



fives

Industry can do it

ANNUAL AND CSR REPORT

2022 Financial Year



“A sailor has to tackle difficult conditions. He must be resilient, think in the long-term, work in a team, and innovate. And these reflect our own challenges each day, supporting our customers.

Louis Duc’s work to renovate and optimize an IMOCA reflects Fives’ ambition to spearhead the industry of the future - a virtuous and mutually responsible industry.”

Frédéric Sanchez,
*Chairman and Chief Executive
Officer of Fives Group*



fives

“The Fives Group has supported me since 2005. It is a partnership underpinned by shared values and ambitions: environmental impact, promoting technology, innovation, performance, managing risks and contingencies, resilience, competitiveness, teams spirit, etc. This is what drives our commitment to a more sustainable world.”

Louis Duc,
Skipper





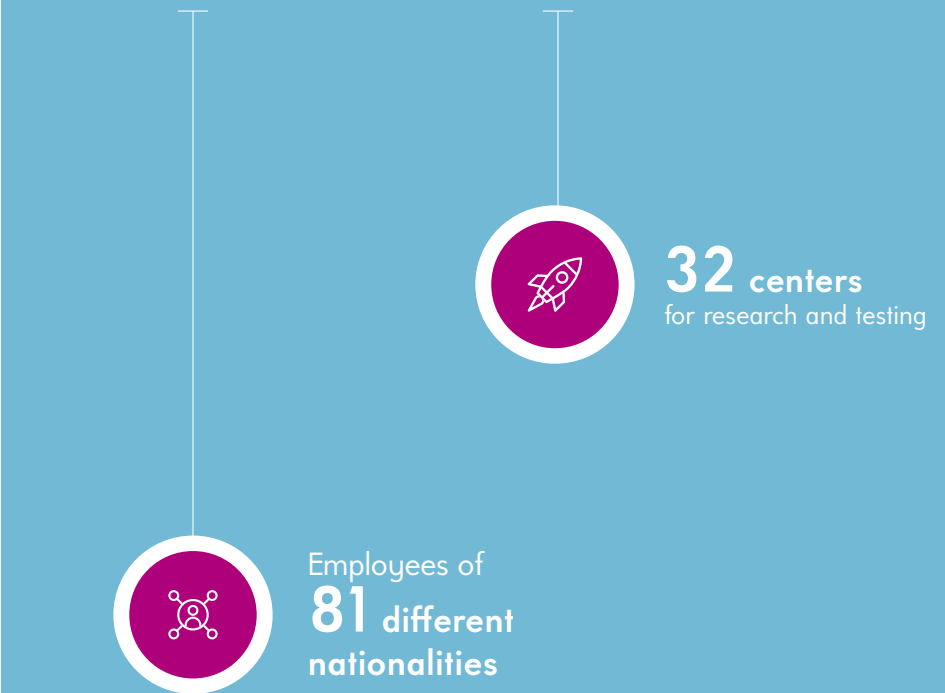
KEY figures

FINANCIAL YEAR 2022



More than
+ 100
locations
in 25 different countries

An international company,
working hand-in-hand with the industry



32 centers
for research and testing



Employees of
81 different
nationalities

MORE THAN
200 YEARS
OF HISTORY

2,786 M€
ORDER INTAKE

2,027 M€
SALES

2,346 M€
BACKLOG

MORE THAN
8,500
EMPLOYEES

2,267
PATENTS IN FORCE
WITHIN 669 FAMILIES

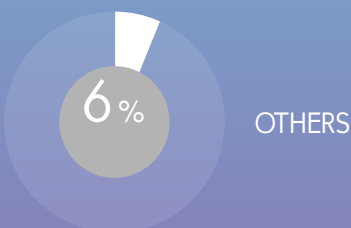
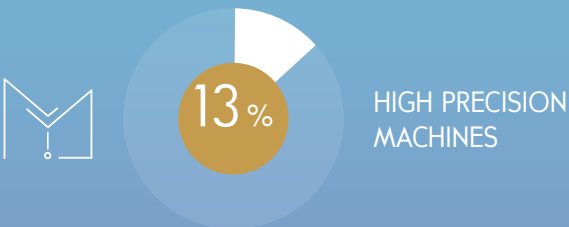
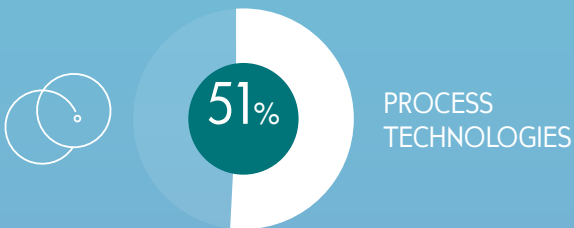
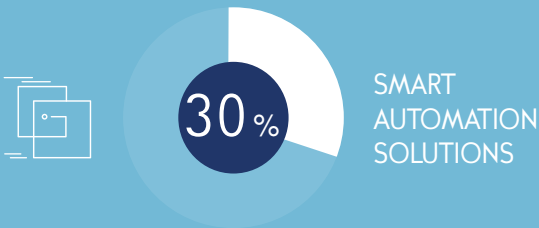
63
NEW PATENTS
FILED IN 2022



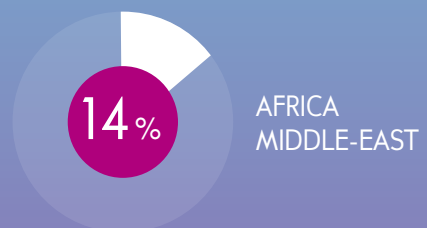
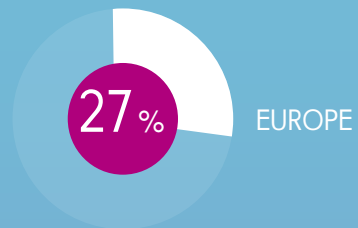
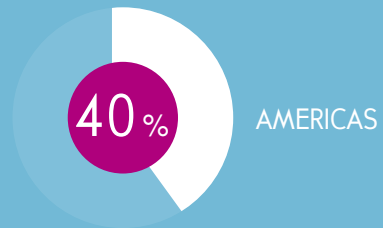
KEY figures FINANCIAL YEAR 2022

AN INDUSTRIAL ENGINEERING GROUP,
Fives designs and manufactures machines, process equipment and production lines for the world's biggest industrial groups.

ORDER INTAKE by activity



ORDER INTAKE by geographical area



ABOUT FIVES

Chairman's MESSAGE

Frédéric SANCHEZ

“None of this would have been possible without the commitment of all our employees to rise to these challenges. They are Fives’ greatest strength. ”

Frédéric Sanchez,
Chairman and Chief Executive Officer of Fives Group



2022 will forever be a historic year for Fives: a record-breaking year, with an order intake of over €2.7 billion, over €2.3 billion in our order book at the end of 2022, and sales of over €2 billion for the first time ever.

These results reflect the Group’s resilience, despite a difficult economic context marked by the return of inflation, continued supply chain disruptions, and China’s zero-Covid strategy. None of this would have been possible without our employees’ commitment to rise to these challenges. They are Fives’ greatest strength.

« What was a bold and visionary choice 20 years ago is now apparent to everyone: industry can only survive if it combines economic performance with environmental performance. »

These results also reflect major trends identified by the Group over 20 years ago. First, the trend to decarbonize is now more important than ever to fight against climate change. In the 2000s, Fives bet that the industry of the future would be digital and low-carbon. So, the Group invested in R&D programs to reduce the environmental impact of its offerings and digitalize its solutions.

Fives now has a portfolio of over 2,200 patents. What was a bold and visionary choice 20 years ago is now apparent to everyone: industry can only survive if it combines economic performance with environmental performance. The result is an array of cutting-edge technology, solutions, and new processes.

Second, regionalization and the reindustrialization that comes with it, guarantee strategic independence. Now present in 25 countries around the world, the Group has always sought to establish itself abroad in order to meet the specific needs of local markets.

Our supply chains are built on national or regional bases: in France, Italy, and the United Kingdom for Europe; in the United States, Mexico, and Canada for North America; in China and Japan for Asia.

The explosion in logistics costs and the increase in climatic, political, and commercial risks confirm the relevance of this approach. It ensures that the Group's growth will be sustainable, healthy, and secure in the long term, with sales expected to increase by an average of at least 10% per year over the next three years.

