occurring in offices Percentage of lost-time accidents occurring on business trips	42% 45% 7% 5%	23% 64% 9% 3%	15% 80% 3% 9%
Lost-time accident frequency rate (Number of lost-time accidents (≥1 day) × 1,000,000 / Number of hours worked)	3.91	4.26	3.74
Severity rate (Number of lost-time accidents (≥1 day) x 1,000 / Number of hours worked)	0.135	0.166	0.151

(1) FTE: Full-Time Equivalent

\* OHSAS 18001 or MASE ("Manuel d'Amélioration Sécurité des Entreprises") certifications (Corporate Safety Improvement Manual), French safety management sustem

\*\* Severe accidents: accidents which could have severe reversible or irreversible consequences, or which could cause death (monitored from January 2015)

The increase in the number of ISO 14001-certified sites continued in 2017 with the certification of Fives OTO S.p.a. sites in Italy and Fives Machinina Systems, Inc. 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 guestion 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, particularly the acknowledgment of the life cycle aspect which was introduced in the 2015 version. This support will continue in 2018, notably focusing on sharing experiences between companies to 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. As an index, the Group moved from an overall index of 3.2 GWh per industrial site to 3 GWh. We have also observed a reduction in costs linked to energy, particularly a reduction in electricity costs at European sites, which can be explained by the opening-up of the energy markets.

As with previous years, site energy consumption is strongly influenced by changes to their 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 industrial sites using water in their process. However, this fall masks significant increases for other sites, due to changes in their level of activity or leaks. It is important to implement regular monitoring of water consumption at sites with significant consumption in order to anticipate leaks and fix them guickly. The inclusion of this point in the new Group rules regarding environmental management will help reinforce awareness actions already implemented on this topic.

#### ENVIRONMENTAL INDICATORS

	2015	2016	2017	The Americas	France	excl. France	and Africa*
Number of sites with ISO 14001 certification (all types of sites)	37	42	46	12	17	10	7
Percentage of ISO 14001-certified sites upgraded to version 2015	-	17%	54%	50%	53%	60%	86%
ISO 14001 certification for industrial sites Number of industrial sites Number of industrial sites with ISO 14001 certification Number of industrial sites with ISO 14001 certification		41 30	44 35	13 11	16 12	8	7 4
in progress Percentage of industrial sites with ISO 14001 certification	6 74%	6 73%	80%	0 85%	1 75%	0 100%	0 57%
ISO 14001 certification for other types of sites (offices, combined sites, test centers, regional facilities)  Number of non-industrial sites with ISO 14001 certification  Percentage of non-industrial sites certified	9 15%	12 20%	11 20%	1 13 %	5 24%	2 18%	3 19%
Environmental management system  Percentage of sites that have written and distributed an Environment policy  Number of FTE** Environment staff in the Group	64% 20.0	71% 21.1	72% 20.7	13% 3.6	29% 9.38	17% 4.0	13% 3.8
Energy consumption in GWh Electricity consumption in GWh Natural gas and heating oil consumption in GWh Total energy consumption in GWh	63.0 62.2 125.2	66.3 65.7 131.9	65.8 66.2 132.0	29.1 33.4 62.5	22.9 22.5 45.4	7.1 9.4 16.5	6.7 0.9 7.6
Energy consumption in €000 Electricity consumption in €000 Natural gas and heating oil consumption in €000 Total energy consumption in €000	6,451 2,124 8,575	6,243 2,064 8,307	6,000 2,059 8,059	2,489 589 3,077	1,958 1,002 2,960	781 427 1,208	773 41 813
Water consumption Water consumption (industrial sites) in m³ Water consumption (industrial sites) in €000	89,316 213	97,405 261	94,823 252	34,918 131	25,349 68	19,383 43	15,173 10

