

# Meeting

the needs  
of our time



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**2019**





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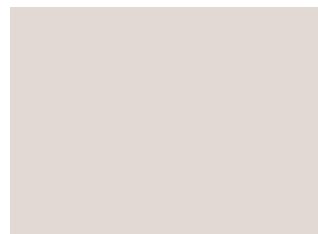
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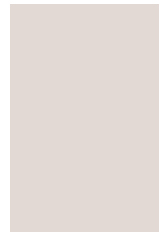
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**2019:** a year  
that builds on the  
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# Meeting the needs of our time

If we had to single out just one highlight of the year 2019 for our Group, it would have to be the return to the identity of John Cockerill. This was more than a symbolic gesture, and truly constituted a founding act that confirms our uniqueness, our ambition and our mission.

As John Cockerill was preparing to end the fiscal year 2019 and to publish its activity report, the Covid-19 health crisis shook up the priorities of the entire company. As we left behind 2019, we were forced to leave the path traced by our strategic analyses and action plans and - like so many others, we were plunged into another reality: that of ensuring the health of all our employees and our loved ones, while also preserving the health of John Cockerill. During this rather strange period, our daily lives consisted of managing day-to-day, adapting to the evolution of the pandemic and making decisions regarding the continuity of the business. We strengthened our adaptive capacities, we learned to react collectively to this crisis of a new order, and, above all, we began to realize that the world would no longer be the same afterwards.

Given this special context, the retrospective exercise of the activity report may seem very superficial. It could well be, if it didn't also give us the opportunity to provide information about our actions in the light of what we know today. This is also how we came to realize that, throughout

2019, John Cockerill carried out concrete, innovative, promising and daring actions that were already likely to meet the new needs of our time.

### Health & Safety

Among our main accomplishments in 2019, we'd first like to point out our health and safety performance. For many years, and well before the Covid-19 crisis, the health and safety of our employees has been our absolute priority. Our accident frequency (2.28) and severity (0.09) rates exceed the 2014 record. Beyond the figures, we are especially pleased that health and safety issues remain a daily priority for our managers and employees, and that the principle of shared vigilance is deeply rooted in their habits and behavior.

### World first in the energy transition

Other successes marked the year 2019 in some key areas, which the events of the first half of 2020 made even more important.

In terms of energy transition and sustainable development,

the teams of John Cockerill have developed many innovative initiatives. For example, and as a world-first, we have launched a solar power plant in China that operates 24 hours a day using molten salt technology. In terms of soft mobility, we have finalized the construction of the Cuenca tram (Ecuador), continued the assembly of locomotives on behalf of CFCO (Congo) and carried out modernization for VNF (France), one of the most impressive river locks in Northern Europe.

In 2019, John Cockerill also took a crucial step into another market of the future: that of green hydrogen. By creating Cockerill Jingli Hydrogen together with a well-known Chinese player, we are now able to design and install the largest electrolyzers in the world. At the same time, we have taken the position of No. 1 worldwide in the development of a new, 100% green mobility sector.

In the field of energy storage, the MiRIS® pilot plant installed at the Headquarters of the Group continued to ramp up its power with the development of an intelligent

energy management system (EMS) and the commissioning of a new type of battery.

Still on the energy front, John Cockerill continued its support of EDF in 2019, in order to develop the performance and safety of its nuclear power plants. This was particularly the case at Cattenom, Chooz and Tricastin (France).

### Fighting against insecurity

The beginning of the year 2020 highlighted the essential importance of security: the security of populations on the one hand, and the security of the supply of goods and services on the other. John Cockerill understands this need, and has taken it into account for many years, in particular by continuing its development in the defense field.

In 2019, we continued the remarkable execution of the largest land defense contract ever awarded to a company. The teams achieved an exceptional production rate in 2019. Shipments could not be made at the same rate,



Bernard Serin and  
Jean-Luc Maurange

however, and we therefore closed the year with a large inventory, putting pressure on the Group's cash position.

We have also positioned ourselves in a new activity, that of securing sensitive civil and military sites. To this end, we have launched John Cockerill Fortress and started marketing its solutions against malicious drones.

### Preserving natural resources

Some projects are gaining momentum among our portfolio of environmental solutions: whether in the collection and distribution of water in Kenya, air treatment in Morocco, or the biological elimination of drug residues in hospital effluents (MEDIX®, Belgium). The strong growth of NESAs® solutions for heat treatment and for the recovery of various materials, such as activated carbon, should also be noted.

### A group of citizens

These few examples of structural advances implemented in 2019 are sources of pride, both for

us and for our technical and commercial teams. We would also like to highlight another of a different nature here. A citizen-oriented project implemented under the aegis of the John Cockerill Foundation: the creation, installation and then the donation to the Walloon Region of L'Arc Majeur by Bernar Venet, a monumental work of art, the largest made from CorTen steel in the world, installed on either side of a Belgian motorway. This project was not only a work of art, but also a technical challenge and a human adventure, and gave us the opportunity to honor regional know-how and technological audacity.

### Ensuring sustainability

2019 was just as intense from an operational point of view. Managing a portfolio of projects, some of which relate to innovation and others to mature products, while ensuring the gradual renewal of historic activities, requires agility and vigilance. Internally, time and resources have been mobilized for plans to return to profitability, the implementation of new forms of

organization and a substantial wave of digitization.

Globally, John Cockerill ended 2019 with a turnover of 1.256 billion Euros, close to that in the year 2018. While innovating and investing in the renewal of our activities, we were also able to generate a respectable operating profit of € 36 million, which is certainly down compared to the previous year, but of a sufficient scale to face the first months of 2020 in the best conditions.

### Determination and passion

With a few months of hindsight and while going through the global Covid-19 crisis, we are taking the full measure of the important strategic milestones achieved in 2019 to prepare the John Cockerill of tomorrow.

These achievements testify to our vitality, our ability to achieve great things, and our willingness to dare. In a word, to our entrepreneurial DNA. We are proud of what our teams have achieved in 2019. We are proud of our agility in adapting our responses to your

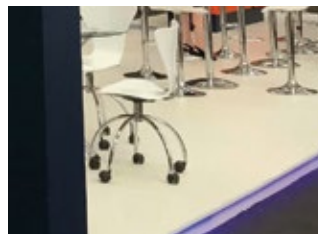
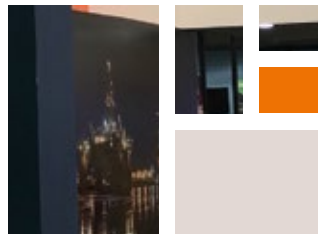
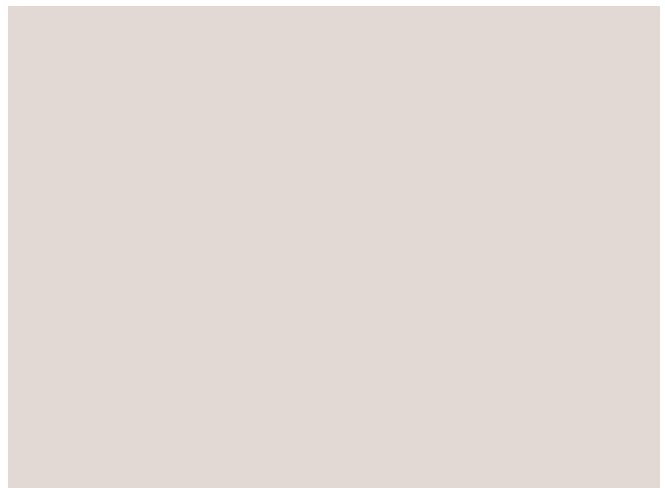
needs and to profound and constant change. We know our strengths, our assets. They allow us to approach the future with confidence, enthusiasm, determination and passion. In order to support you, our partners and our stakeholders, in your future projects, and to remain by your side as enablers of opportunities.

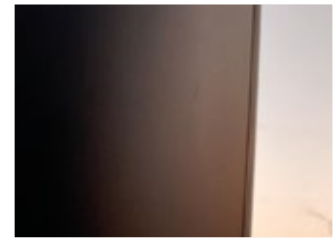
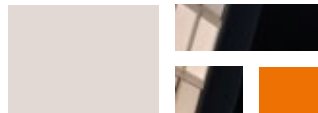
Jean-Luc Maurange  
CEO

Bernard Serin  
Chairman

Deployment of the new identity

# A new identity for the Group





# CMI is becoming John Cockerill (again)

A new chapter in the Group's history opened with the evolution of its identity in 2019: CMI reconnected to its roots by becoming John Cockerill again. The employees, more than ever inspired by the visionary and entrepreneurial spirit of this emblematic figure, have embraced in their own way the mission that John Cockerill set himself more than 200 years ago: to meet the needs of their time.

The official announcement of this change took place on May 16, 2019. Since then, the image of John Cockerill has been gradually spread through brochures, fair stalls and trade shows, business cards and, of course, via the Group's website. A unique and resolutely modern identity, supported by a clear and graphic charter, now brings together all of the Group's activities.



Iconic projects

# 5 priority areas



Meeting the needs of our time is our Group's mission. In order to accomplish this mission, we take an entrepreneurial look at the world, at existing and developing technologies, and at the needs of our clients and the communities in which we live.

We catalyze new opportunities. With the ambition of combining technologies and expertise for the development of large-scale, concrete and sustainable solutions. Solutions that take the form of new services and the associated equipment. For the energy, defense, industry, environment, transport and infrastructure sectors. Making our technical contribution to the world that complements the essential taken at political, educational and societal levels.