With its pioneering spirit, the Group is now putting its technological leadership at the service of manufacturers who are aware of the urgent need to change their business model to make it more sustainable.

« At Fives, we believe that industry is one of the key answers to the great challenges of our time, and we are working every day to make your life better. »

At Fives, we believe that industry is one of the key answers to the great challenges of our time, and we are working every day to make your life better. An industry that invents solutions that improves daily lives and helps fight climate change.

An industry that gives meaning to the projects of passionate people. An industry that empowers its employees to make a positive impact on the world around them. This is our purpose, "Industry can do it."



SUMMARY

- 01** **INVENTING SOLUTIONS TO IMPROVE OUR DAILY LIVES**
Financial results
Governance
Risk management and compliance
- 02** **OFFERING SOLUTIONS TO MEET CLIMATE CHALLENGES**
Climate strategy
- 03** **GIVING MEANING TO THE PROJECTS OF PASSIONATE PEOPLE**
The Fives employer promise



01

INVENTING SOLUTIONS

TO IMPROVE OUR DAILY LIVES

Financial results

Governance

Risk management and compliance





“The quest for performance is omnipresent in our IMOCA renovation and optimization program, and has been since its inception two years ago. We aim to recycle everything that can be recycled and to work in a frugal way, but we are competitors first and foremost! In two years, we have made significant performance gains.”

Louis Duc,
Skipper



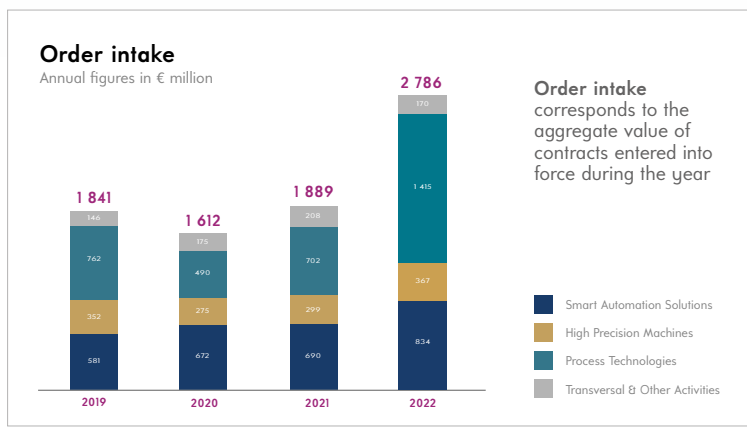


Financial RESULTS

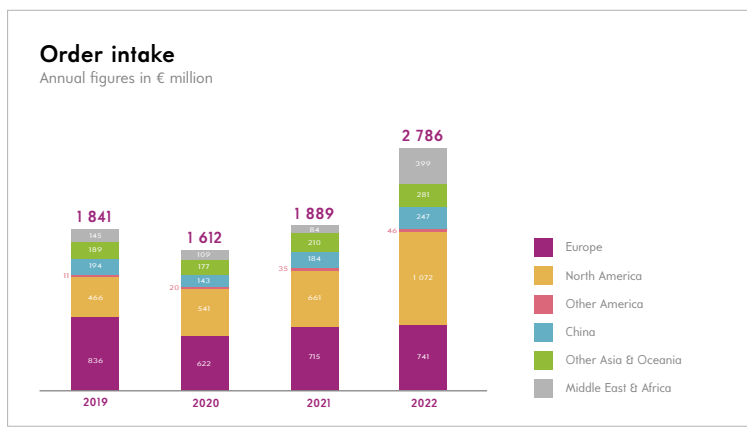
1 RECORD ORDER INTAKE AND ORDER BOOK!

With an order intake of €2.786 billion, Fives achieved its best ever performance in 2022, up €897 million (i.e. over 40% before the favorable foreign exchange rate effect of €123 million) compared to 2021 (€1.889 billion) and up €669 million compared to the previous record of 2017 (€2.117 billion).

This record figure confirms that the Group strategy is in line with main current market trends: the growth of e-commerce due to changing consumer habits and the need for automation to address labor shortages for the Smart Automation Solutions division; the awareness of climate issues and the need to work to reduce the industry's carbon emissions for the Process Technologies division; and the national sovereignty challenges in segments considered strategic for the High Precision Machines division.

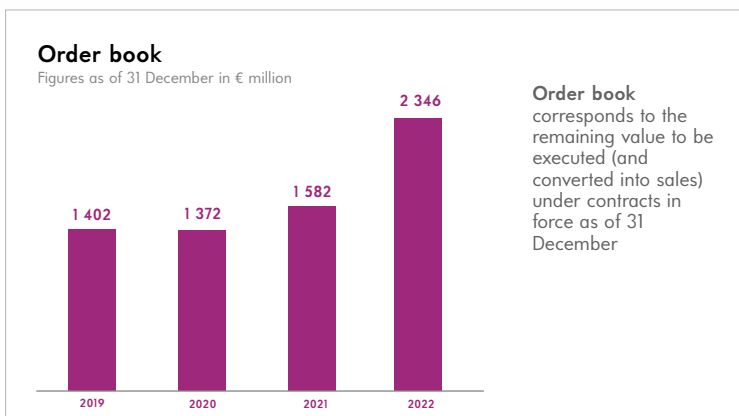


The changes in the geographic mix also reflect the excellent progress made in North America, which has become the Group's leading business area, ahead of Europe, with almost 1.1 billion in orders booked. The Group has a historically strong position in North America in High Precision Machines activities, but it has also gained market share in the Smart Automation Solutions and Process Technologies divisions.



Financial RESULTS

The closing order book at the end of 2022 was €2.346 billion, up nearly 50% compared to 2021 (€1.582 billion), which was already a record high for the Group. The order book numbers show the activity level and workload for the next two years for all the divisions.



2 AN OFFER DRIVEN MORE THAN EVER BEFORE BY THE CHALLENGES OF DECARBONIZATION

Growing awareness of climate challenges is leading to increasing pressure on industrial companies from regulators, end consumers, and funders. These challenges are now at the heart of the strategies of the Group's main customers, whether the aim is to reduce the greenhouse gas emissions caused by their activities (scopes 1 & 2) or to position themselves in markets that contribute to the low-carbon transition (scope 3).

In Process Technologies, our customers focus on reducing their energy consumption and CO₂ emissions was reflected in projects to modernize steel reheating furnaces and programs to electrify glass melting furnaces, where Fives has formed strategic partnerships with two companies that it supports, the Verallia and Pochet groups. Business activity also benefited from strong growth in certain end markets, contributing to the low-carbon transition, such as photovoltaic glass (in China and now in Europe) or electric mobility, which is driving the development of silicon steel capacity (particularly in China and South Korea, where Fives won orders for Baosteel and Posco).

This momentum had a downstream impact on the automotive sector, where the year was marked by the ramp-up of the electric vehicle strategy in Europe in order to meet the European Union's targets (100% zero-emission vehicles by 2035). The Group benefited from investments by manufacturers and their tier 1 subcontractors in new battery, engine, and transmission assembly lines and filling systems, as well as retrofit projects to adapt existing lines to the production of electric vehicles. For some of its technologies, Fives is also positioning itself as a leading global supplier to newer players that are only present in this segment, such as Tesla in the United States and BYD in China.

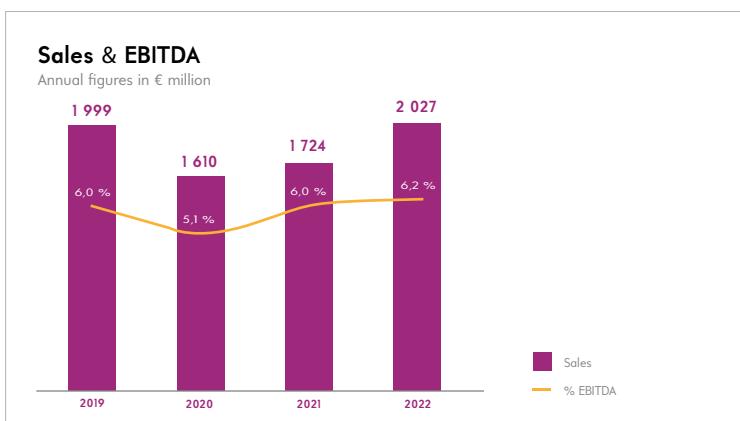


Financial RESULTS

In cryogenics, the Group recorded a significant increase in orders: in Europe, where the rise in energy costs and the need to find an alternative to Russian gas supported investments in the liquefied natural gas (LNG) segment; in China, where sustained demand for pure nitrogen for the electronics market and for oxygen for steel production and coal conversion units is driving business in the air gas separation segment; and in the United States, where Fives recorded its first orders for hydrogen cold boxes as part of a partnership signed with Plug Power at the start of the year, and finalized its first hydrogen pump dedicated to supplying fuel cells.

