Committed to a low-carbon and safer future

Purpose report 2021

John Cockerill

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Table of contents

Word from the Board

Committed to a low-carbon and safer future

The 2021 financial year shows a very respectable economic performance, in a global economic context that had been shaken by the Covid-19 pandemic: revenue close to one billion Euros (947.5 million) and operating profit (EBITDA) of 54.1 million Euros. These good results for 2021 stem from the strategic choices made in 2017. In that year, we decided to develop our technology portfolio to better align it with the changing needs of our time. What we have implemented in 2021 confirms that it is now possible to reconcile economic sustainability with our ambitions for a decarbonized and more secure future.

Technologies dedicated to low-carbon energies occupy a prominent place among the major advances of 2021. With regard to green hydrogen, we are confirming our position as the world leader in the manufacture of large-capacity electrolyzers, with a 33% share of the world market. We have also launched the construction of a gigafactory in France, to serve the European market. Another factory will follow in India, in partnership with Greenko, the Indian leader in renewable energies. We have outstanding prospects in the renewable energy markets. Focused on green hydrogen, solar and integrated solutions, they should represent a quarter of our turnover by 2025.

The more traditional activities of John Cockerill have not been left behind: after a very quiet start to the year, significant orders have been received, for heat or surface treatment lines, steel-making lines, recovery boilers or specific equipment. The advanced design of these industrial facilities now includes the optimization of their overall environmental footprint, whether in terms of their energy efficiency, their CO_2 emissions, or the treatment of their liquid, solid or gaseous effluents.

Processes dedicated to wastewater treatment and waste recovery are also on the rise, with the development of new applications. Following Medix® dedicated to the treatment of hospital effluents, we launched BeFlow® dedicated to the 100% biological purification of water.

In Africa, we have made great strides in the Ivory Coast this year, where we are taking charge of vast infrastructure projects: motorway interchanges, bridges, drinking water supply, water treatment plants, etc.

In the Defense field, our teams delivered the last turret-gun system of the AB contract in 2021. The training and maintenance element of the AB contract came into force with, in particular, services on the Commercy (France) site which are progressing to the entire satisfaction of the clients. The flawless execution of this major program is a technological, logistical, human and financial success. And in addition, our technological offering is ever more diversified: the Cockerill® i-X light rapid interception vehicle, the Tank Boat®, the Agueris® weapons systems simulators and Fortress® technologies for protecting sensitive sites and areas.

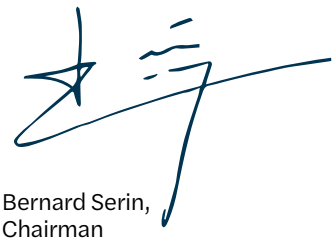
Re-inventing ourselves in order to perform, innovate and play our part

Innovation occupies a special place in the John Cockerill DNA. In 2021, 60% of our innovation projects were focused on reducing the carbon footprint of industries, through the storage of CO_2, its transformation into synthetic fuel and, of course, the reduction of CO_2 emissions. The contribution of our experts is also decisive in research partnerships such as Siderwin, dedicated to the production of zero carbon steel, HECO2 which is dedicated to de-fossilization and carbon capture and Columbus which aims to decarbonize the production of lime. Our spirit of innovation is also exemplified by Industrya, our investment funds which has concluded its first investments in three technological start-ups.

By reinventing itself, John Cockerill is also setting out to further increase its contribution to society, another cornerstone of its DNA. In 2021, we structured our ESG approach and measured our first non-financial indicators. Beyond the positive environmental impact of our business solutions, we have also shored up our work in the Community, whether through the John Cockerill Foundation or through the CSR team in India.

To secure our future, it is first and foremost necessary to have committed talents within our ranks. We intensified our training programs in 2021, particularly with regard to leadership, and expanded our operational teams by bringing in diversified profiles. We have gauged the attractiveness of the Group through our ability to attract experienced managers, as well as through the sustainable commitment level of our employees, which was measured at 79% in our bi-annual opinion survey.

The year 2021 also enabled us to strengthen our financial situation with in particular a return to a comfortable level of available cashflow, an essential condition for continuing our developments and increasing our impact. We are entering 2022 with a technological portfolio that is perfectly suited to the needs of the post-Covid world and with a sustained level of order intake. Our outlook is positive, as is our desire to contribute to a safer and decarbonized future. Twenty years after regaining its autonomy, our Group is poised to write a new page in its history, and to assert itself as one undisputed champion in the decarbonization of energy, in industry and mobility, while strengthening the security of states and sensitive sites.



Bernard Serin,
Chairman

Jean-Luc Maurange,
Managing Director

Sustainable journey

Since its privatization in 2002, John Cockerill has regularly incorporated social, societal and environmental concerns into its decisions and activities. This natural dynamic was accelerated in mid-2020, when the Board of directors decided to further measure its societal and environmental contribution and improve its impact. The aim was to develop a structured approach, define a roadmap and related objectives, and report transparently on these non-financial indicators. Where are we now?

ESG roadmap

In 2021, the economic context related to the Covid-19 pandemic required significant resources to be mobilized to preserve the company's interests in the short term. To avoid weakening a highly stretched organization, the initiative was continued, but at a slightly slower pace than expected.