In 2019, throughout the world, John Cockerill's teams have put our technologies and know-how at the service of contemporary issues.



# Providing answers to the needs of our time



## Preserving natural resources

Globally, John Cockerill develops solutions to reduce the consumption and waste of natural resources, to clean and purify water and air, to allow access to drinking water, etc. In this perspective, in 2019, our teams have:

- Installed a municipal waste odor treatment solution (La Reunion)
- Developed a solution for converting peat into activated carbon (Finland)
- Facilitated access to safe drinking water (Kenya)
- Developed a gasification solution for household waste (France)



## Producing sustainably

John Cockerill's technological solutions are designed to produce without destroying. They aim to secure production and infrastructure capacities while minimizing the use of resources, energies, and waste throughout their life cycle. In this perspective, in 2019, our teams have:

- Improved the efficiency and consumption of a surface treatment plant (France)
- Improved the yield of a nuclear power plant (France)
- Installed an acid regeneration solution in a steel pickling plant (China)
- Replaced three petroleum coke boilers with two combined cycles using natural gas (Canada)



## Contributing to greener mobility

John Cockerill wants to provide citizens, cities, businesses and governments with a more sustainable and slower form of mobility and transport solutions. In this perspective, in 2019, our teams have:

- Designed the 'zero emission' mobility of buses for the Beijing Olympic Games in 2022 (China)
- Equipped Trans-Gabon with virtual-reality training solutions for its train drivers (Gabon)
- Modernized one of the largest river infrastructures in Northern Europe (France)



## Fighting against insecurity

John Cockerill aims to help states protect their citizens from threats and to maintain the global balance within the alliances. Our Group also wants to help the operators of sensitive sites secure their facilities. To this end, in 2019, our teams have:

- Delivered the first Combat Boat, our solution for protecting shores and coasts from acts of piracy (Indonesia)
- Produced and delivered turret-cannon systems to be integrated on the light armored vehicles of an army corps (Belgium)



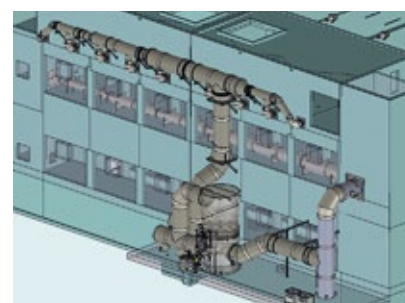
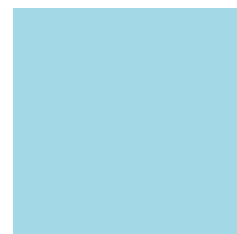
## Facilitating access to renewable energy

John Cockerill's technological solutions are designed to use sun, water, biomass or wind to generate electricity. They also enable the storage of the produced electricity and make it accessible wherever and whenever it is needed. In 2019, our teams also:

- Launched a first thermo-solar plant using molten salts (China)
- Guaranteed the perfect operation of 100 wind turbines in the North Sea (Belgium)
- Channeled the energy power of the River Meuse (Belgium)



# Treating waste free of odor



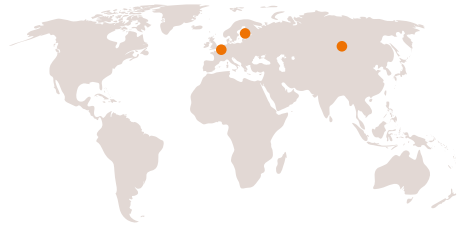
## An alternative to landfill

Reunion Island has adopted a proactive policy regarding household waste. Its new processing center will recycle more than 130 000 tons each year: sorting recyclable materials and converting them into compost and fuel. Which will take the pressure off the landfills. The Suez subsidiary in charge of the project has commissioned John Cockerill to design and install an air and odor treatment solution.

## 78 fans and 4 treatment units

Samuel, the Sales Manager, says: *“Sorting and treating 130 000 tons of waste every year without odor is a major challenge. The center consists of 18 000 m<sup>2</sup>, divided into specific areas. In 2019, our teams designed and installed the equipment to ensure an optimal airflow between the zones, activated by 78 induction fans. They carry the air to be treated to our four physicochemical and bio-filtration treatment units. It is a matter of great pride for us to help clean the air that the entire population of Reunion Island breathe.”*

John Cockerill's teams have already felt this pride in being useful to their customers, and more broadly to the whole community, during projects in Canada, Poland or China, where they have deployed air and odor treatment solutions of this kind in recent years.



# Turning peat into activated carbon

## Capturing the pollutants

Since ancient times, activated carbon has been used to capture pollutants in liquids and gases. Today, it can be found in industry, in the communities, in our kitchens and even in pharmacies. With the population boom and the need to preserve natural resources, demand is spiraling. In this context, a Finnish customer launched a technical challenge for John Cockerill in 2019: 'Is it possible to transform peat into activated carbon on an industrial scale?' Finland does, in fact, have many peat deposits, which could be exploited for more than just fuel.

## Proof positive on the industrial pilot

Marianne, Sales Manager, is delighted: *"We examined this question with enthusiasm, and were able to meet this challenge! By conducting tests on our 'NESA®' pilot facility, we were able to design and validate the industrial process in close collaboration with the customer: the best peat, and therefore the best site for the future facility, close to the deposits, have been identified; we have developed a process that allows the carbonization and activation of the material in a single passage in a multiple hearth furnace, without energy input, with an excellent result. This technical innovation is a world first! It was a great pleasure to provide the customer with a solution that meets his needs, after having tested it on our pilot installation. He signed right up."*

In 2019, John Cockerill Nesa also supplied carbonization and mineral coal activation facilities in Siberia, as well as facilities for the regeneration of activated carbon - spent this time - in Belgium.



# Providing drinking water to those who need it

## Kenya

For a large part of the population of Kenya, access to water is a real issue. Especially in rural areas, where, according to the World Bank, only 12% of households are connected to the water network. The authorities are therefore launching a vast program to facilitate access to drinking and sanitary water. And have asked John Cockerill to assist them.

## Water for 300 000 people

Dominique, the Project Manager, explains: *“We are carrying out major projects in three provinces in Kenya, with the support of the Belgian State. They range from well drilling to the renovation and construction of water treatment plants, up to the supply system. We have made it a point of honor to use photovoltaic energy to power the installations, so that they are both more sustainable and less dependent on the availability of the electricity grid. As far as the Kajiado project is concerned, a good part of the wells has been built. We designed and shipped the equipment and prepared the infrastructure on site in 2019, and we will be commissioning the facilities in 2020. This is enough to provide access to water to 300 000 people and to the breeders for their animal herds. And enough to make all the John Cockerill teams proud.”*



# Extracting value from millions of tons of organic waste

## Dare you?

The public stakeholders in the treatment of wastewater and municipal waste in the Ile-de-France region\* have set a challenge for industrialists and researchers: to maximize the production of injectable bio-methane in the natural gas network starting from the organic fraction of residual municipal waste and sewage sludge. Under three conditions: to show a positive energy balance, minimize the ultimate waste and recover the nutrients.



## Double dare you!

The first challenge of the research phase was brilliantly met by the John Cockerill's specialists and their partners. Thomas, the Project Manager of the research phase, explains: *"In 2019, we completed the R&D phase, backed up by tests. By combining substrates, we were able to achieve a higher environmental performance than with separate pathways, and thanks to judicious blending and an innovative combination of proven technologies, we have maximized the production of injected bio-methane on the network. The residual chemical energy is converted into thermal energy, and the nutrients are extracted from the ultimate residues in order to recycle as many elements as possible."*

The solution was convincing. As part of a second phase, John Cockerill's teams and their partners will spend the next 36 months building a pilot unit in order to confirm the expected performance under real conditions. So that, in the end, waste will go hand in hand with progress.

\* In the Paris area, Sycotom processes and recycles 2.3 million tons of waste per year, and SIAAP treats 2.3 million m<sup>3</sup> of wastewater every day.

\*\* For this project, John Cockerill is bringing together the expertise of three of its subsidiaries (Proserpol, Europe Environnement and Nesa) and has joined forces with the company Sources and with the engineering colleges Institut UniLaSalle de Beauvais and the Compiègne University of Technology.



# Greener surface treatment

## A longer service life for materials

Treating surfaces - cleaning them and applying a coating - gives materials new properties and a longer life. Specitubes primarily supplies the aerospace, pump, automotive and nuclear industries with tubes made of stainless steel, titanium and nickel alloys. In 2019, it called on John Cockerill to redesign one of its titanium tube processing facilities. These tubes are intended for particularly demanding applications in aeronautics.

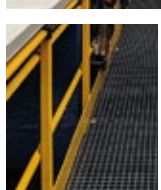
## Less water, more capacity, maximum safety

Michaël, the Project Manager, and the teams are proud of the result: *“By rethinking the material flows and the operator interventions, we were able to multiply the capacity of this surface treatment line by 2.5. At the same time, we managed to divide the need for rinse water by 3.5. We made it a point of honor to design a process that ensures excellent work ergonomics and maximum safety, to the great satisfaction of the operators.”*

### And in Mexico...

In 2019, Sarrel, Europe's leading plastic electrolytic metallization company, commissioned John Cockerill to design and install its new surface processing plant in Mexico. Enough to meet not only the local needs of the automotive industry, but also those of the electronics, the electrical appliances and the perfumery industries.

John Cockerill is a world leader in surface treatment, with teams in China (Cockerill Tempo), Finland (Galvatek) and France (CMI Sleti). Our Group also has the necessary expertise in the treatment of air and liquid effluents to allow us to offer truly global solutions.