Finally, in the nuclear field, in France, the Group is benefiting from the growth in maintenance activities, as aging facilities increasingly require ad hoc maintenance (repair of networks affected by stress corrosion problems) or scheduled maintenance for “major refitting” (in order to extend the service life of existing units). The new EPR projects announced by the French government to increase the production of low-carbon energy - which offers excellent business prospects for Fives - should lead to new orders from the end of 2023.

3 GROWTH AND CONTROLLED EXECUTION IN A COMPLEX ENVIRONMENT



The business environment was significantly impacted by the consequences of the war in Ukraine and by the particularly severe lockdown in China to combat the Covid-19 pandemic. Major supply chain disruptions (related to shortages of electronic components, reduced supply of manufactured sub-assemblies and increasingly complex logistics) and rising inflation (leading to significant increases in raw material and energy costs for the industry) led to increased operational complexity.

Sales in 2022 amounted to €2.027 billion, up €303 million compared with 2021 (€1.724 billion), including a favorable foreign exchange effect of €84 million. This increase (+13% at a constant exchange rate), notably affected by a higher opening order book (+15%), is mainly linked to the Process Technologies division. Progress made by projects in the High Precision Machines division and Smart Automation Solutions division, in particular, was delayed due to shortages of electronic components.



Financial RESULTS

The gross margin rate for the 2022 financial year was 19.1%. It is down slightly (0.2 points) compared to 2021 due to production inefficiencies caused by supply chain disruptions (whose impact is estimated at 0.3 margin points). In general terms, the Group managed to absorb the increase in raw material, energy and logistics costs, while controlling the effects of longer delivery times on execution schedules.

General expenses were €306 million in 2022, up €36 million compared to 2021, with a foreign exchange effect of €11 million. This increase (9% at a constant exchange rate) mainly reflects the impact of inflation on payroll and operating expenses.

Group EBITDA was €125 million in 2022, up €21 million (+21%) compared to 2021 (€104 million), including a favorable foreign exchange effect of €6 million. It was, therefore, 6.2% of sales, 0.2 points above 2021, despite a much more complex business environment marked by significant inflation and major supply chain disruptions.

After two years (2020 and 2021) marked by the consequences of Covid-19, the Group's 2022 results are above their pre-pandemic levels (sales of €1.999 billion and EBITDA of €120 million in 2019). This improvement should continue in 2023, based on the record order book at the end of 2022.





NON-FINANCIAL INDICATORS

As a designer of machines, process equipment, and production lines for the world's largest industrial Groups, Fives is at the core of many of the sustainable development issues faced by industry. To meet these sustainability and industrial performance challenges, Fives designs innovative products that combine energy efficiency, emissions reduction, and machine safety.

SCAN THIS QR code
to see all the indicators



To better address the demands of our clients and, more widely, of all our stakeholders on these issues, indicators have been developed to steer and monitor the Group's performance levels in the social, environmental, and innovation fields. The reporting system in place makes it possible to measure the progress of the actions carried out within the Group and report on changes on a regular basis.

The HR (social indicators) and Innovation reports are scoped in line with the financial consolidation process. Health, Safety, and Environmental data, on the other hand, are based on workforce and activity criteria which may lead to differences in scope.

SCAN THIS QR code
to download the action plan



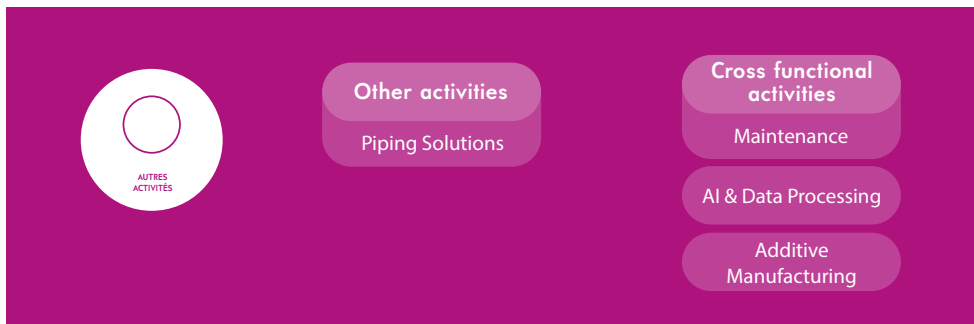
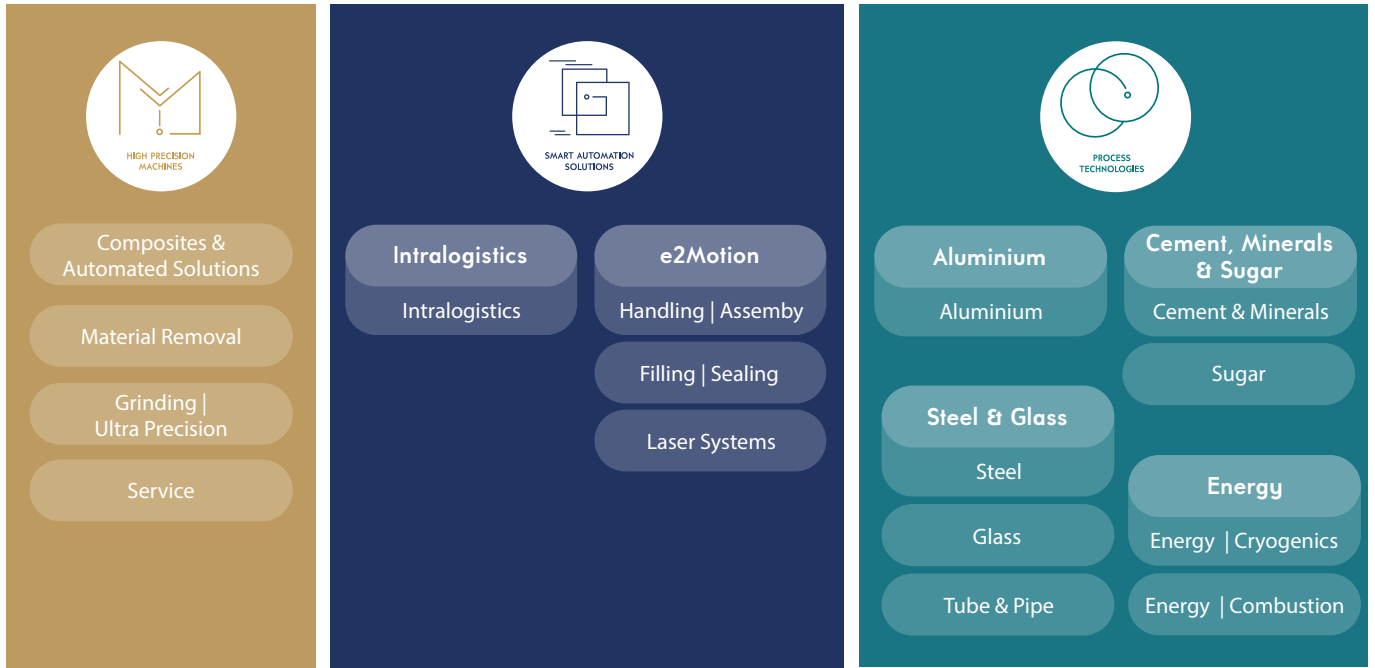
THE UNITED NATIONS GLOBAL COMPACT, THE WORLD'S LARGEST VOLUNTARY CORPORATE RESPONSIBILITY INITIATIVE

Fives, a member of the United Nations Global Compact since 2011, underlines its role in a global community of companies concerned about Human Rights, working standards, the environment, and the fight against corruption.