<sup>\*</sup> Including the Middle East and Australia

Europe Asia

<sup>\*\*</sup> FTE: Full-Time Equivalent





## 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.



Commitment	Program	Achievements at end-2017	2018 goals	Level of maturity at end-2017
Minimizing the environmental footprint of the Group and its customers	Engineered Sustainability® Internal eco-design program which meets (and exceeds) the requirements of the ISO 14062 standard. It is an innovation process that can lead to the award of a brand identifying best-in-class products in terms of environmental and safety performance. EY awarded this program an insurance certificate in 2013. GC 8 - GC 9	The Engineered Sustainability® program  32% of target subsidiaries have joined the program  Recap of products involved:  9 products currently carry the Engineered Sustainability® brand.  1 product is having the label renewed.  3 products are working towards it.  2 products have chosen not to renew the brand owing to a change of market.  Several subsidiaries voluntarily use the program's eco-design methods and tools to structure the development of their products without specifically aiming to obtain the brand.  ISO 14001 v2015 certification  Eco-design training has revitalized following the introduction of new requirements for ISO 14001 v2015: 50 people have been trained to use the Fives life cycle analysis system (LCA).  Climate impact assessment  Fives, with the help of Carbone 4, carried out a climate change impact assessment on the scenario of a 2°C temperature increase and its effects on the Group's business and strategy. The results provided the Group with avenues to explore in terms of technology and its current and future business opportunities.	<ul> <li>The Engineered Sustainability® program</li> <li>Products aiming for certification:</li> <li>Finalize the 3 projects ready for the brand.</li> <li>Renew the label for the 4 products due for renewal.</li> <li>Continue the process to obtain the brand for 3 products (Automotive, Cement and Combustion).</li> <li>Continue product design projects based on the method and tools without aiming to obtain the brand (Interlinking, leak detection, pressure generator, etc.) and launch new ones.</li> <li>ISO 14001 v2015 certification</li> <li>Continue eco-design training for transition to the 2015 version.</li> </ul>	
Minimizing the environmer	Group energy and environmental management program Support Group performance improvement. GC 7 - GC 8	The certification of Group industrial sites December 2017: - 80% of the Group's industrial sites ISO 14001-certified, i.e. 35 sites (compared to 73% in 2016) 46 sites of all types ISO 14001-certified within the Group.  Transition to ISO 14001 v2015 - In 2017, 54% of ISO 14001-certified sites were compliant with the 2015 version (compared to only 16% in 2016) Eco-design awareness sessions were run in association with the Group's innovation department (29 subsidiaries from various divisions were involved).	New Group Directive  - Launch of the new Group Environmental Directive, defining the new policy and objectives for subsidiaries.  Transition to ISO 14001 v2015  - Pursuing the support for subsidiaries compliance with the 2015 version of ISO 14001, drawing on synergy among the subsidiaries.  REACH regulation  - Support for subsidiaries to implement the EU's REACH regulation by implementing a standard policy.	•