# Contribution to nuclear performance in complete safety

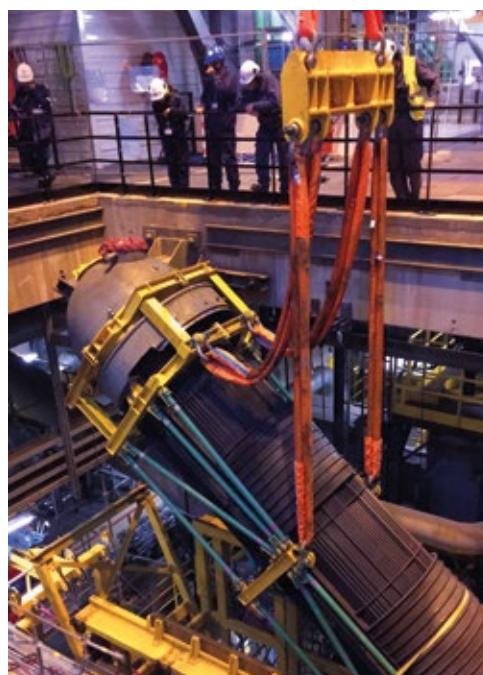
## The strictest requirements

The EDF nuclear power plant at Cattenom had to replace the six low-pressure heaters in Unit 1 during a shutdown in 2019. A delicate operation that considerably increases the efficiency of the plant: this equipment is used to heat the water that feeds the steam generators. The requirements governing nuclear operators are the most stringent, and they only entrust this important work to certified partners who have proven their professionalism. EDF chose to entrust this operation to John Cockerill.

## Operational security, efficiency of the facility

Claire, Project Manager Engineer: *“These heaters are impressive: 12 m long and 25 tons each! We carefully prepared the site, and dismantled any equipment that hindered their extraction. We then set up a 140 tons frame to facilitate the lifting and removal. The brass tube beams were replaced by stainless-steel tube beams to obtain a better performance. The strength of John Cockerill was played to the full, with each of eight Business Units bringing in their own specific expertise.”*

*“And then, continues Claire, because safety is our priority, we organized a challenge between the teams. It was a fantastic experience. We are proud to provide solutions for nuclear power that enable it to produce more electricity with the same infrastructure, and with the rigorous security for which we are renowned. As long-time partners, our fully trained and qualified staff carry out work on all the power plants in Belgium and France.”*





# Recycle 100% of the pickling acid in the steel industry

## No lost acid

Like all other steelmakers, Baowu uses hydrochloric acid to pickle the metal sheets that it produces. An acid that can be regenerated to almost 100%. Until now, this member of China's largest steel group has been recycling some of its acid using an old technology. They were looking for a greener solution. In 2019, they found it with John Cockerill.



## An unrivaled environmental performance

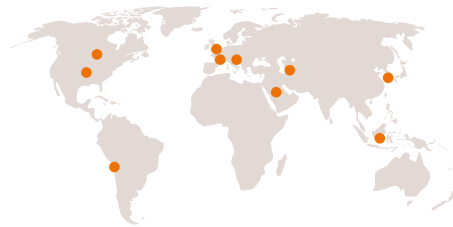
Michael, Managing Director of CMI UVK, responsible for the marketing of the Group's Acid Regeneration Plant (ARP), talks passionately about this: *"The technology applied by John Cockerill enables the recycling of almost 100% of the spent acid. The way in which we rapidly cool the fumes and clean them guarantees ultra-low emissions that are unmatched on the market. The preheating of the combustion air saves energy and reduces the CO<sub>2</sub> emissions. One of the two installations that we are currently building for Baowu is the largest facility in the world. It processes the acid from three different stripping entities, using a single control room. The recovered low-dust iron oxide is recycled in other industrial processes."*

**Steel lines suitable for new generation steels?**

In 2019, JSW, a major Indian steel producer, entrusted John Cockerill with the construction of a new continuous annealing line suitable for the latest generation of steels: more resistant. Thanks to the mastery of all the key equipment used, including the crucial cooling stage, the line shores up the strength of the steels produced. This is the 10<sup>th</sup> processing line order that John Cockerill has received from JSW. Quite a vote of satisfaction ... and trust!







# Allowing industry to contribute to the energy transition

## Energy transition: less carbon energy

Suncor, a Canadian oil company, is mindful of its environmental footprint. The steam requirements for oil sand operations were met by three petroleum coke boilers that were approaching the end of their service lives. Rather than renew them, the company chose to replace them with two combined cycles using natural gas. These will produce the steam that is used directly for the site's own needs, as well as providing electricity, thereby contributing to Alberta's energy transition process, which is still heavily dependent on coal.

## 8% of the electrical needs of Alberta

Olivier, Proposal Manager: *"Replacing petroleum coke with gas is a virtuous act: it reduces the CO<sub>2</sub> impact by 40%, as well as reducing undesirable substances such as sulfur, particulate matter or heavy metals. Mitsubishi turbines release combustion gas at 700°C. We collect it in our boilers to produce steam. And, in order to be at the top of the world's environmental standards, we've added selective catalytic converters to reduce nitrogen oxide emissions."* These two combined cycles will provide the Province of Alberta with 800 MW of electricity, which corresponds to 8% of its electricity needs, or the consumption of some 500 000 households.

As the world's third-largest supplier of heat recovery steam generators, John Cockerill has built hundreds of combined cycle boilers worldwide. It is currently designing them for Canada, Slovenia, South Korea and the USA.



## Using steam to desalinate seawater in the United Arab Emirates?

The After-Sales team of John Cockerill Energy operates all around the world to optimize and upgrade existing boilers: in Algeria, Chile, France, Indonesia, Turkmenistan, the UK, etc.

In 2019, it mainly carried out work on the boiler of the Fujairah Combined Cycles Station (United Arab Emirates), a station dedicated to desalination of seawater and the provision of drinking water. *"It's a first of its kind, says Habib proudly. We designed 4 heat recovery units and carried out the engineering work, supplied them, supervised their construction, inserted them at the outlet of the 4 existing boilers and ensured their correct start-up. Each can be considered as a mini-boiler, which produces a new low-pressure vapor by recovering the fumes lost to the exhaust chimney. Thanks to our intervention, the Sembcorp desalination station in the Emirates has seen its performance greatly enhanced."*



# Mobility at the Beijing Olympics without CO<sub>2</sub>

## Green hydrogen

In 2019, the State Energy Group selected John Cockerill to supply the world's largest hydrolyzer (stack of 1 500 Nm<sup>3</sup>/h) for the 2022 Beijing Winter Olympics. The aim is to supply a fleet of buses within the Olympic Village with green hydrogen. Hydrolyzers break down water into oxygen and hydrogen. Powered by green electricity, they guarantee a virtuous 'zero emission' process.

## The world's largest manufacturer of hydrolyzers

Roland, manager for the hydrogen activity: *"Our solutions for the production and distribution of hydrogen cover the entire value chain, from renewable energy source up to green hydrogen for applications as diverse as mobility, industry and the energy sector. All of our customers and partners aim for environmentally friendly solutions. This is the case for the Beijing Olympics, for Liège Airport, or for our applications for making methanol from green hydrogen."*

John Cockerill has a strong team in Belgium and France, with a large development budget. *"Together with various European partners, says Roland, we have built the test and simulation capabilities to create the solutions of tomorrow. In 2019, we also set up Cockerill Jingli Hydrogen, a joint venture with a Chinese industrial partner who is already well established in this market, and have inaugurated new production infrastructures. On balance, with a capacity of 30 MW sold in 2019, we have become the world's largest player. This position is reinforced by already having sold 11 stacks of 5 MW minimum, the largest dimensions in the world."*



### Did you say storage?

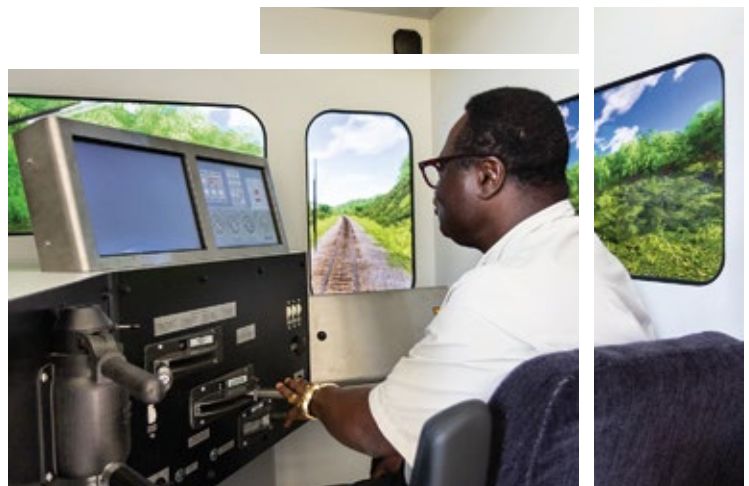
Producing hydrogen with a hydrolyzer powered by green energy is an excellent solution for the storage of renewable energy. The storage of energy is an area which John Cockerill has chosen to develop further. From 2018 onwards, it has been developing energy storage solutions based on various types of batteries, including flow batteries, through MiRIS<sup>®</sup>, Europe's largest industrial pilot plant, which is based at its Headquarters in Seraing, Belgium.



# Training train drivers without taking out the locomotives

## Trans-Gabon railway network

Setrag looks after the management of the Trans-Gabon rail network. The operator's ambition is to ensure optimal training for its train drivers. To ensure better safety. And cap energy consumption as well. That is best done by confronting them with the many potential problems. It's quite complicated to do this in real life. Hence the use of the simulators from John Cockerill.