GOVERNANCE

ORGANIZATION CHART OF ACTIVITIES





GOVERNANCE

SUPERVISORY COMMITTEE

With members from outside the Group, the Supervisory Committee meets several times a year and is responsible for overseeing the Fives' management team.

Members :

- **Philippe Reichstul, Chairman**
- Heyoung H Lee Bouygues
- Alain Cianchini
- François Dufresne
- Dominique Gaillard
- Stéphane Guichard
- Jean-Georges Malcor
- Antonio Marcegaglia
- Laurence Parisot
- Jean-Dominique Sénard

SENIOR EXECUTIVE COMMITTEE

Defines the Group's priorities and transverse policies

- **Frédéric Sanchez, Chairman and Chief Executive Officer**
- Suresh Abye, *Finance Director*
- Alain Cordonnier, *Deputy General Manager, President of the Cement, Minerals & Sugar Division*
- Sébastien Gauguier, *President of the Aluminium Division*
- Guillaume Mehlman, *Deputy General Manager, President of the Steel & Glass Division*
- Denis Mercier, *Deputy General Manager of Fives*
- Céline Morcrette, *Human Resources Director*
- Luigi Russo, *Deputy General Manager, President of the Smart Automation Solutions Division*
- Michelle XY Shan, *Country Director - China*
- Frédéric Thrum, *Deputy General Manager, President of the Energy Division*



GOVERNANCE

EXECUTIVE COMMITTEE

The Executive Committee is primarily in charge of ensuring the implementation of decisions made by the Senior Executive Committee and reviewing the relevance and effectiveness of cross-functional policies based on feedback.

- **Frédéric Sanchez, Chairman and Chief Executive Officer**
- Suresh Abye, *Finance Director*
- Hervé Boillot, *Mergers & Acquisitions Director*
- Daniel Brunelli-Brondex, *Country Director - India*
- Alain Cordonnier, *Deputy General Manager, President of the Cement, Minerals & Sugar Division*
- Sébastien Gauguier, *President of the Aluminium Division*
- Arnaud Lecœur, *Group General Counsel*
- Guillaume Mehlman, *Deputy General Manager, President of the Steel & Glass Division*
- Denis Mercier, *Deputy General Manager of Fives*
- Céline Morcrette, *Human Resources Director*
- Frédéric Renaud, *Country Director - Italy*
- Luigi Russo, *Deputy General Manager, President of the Smart Automation Solutions Division*
- Michelle XY Shan, *Country Director - China*
- Frédéric Thrum, *Deputy General Manager, President of the Energy Division*
- Thierry Valot, *Innovation & Digital Director*



RISK_{management} & COMPLIANCE

1. CONTROLLING RISKS IN A CONSTANTLY CHANGING ENVIRONMENT

“In 2022, in a still unpredictable context that requires more vigilance than ever, we have continued to reinforce our risk control system by structuring our organization and acquiring tools that allow Fives to increase its resilience to deal with all sorts of risks.”

Denis Mercier,
Deputy General Manager of Fives



2022 was marked by many crises that affected every aspect of industry, including the geopolitical crisis linked to the war in Ukraine, the Covid crisis in China, the complex challenges posed by increasingly volatile markets, the instability caused by increased protectionism, and the growing complexity of supply chains and logistics flows, all while companies were getting back on track after two years of health crisis.

Faced with this constantly changing environment, the Fives group's resilience lies in the diversification of its activities and its geographic footprint, as well as the agility of its organization.



RISK management & COMPLIANCE

To support its resilience, the Group has a solid insurance program with satisfactory coverage conditions, adapted to its activities and its growth, in an industrial risk market that remains under pressure and is faced with varied and complex risks. The Group's insurance policy is based, in particular, on the increased involvement of group teams in risk prevention, rigorous monitoring of commercial matters (closely involving both head office and operational teams), constant adaptation of insurance cover to risks (both sectoral and geographical), and anticipation of policy renewal negotiations.

In 2022, the Group strengthened its protection system by thoroughly revising its corporate risk mapping and adapting it to each of its activities. This system has enabled the Group and its divisions to put in place an effective action plan to respond to the main risks related to the competitive environment and procurement, climate issues, security risks and, in particular, our management of cyber risks.

Finally, each of these different risks also offers many opportunities for the Group's future. Good risk management allows the Group's subsidiaries to be better prepared for the threats they will face, to respond better to new or unexpected situations, and to seize the opportunities that arise from these disruptions.



RISK management & COMPLIANCE



Fives has developed an integrated risk management strategy based on the following three things:

1

A STRUCTURED RISK CONTROL SYSTEM

Including risk management in a rigorous and structured system, in particular through the Group Directives, which are regularly adapted and set out the rules that all Group subsidiaries must follow.

The Group's Internal Control team is responsible for implementing, monitoring and updating the Directives.

These Directives mitigate the main risks identified in the risk map. The Group's Internal Audit team assesses the application of the Directives according to an annual action plan discussed by the Risk Committee and approved by the Group's Senior Executive Committee.

2

A CENTRAL BODY, THE RISK COMMITTEE

In order to coordinate all the activities contributing to the Group's risk management, Fives set up a Risk Committee in 2020, co-chaired by the Group Deputy General Manager and the Group Risk and Compliance Director, which brings together the head office functions primarily affected by the various types of risk.

The Committee helps to monitor and update the Group's overall crisis management system. It maintains an ongoing dialogue between the Group's headquarters and the divisions, business units, country directorates, regional offices, and subsidiaries, in particular to monitor audits and the action plans resulting from risk mapping. The Committee reports to the Group's Senior Executive Committee on its activities and the crisis management system, and proposes decisions that fall within this management body's remit.

3

A CRISIS MANAGEMENT SYSTEM

A crisis management system that ensures responsiveness and clarity of direction enables the Group to deal with all types of incidents, whether minor or major.

The crisis in Ukraine in 2022, and the imposition of sanctions on Russia by the European and American authorities provided an opportunity to test the Group's responsiveness and its ability to manage a complex crisis by calling on all its resources. A crisis unit was set up, under the aegis of the Group Risk and Compliance Department, to ensure that the Group's activities are in strict compliance with the changing sanctions and regulations in force.

2. CYBERSECURITY, THE GROUP'S PRIORITY

To improve its cyber resilience, the Fives group established a dedicated organization in June 2018. A Cybersecurity Department that reports to the Deputy General Manager was created. A team has been set up to define a cyber strategy and address the needs of all Group subsidiaries to protect their data and information systems. In the face of increasing cyber risks and attacks, the main objective is to protect the Group's assets, ensure business continuity in the event of a cyber crisis and, of course, meet the cyber security requirements expressed by customers.

Fives' cyber governance is based on the close involvement of the senior management and operational teams of the divisions, countries and entities. In each division and in certain countries, cyber officers have been appointed to lead and ensure the implementation of the Group's cyber roadmap in all subsidiaries.

This Cyber Roadmap is based on 4 pillars:

- user awareness
- protection of assets and data
- detection/remediation of vulnerabilities and incidents
- capitalization.

This cyber roadmap is updated annually to keep pace with changes in the threat environment. Cyber projects are selected and prioritized to address the risks identified by Fives.

To ensure the effectiveness of this approach, some twenty cyber KPIs measure quarterly progress in the deployment of technical solutions, compliance with the Group's security policies and the active involvement of all employees (measured by performance in awareness programs). These KPIs are reported to the Group Cyber Department by the General Managers of the companies. They are monitored and commented on by company, divisional and Group management committees.

Examples of monitored cyber KPIs include the following:

- in 2022, the validation rate of monthly cyber training sessions, results of fake phishing exercises, participation in cyber events, distribution of the IT charter, deployment of EDR with managed services, implementation of dual authentication for remote access to servers, encryption of workstations, etc.
- in 2023, the level of compliance with the Information Security Policy (ISP), back-up tests, resolution of action plans defined following penetration tests or audits, coverage and velocity of patch management actions, monitoring of cyber budgets, etc.

Various cyber committees are organized on a monthly basis to ensure the progress of projects, to share experiences and to encourage up- and down-stream communication. Some of these committees bring together technical experts, others business leaders.

2. COMPLIANCE AND BUSINESS ETHICS, A CORE PRIORITY FOR OUR BUSINESS LINES

Compliance and business ethics are among the Group's core values. Senior Management has a clear and unequivocal message to ensure that all Group subsidiaries comply with applicable laws and regulations and that their actions are fully consistent with the Group's business ethics charter.