nmitment	Program	Achievements at end-2017	2018 goals	Level of maturity at end-201
ces on the marketplace	Fives Code of conduct Adoption of the Code of conduct by all employees by: - Distributing it to all employees Writing a reading guide for the Code of conduct, and practical examples to train all Group managers, to feed into an annual discussion of the Code in each team. GC 10	Monitor the distribution of the Code of conduct to all employees.     Work carried out in France to incorporate the provisions of the Sapin II law.	<ul> <li>Update of the distribution and integration rules of the Code of conduct during the redesign of the Group's procedures.</li> </ul>	•
cetplace cetplace	Business ethics Intensify the program on corruption prevention and anti-competition practices. GC 10	<ul> <li>Launch of training further to risk analyses carried out in 2016: 93% of companies have undergone a corruption risk analysis within the past 24 months.</li> <li>Update the rules and work documents concerning agents: the entire agent validation process has been revised.</li> </ul>	<ul> <li>Continue training.</li> <li>Update of risk analyses carried out in 2016 and integration of newly acquired entities.</li> <li>Finalization of the Sapin II measures, in particular concerning the alert system.</li> </ul>	•
Promoting fair practices on the marketplace	Responsible purchasing Incorporate our social responsibility goals into our relations with subcontractors and suppliers. GC 1 - GC 2 - GC 3 - GC 4 - GC 5	<ul> <li>Reinforcement of the recognition of the environmental impact in the subcontracting chain, under the effects of the requirements of ISO 14001. Joint purchasing-health and safety projects were led, also incorporating Reach and WEEE regulations in Europe.</li> <li>Monitor the accidents of subcontractors under the Group's responsibility (on Fives or the client's premises) at the same level as employees and temporary workers.</li> <li>Joint actions by the purchasing and innovation departments for the promotion of supplier innovation.</li> </ul>	- Update of our general terms and conditions of purchase by incorporating the new provisions of the EU's RoHS and WEEE directives Formalization of a standard policy for better compliance with REACH regulations in the Group, following a pilot project launched in 2016 Coordinate the business, purchasing and health and safety processes for better compliance with the safety objectives by subcontractors (selection, contract, monitoring, safety performance assessment of subcontractors): this point is currently systematically incorporated into the Group's safety audits.	•
	Promote social responsibility in our commercial offer Figure out how to make social and environmental impacts part of the offer and the CSR performance levels for Fives and every subsidiary part of the sales pitch. GC 9	<ul> <li>EcoVadis evaluation: the Group maintains his "Gold" level and improved his rating with a mark of 75 out of 100. Fives reachs the top of 1% of the 20.000 companies rated by EcoVadis.</li> <li>Support for business and marketing teams to use the Group's CSR expertise, as well as actions led directly by the subsidiaries.</li> </ul>	<ul> <li>Continue with the communication in place, by systematically informing the sales teams.</li> <li>Continue with the sales team involvement in the 2020 safety roadmap.</li> </ul>	•























# INDICATORS UN GLOBAL COMPACT

Commitment	Program	Achievements at end-2017	2018 goals	Level of maturity at end-2017
	Group Safety Ambition 2018-2020  Strengthen the Group's move towards a safety culture adopted by one and all and set new targets for employee and temporary workers, namely:  Accident objectives for 2020:  Reduce the accident frequency rate to 2.5 or below.  Halve the number of accidents with lost-time (LTI) in	Accident performance  - Notable improvement of the Group's accident performance with an accident rate of 3.74.  - No fatality in the Group (including subcontractors).  - The number of severe accidents halved (from 7 in 2016 to 3 in 2017).  Group Safety Ambition	Group Safety Ambition - Support for each of the Fives companies to clarify priorities, implement tools and monitor improvement plans Pursue the development of Group'	•
and motivating working environment	Fives' workshops.  Reach 0 severe accidents.  No fatality (including subcontractors).  Safety culture targets for 2020:  Achieve the "Independent" maturity status at Group-level.  Have no company with "reactive" status.  Reach "interdependent" status for some Group companies.	<ul> <li>Definition of the Group's Safety Objectives 2018-2020.</li> <li>Definition of strategic actions suited to the current and future issues of each business, by the Executive Committee, the SBU Directors and Companies board of Directors.</li> </ul>	HSE tools in all Fives businesses, in particular:  Training of leading teams on Field Safety Observation and Dialog.  Reinforcement of the implementation of Group Safety Golden Rules (also including subcontractors).	
and motivating	Promoting diversity and raising awareness of non-discrimination Gender equality: tracking of the percentage of women hired, access to training and promotion; awareness raised of discriminatory practices.	Gender equality 15% women employees. 40% of those women are engineers or managers.  Older people	- Draft and launch a plan to promote the presence of women employees in the Group, run by Human Resources.	•
Providing a safe	Employment of older people: tracking of the agreement on older people signed in France. However, the over-50s employment rate is high, and the challenge for Fives in many of its subsidiaries is to transfer know-how. Employment of disabled people: awareness-raising campaign since 2012 and sharing of best practices. GC 6	34% of employees are 50+, which has remained stable since 2015.  Training Anti discrimination training continued.	- Promotion of a training program on diversity, in particular with regards to hiring.	
	Harmonization of the employee welfare protection regime Harmonize and challenge the employee welfare protection regime in the main domains where the Group has a presence.	<ul> <li>Implementation of a life insurance plan for employees at our subsidiaries in Mexico, Thailand and Russia.</li> <li>Standardization of the travel life insurance policy for American subsidiaries.</li> <li>Development of the healthcare plan in the USA.</li> </ul>	<ul> <li>Investigate the implementation of additional cover in the Middle East and Indonesia.</li> <li>Examine the standardization of plans in Canada.</li> </ul>	•