## Simulation and virtual reality

Yannick, head of rail simulation at John Cockerill: *"We provided Setrag with a comprehensive Transurb® training system in 2019, based on simulation and virtual reality. Not only for the tasks related to the operation of trains, but also for learning how to cope with degraded conditions. Cases in which the driver is asked to leave his machine in order to intervene. Training is carried out at a reduced cost, without stress, creating a variety of situations. We have also delivered compact versions that can be used in different locations."*

Through its Transurb® brand, John Cockerill is a well-known player in railway training equipment via simulation, with references in Belgium, Denmark, Finland, France, Hungary, Morocco, and beyond: it will soon be equipping the rail network in the Sydney region of Australia.



# Faster and less water-intensive river mobility



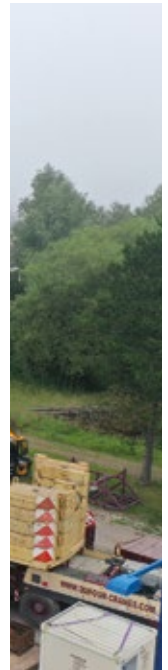
## Fontinettes Lock

The Navigable Waterways of France (VNF: Voies Navigables de France) are committed to ensuring efficient and environmentally-friendly river navigation. The Fontinettes lock is one of the largest locks in Northern Europe: 17 m deep, a drop of 13 m, 143 m long and 14 m wide. The VNF had already entrusted John Cockerill with the renovation of essential parts in 2015. Again demonstrating its confidence, in 2019, they entrusted it with the repair of the middle gate.

## Reduced water consumption

Nicolas, the Project Manager, takes us through this exceptional project: *“The middle gate has two panels of 135 tons each. Before carrying out this high-tech intervention, we started by modeling the entire lock in 3D. We then carried out the complete repair while ensuring all the of boilermaking, mechanics, asbestos removal, machining, painting, adjustment work, and finally the commissioning. In addition to this, there was also the simultaneous coordination of the various contractors needed for this 9-month project.”*

Thanks to this intervention, mobility is even gentler down the stream. *“From now on, says Nicolas proudly, a 50% water saving is achieved for every lock passage made, which represents no less than 8 000 m<sup>3</sup> of water. Everything went smoothly, and we were congratulated by the customer, who has since entrusted us with new projects throughout France.”*





# Protecting the maritime coast from acts of piracy

## Combat Boat

A South-East Asian country is facing piracy along its coast. To combat this threat, it has equipped its navy with a fleet of light and fast catamarans fitted with a cannon turret: a medium-caliber John Cockerill turret.



## 30 mm

Sandrine, Program Manager: *“Using a turret with a medium-caliber cannon is very different on land or on water. To meet this need expressed by our Asian partner, we decided to use the 30 mm variant of our modular turret, and to challenge our teams to integrate it on a catamaran. This resulted in a magnificent collaboration with the customer and shipowner's teams, and a first model was delivered in 2019. At the same time, we are working on a lightweight medium-caliber version for mass production.”*

Other units should follow. *“First of all, because our client is looking to equip a full fleet, adds Sandrine. Secondly, because this new combination of catamaran and turret will allow other nations to protect their coasts, rivers or estuaries.”*

## 10 years already

The acquiring country is no stranger to John Cockerill. It has been using Cockerill® CSE90 systems for more than ten years. Its satisfaction and confidence are such that, in 2019, it ordered CSE90 simulators to train its troops in the handling of these systems, and several Cockerill® 3105, modular turrets in their 105 mm configuration, which are to be installed on a tracked vehicle. A first.





# Minimizing the time between the statement of the need and the delivery of the equipment



In today's technological environment, the needs of modern armed forces are evolving at a very high rate. In addition to its ability to understand the specific needs of each of its clients, John Cockerill has earned a reputation in the market for its unique ability to minimize the time between the statement of the need and the delivery of the appropriate technological responses.

## Record of 27 turrets in one month

2019 is thus the year of a new record, that of the largest number of turrets assembled over a month. Sébastien, Production Manager: *"For several years now, we have been running a supply program of an exceptional scale. We completed the development and qualification stage in record time. At the same time, we developed a supply chain involving more than 150 suppliers capable of supplying some 7 000 parts per turret. Not to mention the critical mechanical parts, which are designed and made by our own teams. Since 2018, our assembly lines have found their cruising speed. At their maximum yield, they allowed us to reach the record production of 27 turrets in a single month."*

This program is entering the final stretch. Carrying this out to such a tight deadline is a real success, and is entirely due to the qualities of each of the players in the chain. This achievement is a perfect example of the ability of John Cockerill to design, qualify, produce, deliver and support large quantities of weapons systems that perfectly meet the current and future requirements of its clients, the regular armed forces.



# Storing the sun's energy to regulate the production of green energy

## Regulation of green energy

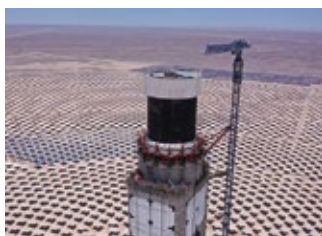
Luneng, a Chinese energy player, is developing an electricity production complex in Haixi (China) bringing together several renewable energy sources: photovoltaics, wind and thermal-solar power. The aim is to optimize their yield and better control their intermittency. John Cockerill is involved in this project.

### John Cockerill solar receiver

The thermal-solar power plant at this complex began operations in late summer 2019. Viviane, Project Manager: *“Our teams designed the solar receiver. A structure 40 meter high, which was hoisted to the top of a 150 meter tower. The field of solar mirrors that is located at the foot of this tower concentrates the sun's rays towards our receiver, which will heat melted salt to a very high temperatures (565°C). This allows water to be heated, which will then enter the steam supply that, ultimately, is necessary in order to generate electricity. The point of this melted salt is that it stays hot for dozen of hours. This makes it possible to decide when to produce electricity. Not just when the sun is shining, but when you really need it.”*

In addition to the solar receiver, the John Cockerill teams have also designed a remote-control system for the variations in the temperature. *“This software allows us to detect temperature variations in our exchangers, and make the necessary adjustments to ensure both the integrity of our equipment and the correct temperature of the molten salt. As the icing on the cake, we are able to control this from our headquarters in Seraing (Belgium). By combining this stored energy with the energy generated directly by photovoltaic and wind, we can better regulate green energy in order to be able to release it at the right time.”*

John Cockerill is currently equipping other molten salt solar-thermal power plants in Chile and Dubai.



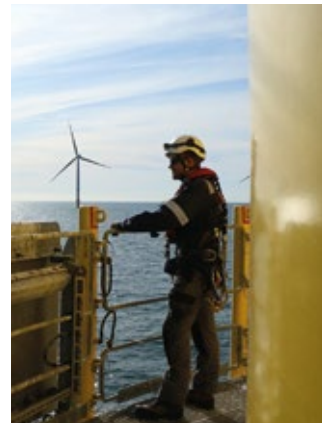
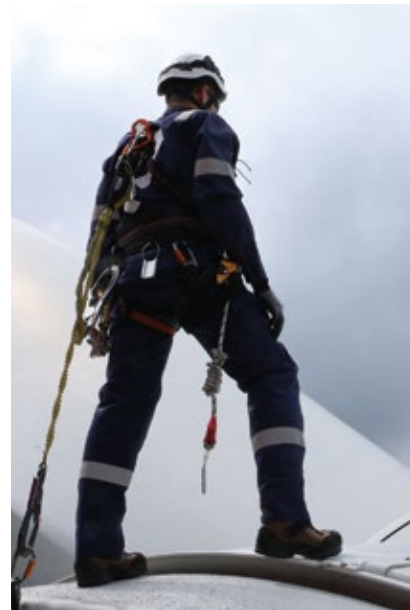


# Ensuring the optimum performance of offshore wind turbines

Belgium is banking on wind energy in its energy transition. Wind energy accounts for 10% of its electricity production, and almost half of this wind power is generated in the North Sea, where there is more wind, and where it is possible to install very large and powerful wind turbines. Belgium ranks 4<sup>th</sup> in offshore wind power in Europe. John Cockerill is positioning itself as a partner of choice to ensure the maintenance of these offshore wind farms and to guarantee their availability and best possible performance.

## 40% of Belgian offshore wind power

Marie-Anne, Project Manager: *“We have been ensuring the maintenance of offshore wind turbines in Belgium since 2011. These wind turbines are impressive: more than 100 m high and with blades that are 75 m long on the larger units. In 2019, John Cockerill signed a maintenance contract for a new park in the North Sea. In all, we are currently ensuring the correct operation of more than 100 wind turbines, or 40% of the Belgian offshore wind power. A considerable investment was required in technical and safety training. Not surprising given that the transport of the ‘wind turbines’ is carried out by boat and helicopter. We also operate onshore, on request, in Belgium, but also in the Netherlands or the United Kingdom.”*







# Channeling the power of water

## Hydraulic force

The Meuse, an important river transport route between France and the Port of Antwerp, is a capricious river. Downstream of Liège (Belgium), its flow frequently varies from 50 to 2 000 m<sup>3</sup>/s, with a capacity of 3 000 m<sup>3</sup>/s in the case of a centennial flood. The Monsin Island Dam Bridge (Pont-barrage de l'Île Monsin) was built by teams from John Cockerill in 1928. Due to its variable flow, it allows the maintenance of a navigable level in the Meuse and the Albert Canal between Ivoz-Ramet and Genk (Belgium), a stretch of more than 60 km. In parallel to the dam, EDF Luminus also uses part of the flow to produce hydroelectricity. The floodgates had to be replaced to ensure the safety of the river, both upstream (the city of Liège) and downstream (the city of Visé and the Netherlands), as well as access to the oil port of Wandre, a strategic reserve of the state. The Walloon authorities have once again chosen the teams of John Cockerill for the implementation of this huge project.