The Group's ethical values are also enshrined in the Code of Conduct, which is distributed to all employees. At the heart of the prevention system is a business ethics directive.

The Group has a Risk and Compliance Department, which reports directly to the Fives Deputy General Manager and is responsible for ensuring that the policies and procedures are implemented by all Group Divisions, Business Units, Country Directorates, Regional Offices and subsidiaries.

To comprehensively strengthen its system and ensure local legal oversight, the Group, which operates in 25 countries, has established a system of Compliance Officers in key countries to cover the Group's entire perimeter. The local Compliance Officers play a key role in adapting the Group's policies to local rules, raising employee awareness about Compliance and Business Ethics in the local language, and promoting a culture of integrity.

In 2022, the Group strengthened its anti-corruption system in accordance with the requirements of the Sapin II law of December 9, 2016. As part of its anti-corruption system, the Group has started work to

update its corruption risk map, which will now have a specific section for each Group Division and for the Group's five main non-EU countries, i.e., China, the United States, India, Japan, and the United Kingdom. In 2022, the Group also continued to raise employee awareness of corruption-related risks through its training program.

The Group is developing a global digital architecture that strengthens the verification of third-party integrity (customers, suppliers, agents, etc.) and ensures that all the partners and entities it works with adhere to the Group's compliance rules.

Finally, several years ago, the Group put in place a system that allows whistleblowers to report any violation of compliance rules and procedures or the Code of Conduct and to speak out freely without fear of reprisal, while maintaining their confidentiality and anonymity.

In short, the policies and measures deployed by Fives, which are being constantly improved, include measures to address the three pillars of the fight against corruption:

1. a firm and emphatic commitment by senior management, in particular the Senior Executive Committee,
2. a corruption risks map - with particular attention to the Group's wide range of sectors and geographies,
3. a prevention system to prevent any corruption and more generally any behavior contrary to the Group's Code of Conduct.



02 OFFERING SOLUTIONS

TO MEET CLIMATE CHALLENGES





“We have created an educational document for school children that compares life on land and the frugal life sailors have to lead because when we are at sea, we don’t have any electricity, running water, Wi-Fi, repairmen of any kind, or any supermarkets... And yet we can live at sea for weeks at a time during races while consuming very little. By explaining the solutions adopted by sailors to achieve this frugality, we would like to get “landlubbers” to rethink their daily consumption and even think about new ways of doing things...”

Louis Duc,
Skipper

FIVES, A PIONEER IN DECARBONIZING INDUSTRY

“Twenty years ago, we took a bold and visionary gamble on the industry of the future. An industry that would be digital and low-carbon, or would no longer exist. We also prioritized research and development programs aiming to reduce our technical solutions’ environmental impact. This long-standing leadership now means we are a key partner for the major transformations in the mobility sector, with electric vehicles, and the green hydrogen sector, which is the ultimate low-carbon energy source.”

Frédéric Sanchez,
Président de Fives



Fives operates in markets that alone account for almost 25% of global greenhouse gas (GHG) emissions.

(data source: French Ministry of Ecological Transition)

Fives is aware of its responsibility in the face of these climate challenges and has been taking action for more than 20 years, with 3 main objectives:

- **Reduce the environmental impacts** of its sites;
- **Improve the energy performance** of its installations;
- **Develop ever more innovative solutions** to enable its customers to reduce their carbon footprint.



IN 2022 FIVES WILL GO FURTHER IN ITS CLIMATE STRATEGY
BY PROVING THAT

INDUSTRY IS ONE OF THE SOLUTIONS TO DECARBONIZATION



AN AMBITION STRUCTURED AROUND
3 GOALS

OBJECTIVE **1**

REDUCE CO₂ EMISSIONS FROM OUR ACTIVITIES BY 30% BY 2030
(compared to 2019) (scopes 1 and 2)

OBJECTIVE **2**

CONTINUE TO DEVELOP SUSTAINABLE SOLUTIONS
for industry to improve their environmental performance,
especially their carbon footprint

OBJECTIVE **3**

FOCUS OUR BUSINESS DEVELOPMENTS
in markets that contribute to the low-carbon transition



OBJECTIVE 1

REDUCE CO₂ EMISSIONS FROM OUR ACTIVITIES BY 30% BY 2030

(compared to 2019)
(scopes 1 and 2)



The Group has decided to implement action plans to reduce its direct CO₂ emissions by 30% by 2030 (scopes 1 and 2) by working more specifically on the most carbon-intensive subsidiaries.

The main drivers to achieve this ambitious target are:

- Improving the **energy performance of our buildings and processes.**
- **Changing sources of energy, in particular by:**
 - Producing solar energy at some sites
 - Purchasing green energy

OBJECTIVE **2**

CONTINUE TO DEVELOP SUSTAINABLE SOLUTIONS

for industry to improve their environmental performance, especially their carbon footprint

Fives places its **TECHNOLOGICAL LEADERSHIP** at the service of industries that are aware of the need to **REDUCE THEIR ENVIRONMENTAL IMPACT.**

1ST LEVER

By implementing proven solutions available on an industrial scale

2ND LEVER

By facilitating the adoption of low-carbon energy

3RD LEVER

By improving process control through digitalization

4TH LEVER

By developing new processes

5TH LEVER

By developing solutions for the energies of the future



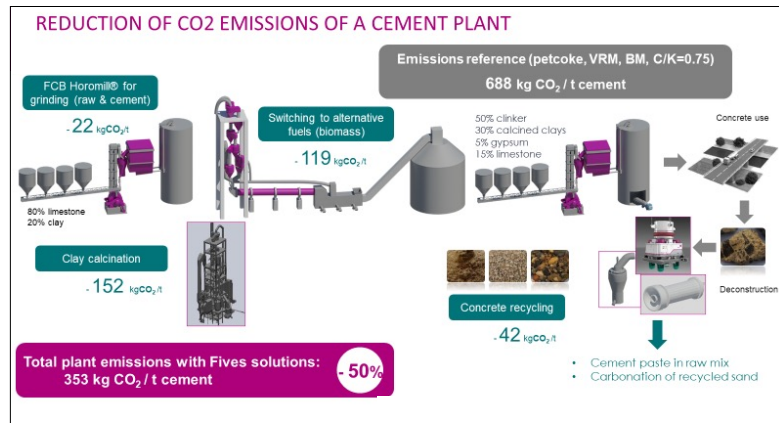


1ST LEVER
 Implement proven solutions that are available at an industrial scale

Example for THE CEMENT INDUSTRY

Fives offers several solutions that can reduce CO₂ emissions by half related to cement production:

- Clay calcination to produce artificial pozzolana, a low-carbon substitute to replace clinker
- Concrete waste recycling and use of the recovered components within the cement process
- Grinding technologies offering the best energy efficiency
- Optimal substitution of fossil fuels with low-carbon alternative fuels



1ST LEVER
 Implement proven solutions that are available at an industrial scale

Example for THE CEMENT INDUSTRY

Circular economy is an essential lever to reduce our environmental footprint. Fives proposes to the cement and concrete industry a comprehensive solution to recycle the concrete from deconstruction that allows 100% recovery of concrete waste.

Thanks to the **FCB Rhodax®** crusher and to the **FCB TSV™** classifier, the three components of concrete (gravels, sand, and cement paste) are recovered and can be reused to make new cement or new concrete.

- The recovery of gravel and sand leads to the **preservation of natural resources** and to the reduction of **energy consumption and emissions related to the extraction of materials from quarries**.
- The reuse of the cement fines in the cement process allows for the **production of a low-carbon clinker** as the raw material has already been decarbonated.
- Finally, the CO₂ from cement gas can be captured and reinjected in the fine part, thanks to the recarbonator, to **reduce even more the total CO₂ emissions** of the process.





1ST LEVER
 Implement proven solutions that are available at an industrial scale

Example for ALUMINIUM AND STEEL

NOx emissions essentially come from combustion and industrial processes such as glass manufacturing, metals, cement, etc. Reducing NOx emissions is a major challenge for industry players as well as their carbon footprint.