Commitment	Program	Achievements at end-2017	2018 goals	Level of maturity at end-2017
<b></b>	Identification and management of employees with potential (CEDRE)  Annual career management committee in each subsidiary, attended by the management team and a Human Resources representative, to:  - Determine which measures need to be taken to improve employee performance.  - Approve personal career plans.	<ul> <li>Deploy and promote the fully digital HR management system, Fives&amp;Me, for 90% of the Group's employees.</li> <li>The first entirely digital and centralized interviews carried out using the Fives&amp;Me system.</li> <li>64% of staff regularly undergo assessment interviews.</li> <li>50% of staff have moved over to a CEDRE.</li> </ul>	<ul> <li>Move the last subsidiaries over to the Fives&amp;Me HR system (UK and Japan).</li> <li>Improve the monitoring of plans of action identified during CEDRE.</li> </ul>	•
Providing a safe and motivating working environment	Training and career path support for promising employees - New employee programs - Ongoing training	Fives Leadership Factory  - 19 individuals benefited from the LeadershipRise@Fives program in 2017.  - 26 individuals followed BusinessManagement@Fives in 2017.  - 186 individuals followed the Manager@Fives program in Italy, France, the USA and China.  - Continuation of the Starter meeting and Career booster programs in all areas and ongoing development of the Group's training catalogue.  - Launch of the digital learning platform in June 2017.	Fives Leadership Factory  - Continuation of the Starter meeting and Career booster programs in all areas.  - Preparation of the integration of training into Fives&Me, in association with the yearly appraisals.  - Continuation of the development of the Group's training catalogue internationally, in particular via the digital learning platform, Learning@Fives.  - Development of the Group's training catalogue on topics relating to operational performance (project management, purchasing, etc.).	•
Provid	Develop an anticipatory strategy on jobs and organizations at each company 4-step program, leads from the strategy defined at the level of the activity: - Determine the business goals and the operational goals Identify the skills required to achieve these goals Qualify the existing positions in the company and the associated required skills Analyse the shortfall and build action plans.	- Several companies have updated their strategic workforce planning, in France and the USA, following the update schedule in the strategic plan.	- Continuation of updates, in line with actions led on strategic plans, over a three-year cycle.	•





















# INDICATORS UN GLOBAL COMPACT

Commitment	Program	Achievements at end-2017	2018 goals	Level of maturity at end-2017
and motivating vironment	Maintenance of know-how and employment within the Group Process existing in France since 2009. Sharing meetings held two or three times a year, to review the workloads/under-loads and make staff allocation decisions, ranging from several weeks to several months.	- 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.	- Continuation of the resource pooling system.	
Providing a safe and motivating working environment	World employee opinion survey An opinion survey conducted among all Group employees every three years, designed to measure satisfaction levels and any organizational malfunctions, and which gives rises to the implementation of action plans proposed by employee bodies.	- Launch of mini surveys by certain subsidiaries to assess the effectiveness of action taken since the survey results in 2015.	- Launch of a new Group satisfaction survey in April 2018 with the initial results presented in June and a full analysis in September 2018.  - As with the other surveys, targeted action will be taken depending on the results.	•
Incorporating CSR priorities into the organization of all Fives entities	Distribute best practices and Group Directives Compilation of Directives and Guidelines covering all Group jobs, linked to internal control rules. GC1 to GC10	<ul> <li>Launch of the update of the entire Directives and Guidelines Manual:</li> <li>In-house task force to coordinate the redesign of principles.</li> <li>Audits of the existing system.</li> <li>Formalization of the redesign specifications.</li> </ul>	<ul> <li>Write and validate new Directives by the Executive Committee.</li> <li>Launch the platform to host them.</li> <li>Launch the promotion campaign and support for the new version among the subsidiaries.</li> </ul>	•

## **Fives**

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