## Impressive valves

Fabian, Project Manager: *"This project is spread over three low-water periods (April to October) in order to be protected from winter floods and to reduce the impact on the water flow. Two valves are being replaced at each low water: we replaced two of them in 2019, as well as their maneuvering mechanisms. Each weighs 145 tons and is 27 meters long. The entire intervention is supported by John Cockerill: the gearboxes and electric panels were manufactured in our workshops and, on site, we combined the mechanical, electrical and automation expertise of our different teams. A remarkable inter-entity synergy! The effective coordination with the civil engineering teams has allowed maximum safety."*

This whole operation will ultimately ensure the safety of the river, and will continue to provide green electricity to 14 000 households.



Entrepreneurial Group

# Innovation is in the DNA of John Cockerill



# Awards with a growing prestige factor

The 2019 John Cockerill Awards have once again highlighted the culture of innovation at John Cockerill. *“This 5<sup>th</sup> edition brought together 66 projects of very high quality. Participation has increased by 30%, and the quality of the submissions is always higher, says Xavier, the Project Manager. This in-house competition showcases the substance behind the John Cockerill name: the collective intelligence of its teams.”*

## The 2019 winners by category



### Commercial developments:

- Development of a pre-assembly solution to improve the competitiveness of our recovery boilers in the North American market (the 'BMC' project).
- Development of a containerized water treatment solution for electricity generation in Cape Verde (The 'Plug and Play' project).

### Technology:

- The installation of a peat activation process in Finland: a world first in the growing activated carbon market (the 'VAPO' project).
- Participation in a European research project on the production of decarbonized steel through electrolysis (the 'Siderwin' project).

### Health, Safety and the Environment:

- Modernization of a treatment workshop for aviation tubes by making the human factor central to the design of the facility (the 'Specitube' project).
- Refurbishment and re-commissioning of the intermediate gate of the Fontinettes lock, which allowed a significant reduction of the volumes of water needed to allow barges to pass and the reinforcement of the entire metal structure (the 'Fontinettes' project).

### Continuous improvement:

- Strengthening the attractiveness of John Cockerill through the development of teleworking and the implementation of a variable compensation customization system (the 'FlexiPay' project).
- Collective improvement of the operational performance of a production facility, for better accountability and more efficient manufacturing (the 'Aubange Next Generation' project).

### The Public Award:

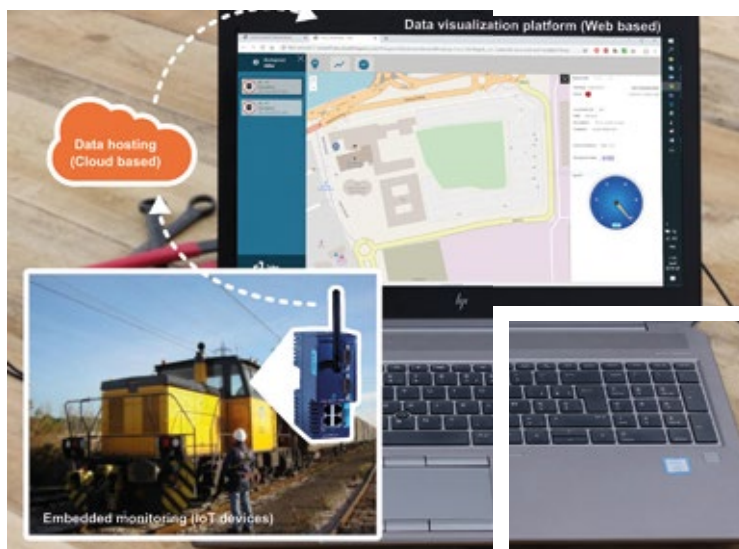
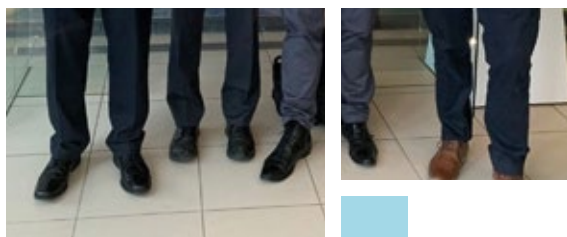
The public Award was given to the Safety Culture in the Taloja Workshops (India).

# Open innovation: to be open in order to be stronger together

For the Group, the year 2019 was marked by the Open Innovation. Our culture of innovation opened up to new collaborations, and John Cockerill has strengthened its ties with many partners.

Together with the C.R.M. of Liège, John Cockerill worked on the stealth of turrets, and also on the optimization of surface materials and the surface treatment of molten salt solar receivers. Developments are being launched with ULiège and CEBEDEAU to consider the future treatment of municipal effluents or to adapt the treatment of cooling systems to the constraints of the biocide directive. In France, in collaboration with LASSALLE-Beauvais and UTC, John Cockerill developed a pilot project as part of Cometha. The Group is also involved in professional organizations: in particular, Transurb® and Agueris® have presented their simulation solutions to the BiR&D (Belgian industrial Research and Development).

Jean, Group Chief Technology Officer, adds: *“In terms of intellectual property, each sector has implemented a dynamic and strategic management of its patent portfolio. This optimization has led to the filing of 12 new patents in 2019.”*



## ‘Digital Industry 4.0’: data catalyst for operational excellence

John Cockerill intends to fully integrate digitalization in order to ensure operational excellence. In order to do this, it launched ‘Digital Industry 4.0’, a project that aims to diversify and adjust the offer of products and services, but also to propose new, innovative models.

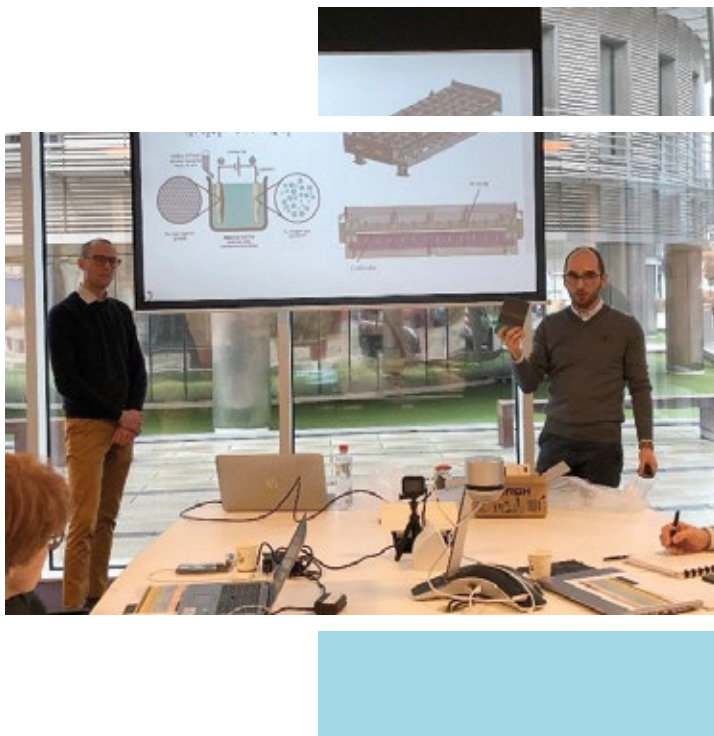
‘Light Houses Projects’ have been deployed in a 4.0 vision, thanks to a Data Hub, a platform that facilitates their digital development. The information for each project is centralized.

*“This Hub is data-driven. The aim is to improve*

*our equipment and processes, but also to develop new services, says Yannick, the project coordinator. For example, the maintenance of an hydrolyzer is facilitated because part of the operation is automated. At the level of a multiple hearth furnace, sensors are installed to analyze temperature variations. Another example: locomotives are equipped to be geo-located, in order to be able to remotely detect a possible problem and to intervene directly.”* All the data from MiRIS® (our industrial pilot project for the production/storage of energy) is also transmitted through the Data Hub: the energy produced by the station and the consumption of the site are monitored. Other Light Houses Projects connected to the Data Hub are Acid Regenerators (ARP) and boilers (Once Through Boiler). These sustainable solutions generate profitable growth, and allow John Cockerill to stand out from its competitors.

# Solutions for a sustainable industry

Among the energy transition projects of John Cockerill, two CO<sub>2</sub> reduction projects are attracting attention. They are being carried out in collaboration with major partners.



## Siderwin: production of iron without CO<sub>2</sub>

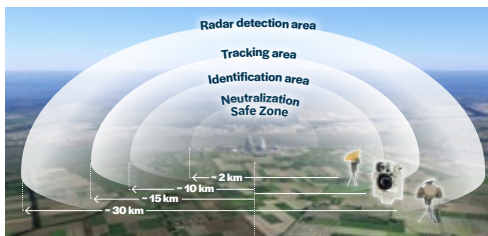
Alongside eleven partners, including ArcelorMittal and EDF, John Cockerill is involved in the development of steel decarbonized production through electrolytic extraction. This is a European project. John Cockerill's contribution is to transform laboratory technology into an industrial process: Siderwin electrifies iron production from renewable energy, with the goal of eliminating greenhouse gas emissions. *"We have analyzed an innovative electrochemical process for converting iron oxide into iron plates. This promising technology is emerging as a sustainable solution for the recycling of industrial waste, which can then be used as raw materials in this process"*, explains Cédric, Project Manager. By participating in this evolution, John Cockerill acquires new expertise and enriches its portfolio of new equipment. This solution also offers prospects for treating the red sludge generated during aluminium production.