The advanced **North American Twinbed™ II** is made up of an ultra-low NOx burner and a regenerative bed. It offers manufacturers high thermal efficiency enabling them to achieve significant energy savings and **greatly reduce CO₂ emissions**. This process also lowers the cost of ownership over time to make it **the most cost-effective solution on the market**.

The North American **TwinBed™ II** also **meets the world's stringent NOx emissions standards** in applications such as aluminum melting, steel forge furnaces, steel reheat furnaces, heat treat furnaces, retort furnaces.



1ST LEVER
 Implement proven solutions that are available at an industrial scale

Example for SILICON STEEL

Experts estimate that 50% of private vehicles - battery or hybrid - will become electric by 2030. The electrical steel production, which is already growing by 5-7% per year, will require at least additional 5 million tons of additional high-grade electrical steel within the next 10 years, with massive investments required in China, Europe, and the USA.

Fives designs and supplies silicon steel processing lines to serve the e-mobility and energy distribution markets, with the highest-grade steel products and optimum energy efficiency. The production of silicon steel grades present a challenge to steelmakers, as it requires advanced technologies to produce high flux density materials with minimal core losses at high working frequencies.



- Fives' lines are dedicated to the production of non-grain oriented (NGO) and grain oriented (GO) grades
- Applications: EV motors and transformers for high-voltage grid
- Best Available Technology for furnace heating, cooling & atmosphere management
- Thermal cycles with very high heating rates



1ST LEVER

Implement proven solutions that are available at an industrial scale

Example for THE FIELD OF E-MOBILITY WITH e2Motion

With its long-standing expertise in the automotive industry, Fives supports major market players in their transition to more environmentally friendly vehicles.

To meet the growing demand of the e-mobility market, Fives offers automated solutions for the production of Battery Electric Vehicles (BEV), Fuel Cell Electric Vehicles (FCEV), Hybrid Electric Vehicles (HEV) and Plug-In Hybrid Electric Vehicles (PHEV):

- Precision robotics systems and automation of complex production flows
- Laser welding processes
- Fluid filling, leak testing, and sealing equipment



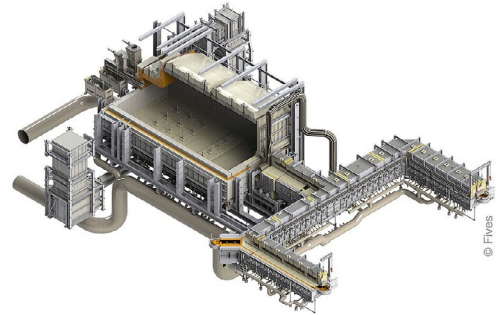


2ND LEVER
Facilitate the adoption of decarbonated energies

Example in **THE FIELD OF GLASS PRODUCTION**

Five meets the challenges of process electrification

- Guaranteeing the **sobriety and performance** of processes. This isn't the simple substitution of one energy by another.
- Offering **shedding capacity**, renewable energy being by nature intermittent.
- Allowing for **gradual adoption** by the industry as **truly decarbonized energy becomes available**



WITH PRIUM® ECO-FLEX :

This technology offers the ability to substitute gas for electricity in a range of 10% to 80%.

2ND LEVER
Facilitate the adoption of decarbonated energies

Example for **THE FIELD OF GLASS PRODUCTION**

Despite a drop in market prices at the end of 2022, the glass market remains favorable to new investments, in both Europe and the USA, with a strong focus on the reduction of carbon emissions through electric melting and a growing need for local PV glass production capacities. Fives has a very strong position in all-electric or hybrid melting solutions, as well as process expertise and specific technologies to produce photovoltaic glass.

All-electric furnaces from Fives are a green alternative to traditional technologies. They offer better thermal efficiency and lower emissions and, with a reliable supply of renewable energy — lower operating costs.



Prium® E-Melt offers a cost-effective option for the production of a wide range of glass types. It enables the production of exceptional quality glass with low fault concentration and high homogeneity. It's also the best available technology to reduce emissions at the plant level.



2ND LEVER
Facilitate the
adoption of
decarbonated
energies

Example in THE SUGAR PRODUCTION

Reducing the dependence of beet sugar factories and refineries from fossil fuels will require:

- **Steam consumption optimization** within those factories;
- **Electrification of some processes** to replace the conventional production of steam from fossil fuels.

To answer these two challenges, Fives has developed:

- **technologies with outstanding performances in terms of energy efficiency** for evaporation and crystallization process (Cail & Fletcher range of Falling Film Evaporators and Continuous Vacuum Pans),
- associated with a **plug-and-play solution for steam recompression**. This process allows to recover the steam produced in the evaporator or crystallizer and to **increase its energy potential**. The equipment is then fed in a closed circuit with the recompressed steam. The consumption of steam conventionally produced with boilers using fossil fuels is indeed not necessary anymore.

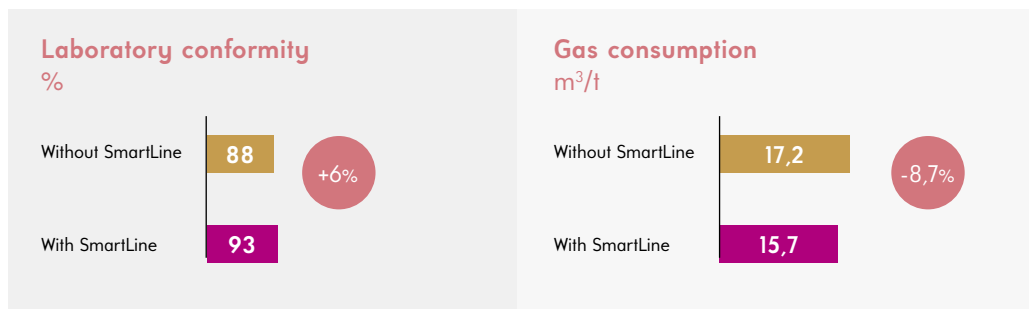
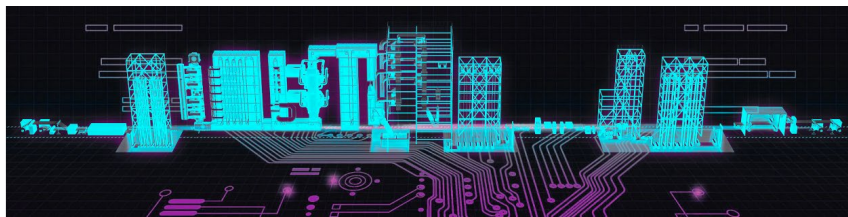




3RD LEVER
Improve process control thanks to digitalization

The Smartline control software, the result of more than 20 years of development and modelling by Fives, enables the steel production process to be controlled with **unparalleled precision, and to achieve substantial gains in both product quality and the energy required for their production**. This performance has been recognized by the award of the Solar Impulse label in 2021

Example in THE FIELD OF STEEL PRODUCTION



3RD LEVER
Improve process control thanks to digitalization

Amelios Suite is a complete digital suite, based on data from advanced sensors to control the entire anode manufacturing process, and thus optimize carbon consumption associated with primary aluminum production. This solution ensures a high-quality anode, and **potentially reduces the amount of CO₂ emitted per ton of aluminum produced**.



The solutions has been recognized by Solar Impulse Foundation as a Clean & Profitable Solution for Climate Change.

Example in THE FIELD OF ALUMINIUM PRODUCTION

<p>CO₂ emission reduction: - 35 to -70 kg CO₂/tAl associated with a decrease in net carbon consumption</p>	<p>Total anode production cost reduced by 2.5% thanks to an optimized net carbon consumption</p>
--	---





4TH LEVER
Designing new processes

Example in
THE FIELD OF HIGH-PRECISION MACHINING

Reducing the carbon footprint of industrial processes involves **optimizing cycle times** and **energy consumption**, as well as **waste management**.

Fives' patented **Dufieux® MMS** (Mirror Milling System) machining technology, which was developed for aerospace panels, replaces chemical machining using an acid bath and reduces cycle times and electricity consumption for the same production capacity.



WITHOUT MMS	WITH MMS
<ul style="list-style-type: none"> — Long cycle including multiple discontinuous operations — Use of large quantities of chemical reagents, the production of which generates greenhouse gases. — Generation of sludge difficult to recycle — Annual electricity consumption for 7,000 panels: 7 GWh 	<ul style="list-style-type: none"> — Several operations performed 4 to 6 times faster in a single cycle — No use of chemical reagents — Production of easily recyclable metal chips — Annual electricity consumption for 7,000 panels: 3 GWh

4TH LEVER
Designing new processes

Example in
THE FIELD OF ALUMINIUM

In an aluminium smelter, most of the Hydrogen Fluoride (HF) is released into the atmosphere directly from the potroom. Fives has developed a solution to eliminate emissions coming from hot spent anodes (@ 650°C) thanks to a dedicated box filled with fluidized alumina designed to confine anode butts: the Anode Inert Tray (AIT).

This allows stopping the interaction between:

1. The carbon in the spent anodes and the oxygen in the ambient air and therefore the carbon consumption and CO2 emission.
2. The fluorine on the spent anodes and the humidity in the ambient air leading to zero HF emissions.

- Reduction of 70% of HF emissions coming from anode butts
- CO2 emission reduction: - 30 to -40 kg CO₂/tAl associated with 2% decrease in Net Carbon Consumption

For one Potline producing 200 000 t of Al/year, the yearly savings will reach:

7,300 t reduction in CO₂ emission

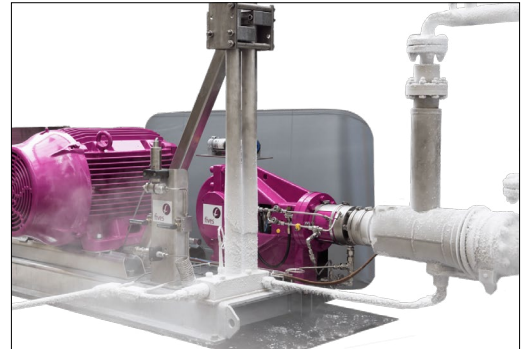


5TH LEVER
**Developing the
energy solutions
of tomorrow**

Example for
**LIQUID
HYDROGEN**

The exponential growth in demand requires the rapid availability of equipment to enable larger production, transport, and distribution. Liquid hydrogen is a vector of choice for the transport of decarbonized energy.

As a technological leader in cryogenics for over 60 years, Fives has been driving and supporting innovation in the hydrogen sector for more than 20 years.



Partner of Atlas Copco and Plug Power, Fives develops heat exchangers to liquefy hydrogen and cryogenic pumps to transfer and distribute liquid hydrogen to answer the needs of the numerous actors on the hydrogen value chain.

Fives provides key hydrogen equipment to all major industrial gas players and supports historical as well as new players in the hydrogen sector to meet the needs of the liquid hydrogen market. By 2030, this market will represent between 10 and 20% of the global hydrogen market.

Fives has an investment plan of €15 million up to 2025 for developments regarding hydrogen.



OBJECTIVE 3

FOCUS OUR BUSINESS DEVELOPMENTS IN MARKETS THAT CONTRIBUTE TO THE LOW-CARBON TRANSITION

Fives' leadership is built on a **WIDE RANGE OF EXPERTISE** to address decarbonization markets: historic markets such as nuclear and new markets that are growing exponentially.

→ **NUCLEAR POWER**, a major lever for carbon neutrality and the resilience of our territories:

- Through the production of controllable means of decarbonized electricity generation
- By reducing and controlling France's energy dependence

→ **THE GREEN HYDROGEN MARKET**

- Fives is creating the conditions necessary for the development of low-carbon hydrogen by offering
- manufacturers equipment to develop hydrogen as a new energy carrier (liquefaction, cryogenic pumps, combustion, industrial piping)
 - solutions for industrializing production lines for sustainable mobility (tank testing line, automated electrolyzer production, fuel cells, and tanks)

→ **THE BATTERY MARKET**, an explosion in production volumes with the development of sustainable mobility.

With the diversity and transferability of the Group's skills in the fields of assembly, intelligent sorting, flow simulation, and traceability are put at the service of e-mobility projects, to guarantee their success. The Fives Group's e2Motion Business Unit thus supports major market players in their transition toward more environmentally-friendly vehicles: hybrid, 100% electric, or hydrogen-powered vehicles.

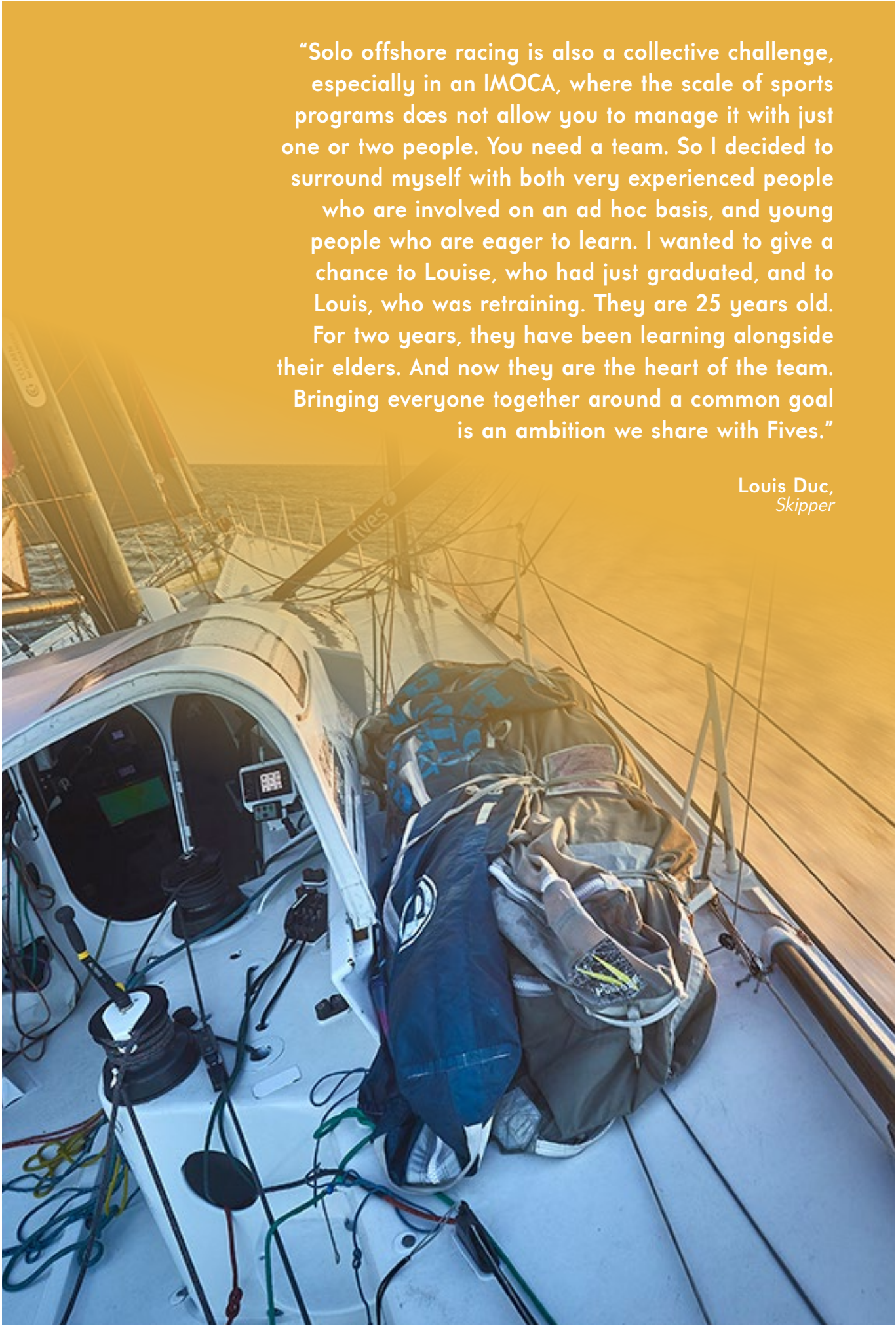
→ **IOT** a lever for the energy transition:

- Through better control of processes via digital twins and the reduction of energy consumption
- By facilitating the use of renewable energy sources through greater flexibility

03 GIVING MEANING

TO THE PROJECTS OF PASSIONATE PEOPLE





“Solo offshore racing is also a collective challenge, especially in an IMOCA, where the scale of sports programs does not allow you to manage it with just one or two people. You need a team. So I decided to surround myself with both very experienced people who are involved on an ad hoc basis, and young people who are eager to learn. I wanted to give a chance to Louise, who had just graduated, and to Louis, who was retraining. They are 25 years old. For two years, they have been learning alongside their elders. And now they are the heart of the team. Bringing everyone together around a common goal is an ambition we share with Fives.”