## '3D' project: capturing and storing industrial CO<sub>2</sub>

John Cockerill is participating in the '3D' project, with European financial support and partners such as ArcelorMittal and Total. This project, led by the IFP New Energy Institute, aims to capture the CO<sub>2</sub> emitted by blast furnaces using an amine absorption process. The '3D' project aims to validate technical solutions that can be replicated on an industrial scale, and then deploy this CO<sub>2</sub> capture-storage technology around the world. The specific contribution of John Cockerill is to study solutions for steam generation starting from the recovered lost heat, and to assess the investment and operating costs.

# From the technology to the (new) markets

The technological developments in 2019 have opened up new market prospects.



## New security solutions thanks to Fortress

In 2019, John Cockerill deployed a range of solutions for securing sensitive industrial sites, based on defense technologies adapted to civilian use. It thereby joined forces with Fortress Intl. to create John Cockerill Fortress. André, CEO of John Cockerill Fortress: *“These new technologies detect drones, identify them and, if necessary, neutralize them. We also offer various solutions for perimeter surveillance, intrusion detection, identification and access control systems and surveillance drones.”*

John Cockerill Fortress offers concrete solutions to fight against insecurity: drawing on its exclusive technological partnerships and its integrator and project management skills, it provides, operates and maintains operational surveillance solutions in restrictive environments.

## Exploring new business models

Originally a supplier of services and equipment, John Cockerill is now also positioning itself as an investor partner. In 2019, a reflection was carried out with the aim of co-financing. Anne-Françoise, Group Chief Strategy Officer: *“Thanks to this structure, John Cockerill could invest alongside its clients to facilitate the rapid adoption of innovative solutions, from the creation of the project to the first phases of operation.”*

The first concrete result of this approach: in 2019, John Cockerill signed a Memorandum of Understanding for the supply of hydrogen-based mobility solutions for the 2022 Winter Olympics in Beijing. Listening skills, thinking differently, proximity and innovation are the key factors for the success of this project. They are an integral part of this strategy.

## 2<sup>nd</sup> generation CPWS: development of a multi-role turret

Technological development never stops at John Cockerill. The CPWS Gen.2 (Cockerill Protected Weapon Station) is a perfect example of an innovative concept. It is a multi-role turret: multi-mission and multi-configuration. *“The CPWS Gen.2 is innovative: better protected, lighter and more competitive than the Gen.1, explains Thierry, President of John Cockerill Defense. This turret retains the advantages of the first Cockerill Protected Weapon Station, such as the protection of crews during reloading of the main weapon, and benefits from numerous improvements, in terms of performance, operability, diagnostics or, once again, maintainability. Among other examples, we have equipped it with a 100% digital video architecture and a configurable hatch that is unique in the world: it allows the adoption of four different configurations according to the mission. The CPWS Gen.2 is very versatile. It can integrate different primary weapons, depending on the needs of the client organization.”*

This new turret model responds to the needs of customers in terms of flexibility and mobility. It is the fruit of an international multi-site development: the cutting of the plates in Distroff (France), manufacture of the first hull in Aubange (Belgium) and assembly in Loncin (Belgium).



# Safety, always a **priority**

## Safety **culture**

At the 2019 John Cockerill Awards, the Audience Award was given to the workshop in Taloja (India) for its 2 300 days without an accident. Even more than performance, the employees of John Cockerill rewarded this culture of safety with their vote. Vivek, General Manager, recalls that these results owe nothing to chance. It's an ongoing effort: *"We have anchored security in our company culture. We have developed a proactive approach around three axes: the involvement of workers, the commitment of the management and the importance given to safety at all levels of the organization."*

And Jean-Luc Maurange, CEO of John Cockerill, adds: *"Nothing is more important than a human life. Our first goal is that all of our employees and sub-contractors return home in good health at the end of each working day. As a company, we do everything in our power to achieve this goal."*



## The best results since 2014

In general, the health and safety performance improved considerably in 2019: John Cockerill Industry exceeded 1 500 accident-free days in Belgium; the machining teams of Distroff (France) have set a new record of 4 000 days without an accident involving a stoppage; John Cockerill Services has reached 3 500 days at MCF (France) and the 1 000-day mark has been crossed at Services Liège (Belgium), etc. *"This result is due to the professional, committed and responsible behavior of everyone, as well as the dialog between the teams leading to ever safer environments. It is a true corporate culture that not only ensures optimal health and safety conditions, but also our operational excellence and the quality of our interventions"*, underlines Gérard, the EHS Group Director.

The figures speak for themselves: group-wide, the accident frequency rate (2.28) and the accident severity rate (0.092) have significantly decreased in 2019.

**2.28**  
frequency rate

**0.092**  
severity rate

# Attractiveness



## Finalist in the **Belgian Company of the Year award**

John Cockerill was a finalist for the Belgian Company of the Year award in 2019. From its participation in the 24<sup>th</sup> edition of this competition, the Group has derived both great pride and the recognition of the work done every day by all its teams around the world. It has effectively highlighted the diversity of activities and the mission that we have set ourselves: to meet the needs of our time.



## Changes in the **workforce**

John Cockerill triggers a great deal of opportunities for its talents. As of December 31, 2019, the Group had 6 315 employees on five continents, 5 741 of which with a John Cockerill employment contract. Their diversity is what gives the Group its collective strength and sheer substance: 48 nationalities, a proportion equally divided between workers (37%), employees and technicians (33%), and managers (29%). 46% of them are under the age of 40, and 13% are women.







## A talent for attracting and retaining talent

The diversity of its activities and the international exposure of its markets allow John Cockerill to offer enriching and formative experiences to its talents. Each mission within the Group is an opportunity to discover a product, a technology, a process, or simply new colleagues, all in the family environment that is unique to John Cockerill.

John Cockerill launched its 'leadership@johncockerill' program in 2019. The objective? To adapt our management practices to the needs of today's talents and to align them with our entrepreneurial values. At the end of the 1<sup>st</sup> phase of the program, the 230 participants identified their strengths and chose their personal development paths, along with action plans. Joint training programs will complete this individual journey in 2020. "This support gives confidence to our talents and encourages them to seize new opportunities in line with their aspirations", adds Gilles, the HR Business Partner for the Defense sector.

As an employer, John Cockerill also strives to create the right conditions for the development and performance of its employees. Two new initiatives in this direction were launched in 2019: one is the possibility of teleworking on a regular basis, the other is the possibility of customizing part of the salary package according to the needs of each person.

"The deployment of teleworking means developing both autonomy and flexibility: two essential ingredients for both personal balance and collective performance", says Brigitte, Chief Human Resources and Communication Officer.

With regard to the salary package, the implementation of Flexible Pay in Belgium means that "each executive can now arrange his/her variable remuneration according to his/her aspirations and individual situation: bicycles, computer equipment or days off were particularly popular in this first edition", continues Pierre, Talent Acquisition Manager.

All of these initiatives meet the needs of the employees, and enhance the reputation and attractiveness of John Cockerill.

## Communication that moves with the times

At the same time as the Group was reconnecting with its roots by re-appropriating the name of its founder, a wind of digitization was blowing through all its communication channels: this is the case for the website, which, in a fluid, clear, modern and intuitive way, shows how John Cockerill responds to the needs of our time. This is also the case with the social networks, through which the Group interacts daily and unites a community that is growing from day to day.

The Group's internal communication has also become digital. The annual mobilization meeting around the issues of the Group has thereby changed its format: it's now taken the form of a television program broadcast to all employees. A way in which to share the challenges with transparency and modernity. This new formula has made it possible to broaden the audience of this event without generating CO<sub>2</sub> through traveling.

As a result, more recourse was taken to video-conferencing and internal webinars were developed, thereby unknowingly experimenting with the practices that the Covid-19 crisis would bring into widespread use a few weeks later. This interactive and immediate communication tool stimulates and engages all the employees, wherever they are in the world. It reinforces the closeness and the dialog between top management and all the employees.



# Adjusted governance



## The Board of Directors

From left to right: Maurice Smer, Louis Smal, Diego Aquilina, Gérard Longuet, Jean-Luc Maurange, Yves Honhon, Bernard Serin (Chairman), Paul Thonon, Nicolas Serin (Vice-Chairman) & Jean-Pol Poncelet.



John Cockerill is overseen by a Board of Directors with a long-term commitment to the Group's industrial project. This is surrounded by the governance bodies necessary for the sound management of the company, whether in terms of strategy, control, risks or operations. These forums of coordination ensure the Group's interconnection and the cohesion of the actions undertaken across the board. Their respective responsibilities are clearly defined.

In the 4<sup>th</sup> quarter of 2019, the Managing Director and the Chairman of the Board of Directors started thinking about re-adjusting the organization and reshuffling the management team, in order to adapt it to recent developments in the Group and to prepare for the future. The societal and economic upheavals following the Covid-19 pandemic in the first half of 2020 reinforced their conviction regarding the merits of this development. The Group's governance bodies were therefore revised on June 1, 2020, as described opposite.

## The Board of Directors

Brigitte Coppens has been mandated by the Chairman of the Board of Directors to develop and structure an ambitious and sustainable development policy at Group level. To fulfill this mission and in order to interact effectively with the Board of Directors, Brigitte Coppens will also provide the general secretariat for the Board of Directors. At the same time, she will retain her position as Chief Human Resources & Communication Officer.