Louis Duc,
Skipper

**JOINING FIVES MEANS BEING SUPPORTED
AND ENCOURAGED BY TEAMS THAT LISTEN TO
THE NEEDS OF THEIR EMPLOYEES:**



POSITIVE IMPACT

- Commitment and search for meaning
-
- Innovation, commitment to the fight against climate change,
and global reach
-
- Positive impact of Fives' solutions



GROW A CAREER AT FIVES

- Career development
-
- Employee training
-
- Professional fulfillment



WORKING ENVIRONMENT

- Workplaces designed BY and FOR those who work there
-
- Occupational safety
-
- Work/life balance



AT THE HEART OF INNOVATION

At Fives, innovation is a vocation. As a pioneer in the industry of the future, Fives innovates every day to make the industry more efficient and sustainable so that it can meet tomorrow's challenges:

- speed and agility
- flexibility and precision
- safety
- respect for the environment



2 267
PATENTS IN FORCE in over
669 DIFFERENT FAMILIES (as of
Dec. 31, 2022)

63
new INNOVATIONS WERE
PATENTED in 2022

32
research
and testing
CENTERS

FIVES COMMITMENT TO THE FIGHT AGAINST CLIMATE CHANGE

Fives has a long-term vision for its activity.

This vision that the Group champions led Fives more than 20 years ago to make the farsighted and bold wager that the industry of the future would be digital and carbon-free, or it wouldn't be around at all.

It has ensured Fives to be seen as an essential partner in the fight against climate change through the use of digitalization, the promotion of a sustainable economy, and the development of new processes and new sources of energy.

Half of the order
intake in 2022 involves
**DECARBONIZATION
SOLUTIONS**

75%
of Fives'
industrial sites
are **ISO 14001**
certified

Fives focuses 100%
of its activities on
providing solutions
**TO REDUCE THE
ENVIRONMENTAL
IMPACT OF ITS
CUSTOMERS**

The Group aims **TO
REDUCE THE
CO2 EMISSIONS**
of its scopes 1 and
2 by 30% between
2019 and 2030



PROMOTION OF LOCAL EMPLOYMENT

Fives' involvement in each of the 200 cities where it operates means that today the Group is acknowledged as a real driver of local economic growth, forging links with local stakeholders and creating many jobs.

Fives is present in more than 200 cities in **25 COUNTRIES**

Each year, the Group hires more than **1,200 NEW EMPLOYEES** worldwide

Fives builds **CLOSE RELATIONSHIPS WITH LOCAL STAKEHOLDERS** in every region where it operates

GLOBAL REACH

Joining Fives means becoming part of an international and multicultural Group present in 25 countries.

This openness to the world allows Fives' employees to take part in a large-scale human adventure and gives them access to numerous opportunities for career development and mobility.

81
DIFFERENT NATIONALITIES
work together within the Group

Fives has operations in **25 DIFFERENT COUNTRIES** worldwide





CAREER DEVELOPMENT

At Fives, every employee's career goals are valued and supported so that everyone has enough space to be able to grow all along their career path.

The Group helps all of its employees to realize their career goals: training, mobility, work time accommodation, etc.

Fives endorses a **ROBUST POLICY OF CAREER SUPPORT AND INTERNAL MOBILITY**, whether it be vertical, lateral, geographical, temporary or long term

72%
of employees have regular annual performance reviews

Fives uses **HR TOOLS** to actively track the careers of its employees and identify their potential for growth within the Group

Each employee can ask at any time **TO MEET WITH THEIR HR REPRESENTATIVE** to discuss their career goals

EMPLOYEE TRAINING

76%
of Fives' employees have received **JOB TRAINING** during the year

Fives supports its employees throughout their careers.

By providing its employees with regular training programs adapted to their professions and the innovations specific to them, Fives enables them to advance to their chosen path.

Joining Fives means using your skills and developing many new ones throughout your career.

Fives is **DEVELOPING BUSINESS TRAINING COURSES** in line with the career paths of its employees



PROFESSIONAL FULFILLMENT

Fives cares greatly about the well-being and daily professional fulfillment of its employees.

85%

of Fives' employees say they work in a team where collaboration is efficient

86%

of Fives' employees say they care about their company





OCCUPATIONAL SAFETY

Employee safety is a central concern at Fives. The Group updates its occupational safety policy to reflect the latest innovations and regulatory requirements so that its employees always feel safe while on the job.



To protect the health and safety of our employees, Fives is committed **TO ACHIEVING ZERO WORKPLACE ACCIDENTS DAILY**

The Group has established 10 Golden Rules of Safety to enable everyone to better identify and control risks. These rules cover the **10 MAIN RISKS THAT COULD LEAD** to serious accidents at Fives

By making safety a priority, Fives has been able **TO REDUCE THE NUMBER OF LOST-TIME ACCIDENTS** by a factor of three in 10 years

WORK/LIFE BALANCE

Fives pays close attention to its employees' well-being, a prerequisite that requires striking the right work/life balance for each of them.

75%
 of Fives' employees say that it makes it easier for them to manage their professional and personal lives

THE GROUP RECOGNIZES AND ENDORSES EMPLOYEES' RIGHT TO DISCONNECT.
 A series of measures and best practices ensure that employees' right to rest is respected and that their work/life balance is maintained without hindering the autonomy and flexibility offered to them



MANAGEMENT

It is by growing its employees that the Group grows in turn.

This is why management is always put at the service of individuals and their needs.

82%
of employees
CONSIDER THAT THEIR MANAGERS ARE AVAILABLE to answer their questions or provide help

81%
of employees
FULLY UNDERSTAND WHAT IS EXPECTED OF THEM

72%
of employees
consider that their managers give them helpful feedback in a timely manner

DIVERSITY AND INCLUSION

As a Group that is committed to inclusion and diversity, Fives works to ensure that every person find their place through employment.

The Group is deeply convinced that it is the diversity of its employees that makes Fives such a rich place to work.

HIRING PEOPLE WHO LIVE IN DISADVANTAGED NEIGHBORHOODS AND SKILLS SPONSORSHIP PROGRAMS IN FRANCE. Fives' employees devote time to help young people who don't have access to a professional network to find their first job



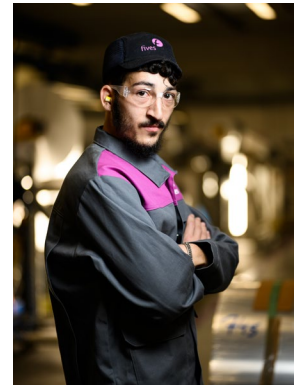
81
NATIONALITIES
work together within the Group





WORKPLACE GENDER EQUALITY

Fives encourages and supports all its female employees who wish to establish their leadership and progress to management positions in the short or medium term.



Fives is actively involved in **ASSOCIATIONS THAT PROMOTE CAREERS IN INDUSTRY** to women (Elles Bougent in France; Women in Manufacturing in the U.S.A.)

PRESENCE OF WOMEN IN TECHNICAL JOBS, such as welding, engineering, design offices, construction sites, and maintenance

In 2021, Fives launched its **«Women@Fives»** support program for female managers and leaders. Its objective is to promote gender diversity in the workplace by helping women unlock their potential, develop their leadership skills, and acquire the keys to building fulfilling and successful professional lives.

PERSONS WITH DISABILITIES

At Fives, disability is not a handicap! Rather than make our employees adjust to their workstations, we redesign workstations to meet everyone's specific needs.

Doing so ensures that people with disabilities can progress in all of the 500 occupations available within the Group.

WORKSTATIONS ARE REDESIGNED AND ADAPTED to meet everyone's needs so that disabled people can be accommodated whatever their position within Group

A POLICY IN FAVOR OF PEOPLE WITH DISABILITIES is implemented and coordinated in every country where the Group operates so that we can all move forward together (e.g., Mission Handicap in France, India, Italy, China, and the U.S.A.)



www.fivesgroup.com



fives

Industry can do it