## Comex

Matthieu Jehl joined John Cockerill on June 1, 2020 as President of the Energy sector. As such, he joined the Group Executive Committee (Comex). He replaces Jean-Michel Gheeraerds at the head of John Cockerill Energy. He joins the Commercial and Legal Department and remains a member of the Executive Committee.

## An expanded Comex

A new and enlarged Comex has been set up to support the Executive Committee in its work. It consists of 11 managers representing the different sensitivities of the Group, in terms of sectors, trades, expertise or culture.

All the details of the Group's governance bodies can be found on: [www.johncockerill.com](http://www.johncockerill.com)

## The Executive Committee

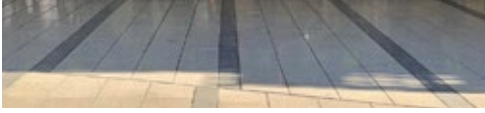
From left to right and from top to bottom: Jean-Luc Maurange, Yves Honhon, Jean Jouet, Brigitte Coppens, João Felix Da Silva, Patrick Paramore, Franck Pasqualini, Thierry Renaudin, Jean-Michel Gheeraerds, Jean Gourp & Matthieu Jehl. In charge of the Comex animation: Anne-Françoise Laime.

A committed Group

# Responsible and committed to societal issues



Through the solutions it makes available to the markets, John Cockerill strives to develop green mobility, to promote renewable energy, to preserve natural resources, to produce in a sustainable manner and to protect against threats. In doing so, it aims to achieve several of the sustainable development goals of the UN. And by fulfilling its mission, John Cockerill also intends to be a responsible player and to promote within its teams the adoption of behavior that is in line with this philosophy. In 2019, the Group has begun to structure an CSR (Corporate and Social Responsibility) approach to amplify the impact of the many local initiatives already in place, whether in environmental, social or economic matters.



## Promoting **sustainable mobility**

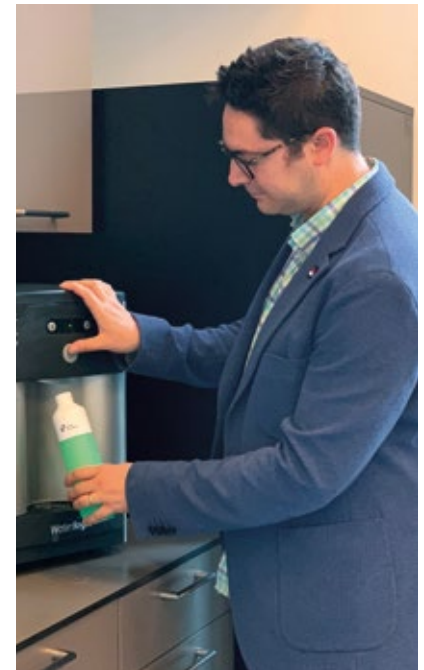
Within the Group's headquarters, which has the highest concentration of staff, soft mobility is the subject of a structured deployment plan: a fleet of cars that is becoming greener, and campaigns to encourage the use of public transport, etc. The use of bicycles has been mainly promoted in 2019: *"Various campaigns have been implemented, explains Pascal, HR Legal and Mobility Manager. Through various incentives, our employees are encouraged to use bicycles to travel around. We have set up a secure and equipped bicycle room, where lockers and charging stations are available to the cyclists. The material is provided free of charge. Financial compensation is also granted per kilometer traveled by bicycle. This dynamic is driven by a small group of ambassadors."*

The 'FlexiPay' plan put in place in 2019 includes this 'soft mobility' dimension by offering the possibility of acquiring a bike. Carpooling has also been encouraged, with the provision of an application and specific parking spaces. The first electric charging stations were also installed in the parking lot on the site. In one year, the number of users of the platform who are dedicated to soft mobility has increased from 3 to 50. The Public Service of Wallonia (Belgium) has recognized this policy through an award. John Cockerill has also received the 'All Active Bikes' label from the Walloon Union of Enterprises.

## Reducing the **environmental impact** of the sites

Single-use consumables have been limited at the Loncin site (Belgium), and a pilot operation was conducted with the site's 460 regular users in 2019. The reduction of the number of water cups (113 400 cups were used in 2018) has made it possible to avoid the production of the equivalent of 260 kg of waste. In order to make this measure available at all the Group's sites in 2020, John Cockerill has presented all its employees world-wide with a drinking flask in 2019.

In addition, a series of pilot actions have been deployed in 2019 to reduce the energy consumption related to the lighting of buildings. Several of John Cockerill's entities have switched to LED lighting. This is the case for John Cockerill Energy and John Cockerill Industry in the United States, and for John Cockerill Services in Chazey (France).



# Medical camps in India

For many years now, John Cockerill has invested in the quality of life of the communities in which the Group's entities are located. This is particularly the case in India, where the Group is developing health, education and sustainable development programs. John Cockerill organized 297 medical camps there in 2019. Nearly 8 100 people, including 4 503 women, have received access to ophthalmology, gynecology, dental services and physiotherapy, and John Cockerill has also provided access to basic medical care for several communities in many villages. Good hygiene practices are instilled in schools and the community at large. And changes in behavior have certainly been observed. The program in India has also enabled the distribution of hygiene kits, of soap in the schools and children's centers, and clothing and toys.

In Mumbai, John Cockerill also published an educational map of the region in order to raise awareness of nature conservation. 18 natural sites have been identified there. The map, which has been produced in three languages, has been distributed in the schools of Mumbai.



## Openness to **young people**

The John Cockerill Campus, a multidisciplinary training center of the Group based in Commercy (France), hosted various events in 2019 that were designed to introduce young people to the careers available within the Group.

More than 170 students discovered the defense business, for example. The initiative, called 'They Move for Defense', has promoted this business to young girls. Carole, the Campus Director, says: *"The participants were accompanied by 21 mentors, all women who are active in the defense sector: engineers, an aspiring member of the Navy, an Air Force Captain, an information system manager specializing in cyber-security, and Florence, the head of industrial scheduling at John Cockerill Defense. The girls participated in workshops showcasing the careers offered by the Air Force, the National Navy and the Army. They were also able to discover the simulation activities, as well as the profession of industrial scheduling for the production of defense equipment in the workshops."*

## Life balance through teleworking

To take even better care of its talents, John Cockerill has developed a policy of structural teleworking in Belgium and France. Employees whose job allows it can now work from home, for up to two days a week. This new feature at John Cockerill is an additional asset in attracting new talent: teleworking truly meets the aspirations of more and more workers, notably by improving the balance between their private and professional lives. It also enhances efficiency at work, in particular for all those activities that require calm and concentration.



# The John Cockerill Foundation

As a responsible Group inspired by the world, John Cockerill deploys its sponsorship policy through the John Cockerill Foundation. Created in 2017, this is based on three axes:

- The preservation and transmission of the legacy of John Cockerill, whether material, immaterial or memorial
- Support for culture and industrial heritage
- Support for social and humanitarian aid

The John Cockerill Foundation implements its actions through partnerships anywhere in the world, be it in kind, in skills, or through services, or financially. In order to successfully carry these good works, it encourages the Group's employees to become involved by participating in projects in various forms (mentoring, ambassador, volunteering, etc.).

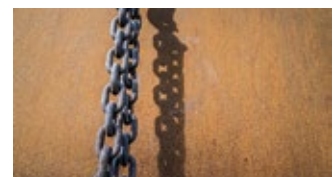
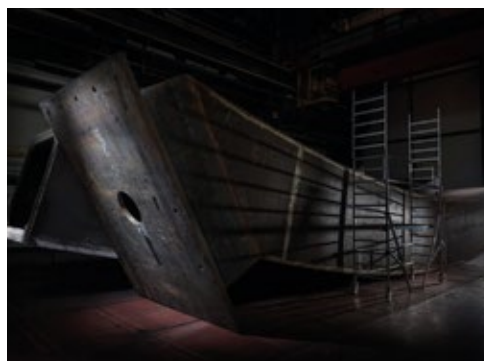
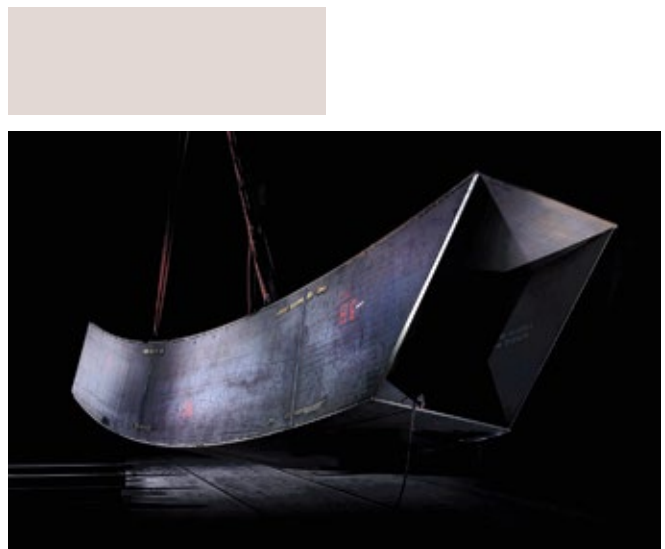
Two projects in particular have marked the year 2019 for the John Cockerill Foundation.

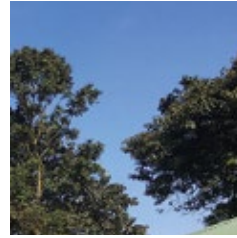
## L'Arc Majeur, When Art Challenges Technology

L'Arc Majeur, conceived by Bernar Venet in 1984, became a reality in 2019 thanks to the audacity, expertise and tenacity of the John Cockerill Group. The work was installed near the A4 motorway (Rochefort, Belgium) at the end of October. It was manufactured in the workshops of the Welding Expertise Center (now John Cockerill Welding) in Seraing (Belgium), and consists of two monumental pieces, the main part of which rises to 60 meters. These exceptional dimensions make it the tallest CorTen steel sculpture in the world.

But it's more than just a work of art, L'Arc Majeur is above all a real technical, technological and human feat: it has taken John Cockerill and its partners almost 20 000 hours to complete this project. The adventure of L'Arc Majeur is currently one of the largest collective public-private partnership operations ever carried out in Belgium.

As a real showcase of Belgian know-how, its implementation and the major media campaign it has benefited from are fully in line with the John Cockerill Foundation's raison d'être of supporting culture and industrial heritage.





## The Nest Home, technology as a response to the needs of the community

The John Cockerill Foundation has supported The Nest Home in Kenya, a children's shelter in Limuru. The center supports about 100 children whose parents have died or have been imprisoned. The association sets up support processes and social and economic reintegration processes, and is recognized at an international level.

The John Cockerill Foundation intervened in 2019 to enable the association to become self-sufficient in electricity and water. Thanks to the John Cockerill teams in Kenya and O·HUB, a start-up arising from the Group's Innovation Lab, a solution has been put in place to produce and store energy, as well as a water filtration solution. In practical terms, the energy solution is a system that includes the construction of a photo-voltaic carport composed of 62 panels, and the installation of a container equipped with batteries that are connected to the panels. With regard to water, a system for the filtration of gray water and a water purification system has been set up for the community via the Lifestraw® system.

These facilities provide the 150 residents with a vital access to resources that undeniably improve their living environment. Living in decent conditions helps them to overcome the traumatic burden on a daily basis, and facilitates their social integration.



Financial performance 2019

# 2019: a year that builds on the momentum of 2018



Despite a more difficult year for some activity sectors, the 2019 fiscal year came to a satisfactory end.

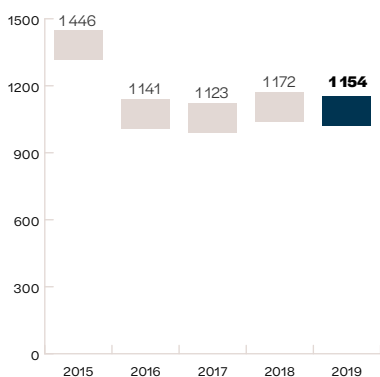


In thousand €	2015	2016	2017	2018	2019
Shareholders' equity	192 256	282 369	262 671	131 144	103 232
Cash flow	267 832	268 741	96 254	114 625	67 073
Order entries	1 446 225	1 140 751	1 123 056	1 171 521	1 154 278
Turnover	1 317 439	1 227 119	933 665	1 296 897	1 259 699
EBITDa	127 940	130 415	84 151	107 783	81 413

The data that has been presented since 2015 has been that of the Consortium, consisting of all sectors of activity of the Group and its real estate activity. Given the percentage of the stake held (directly or indirectly) by the Consortium in each of the subsidiaries included in the consolidation scope, the majority of the Consortium's companies are consolidated by the global integration method.

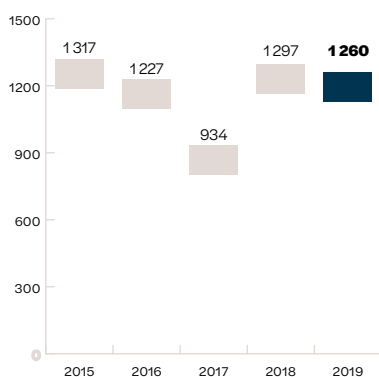
This data is published in accordance with the International Financial Reporting Standards (IFRS). The application of these standards guarantees a homogeneous consolidation of the Group's accounts throughout its scope. It also allows the readability and international understanding of its performance. All the financial data is available in the Group's financial report.

### Order entries (EUR Mios)



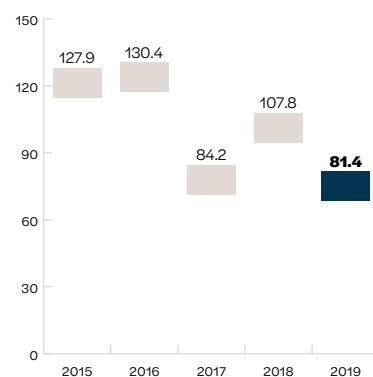
Order entries for 2019 amount to 1.154 billion Euros, which is in line with the order entries booked since 2016.

### Turnover (EUR Mios)



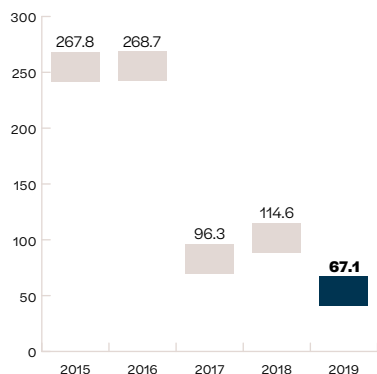
The 2019 turnover represents the third best performance of the Group.

### EBITDa (EUR Mios)



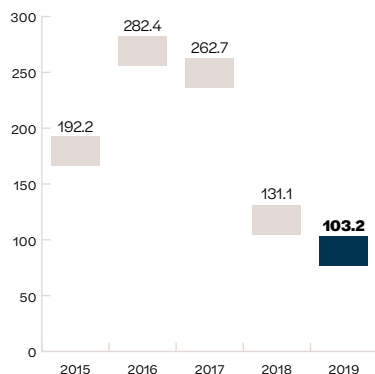
Although down from the previous year, the EBITDa generated in 2019 is solid, and amounts to 6.4% of the turnover figure.

### Cash flow (EUR Mios)



The strong output of the Defense sector influenced the evolution of the cash flow in 2019.

### Shareholders' equity (EUR Mios)



At the end of 2019, consolidated shareholders' equity amounted to 103 million Euros, which is down from 2018.

### Order entries

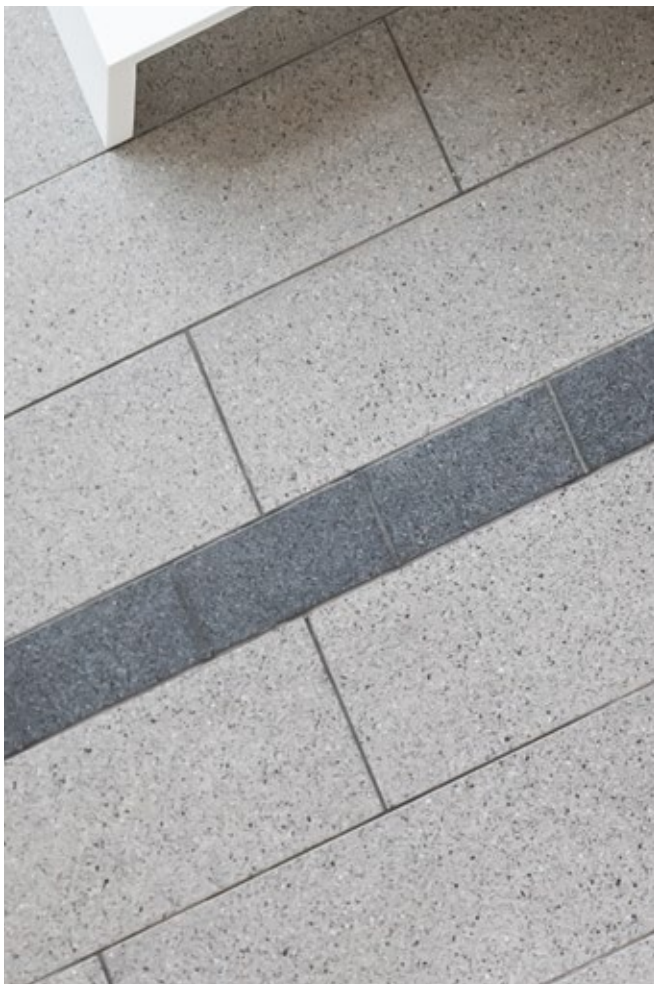
**1.154**  
billion

### Turnover

**1.260**  
billion

### EBITDa

**81.4**  
million





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Our activity report online:  
[2019.johncockerill.com](http://2019.johncockerill.com)

*The Communication Department thanks all those who contributed, to a greater or lesser extent, to the making of this activity report.*

*Ce rapport d'activités est également disponible en français sur demande à [communication@johncockerill.com](mailto:communication@johncockerill.com)*

*The Group also publishes a financial report containing all the financial data in IFRS format. This financial report is available in French and English on request at [finance@johncockerill.com](mailto:finance@johncockerill.com)*

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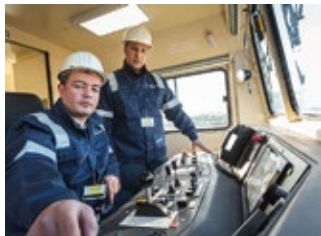
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The John Cockerill Group develops large scale technological solutions to meet the needs of our time: preserving natural resources, contributing to greener mobility, producing sustainably, fighting against insecurity and facilitating access to renewable energy.

Its offering to enterprises, States and communities comes in the form of services and associated equipment for the energy, defense, industry, environment, transport and infrastructure sectors.

Driven since 1817 by the entrepreneurial spirit and thirst for innovation of their founder, the 6 000-strong workforce of the Group enabled it to achieve turnover in 2019 of 1.26 billion Euros in 22 countries across 5 continents.