ESG is an international acronym for the **environmental, social and governance** criteria that generally constitute the three pillars of non-financial performance.

The environmental criterion notably takes waste management, the reduction of greenhouse gas emissions and the prevention of environmental risks into account. The social criterion addresses accident prevention, staff training, respect for employee rights, social dialog, etc. And the governance criterion pays attention to the independence of the Board of directors, the management structure and the transparency of the management bodies.

John Cockerill has chosen to structure its roadmap according to this breakdown. It is structured around five strategic pillars, each accompanied by several commitments. The issues they address are in line with the Sustainable Development Goals of the United Nations.

To date, all the commitments are being deployed. All are not yet accompanied by specific indicators and objectives for the 2030 and 2050 deadlines. Given the diversity of the Group's activities and locations, this cross-functional methodological work is still in progress. It relies on an ESG project team, which itself coordinates work groups and external advisors. The objective is to deliver all the components of a non-financial report as quickly as possible. A Sustainable Committee will be set up in 2022 to orchestrate the process at Group level. It will report directly to the Board.

The non-financial indicators measured and available to date are published in the pages of this report, with, for the environmental dimension, a focus on carbon emissions that have been avoided or reduced.

The EcoVadis methodology evaluates the quality of the ESG management system of an enterprise through its policies, activities and results. Since 2021, John Cockerill SA has obtained a first bronze level evaluation. The advice received to improve the performance of this entity and the overall approach are being taken into account.

Our ESG commitments

ENVIRONMENT

Improving the environmental footprint of our projects, products and services (Eco-conception)

- Improving the environmental footprint of the projects, products and services of our current portfolio
  - Measure the footprint of our projects, products and services
  - Taking a new look at their conception
  - Work on the whole life-cycle of the PPS and even of the value chain of which they form part
  - Encourage ESG criteria in our purchasing and assisting our suppliers
- Develop new solutions which contribute to improving the environmental footprint of humanity
  - Reinforce technical and process monitoring
  - Stimulate innovation and ensure it is financed (M&A, startups, incubator, investment fund ...)

Improving the environmental footprint of our organization (Eco-working)

- Measure the environmental footprint of each of our sites
- Reduce waste and optimize its sorting and recycling
- Initiate themed projects: green IT, facility, catering, mobility...

SOCIAL

Improving the experience of employees

- Guarantee the health and safety of all employees
- Guarantee equality of chances, encourage diversity and inclusion
- Make of John Cockerill 'a great place to work' (employee journey)

Being a socially committed company

- Contribute to providing a better life to local communities
- Promote our ESG commitment and make it visible
  - Internally, promote awareness among the personnel and encourage commitment
  - Externally, be exemplary and bring interested parties on board

GOVERNANCE

Deploying exemplary governance

- Consider ESG criteria to be at the same level as financial criteria in making strategic decisions
- Set up extra-financial reporting
- Conform to relevant standards
- Promote Ethics and Compliance

Financial indicators

In thousand €	2017	2018	2019	2020	2021
Shareholders' equity	262 671	131 144	103 232	102 997	**105 780**
Cash flow	96 254	114 625	67 073	182 099	**219 686**
Order entries	1 123 056	1 171 521	1 154 278	918 255	**951 338**
Turnover	933 665	1 296 897	1 259 699	1 014 254	**947 461**
EBITDa	84 151	107 783	81 413	54 141	**54 113**

The figures presented are those of John Cockerill SA and its subsidiaries. Given the percentage of the stake held (directly or indirectly) in each of the subsidiaries included in the scope of consolidation, the majority of the 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 consistent consolidation of the accounts of the John Cockerill Group across its entire scope. It also allows the readability and international understanding of its performance. All the financial data is available in the John Cockerill Financial Report.

Shareholders' equity
105 780 thousands of euros

Cash flow
219 686 thousands of euros

Order entries
951 338 thousands of euros

Turnover
947 461 thousands of euros

EBITDa
54 113 thousands of euros

For the second consecutive year, our financial results have been impacted by the global economic disruption caused by the Covid-19 health crisis.

At first sight, the 2021 results are close to those of 2020. In fact, they reflect a totally different reality: the first half of 2021 was even calmer than the previous year but by contrast the second half saw a clear recovery, particularly in terms of **new orders**, which ended the year slightly up compared to 2020. This positive trend is also confirmed at the beginning of the 2022 financial year.

As a result of the drop in new orders in 2020, our 2021 **turnover** is down, and has fallen below the symbolic bar of one billion Euros. After this low point, it will rise sharply again from 2022 onwards, thanks to the orders taken in the second half of 2021 and the very large orders already taken in 2022.

With regard to our 2021 **EBITDA** of 54.1 million Euros and our 2021 equity at 105.7 million Euros, these are very close to the previous year.

In terms of **cashflow**, it should also be noted that, at the end of 2021, we ended the year with largely positive cashflow which will also be the case at the end of 2022.

An analysis of the development of the distribution of our turnover by sector shows a re-balancing of our activities in recent years: after having experienced a cycle of high growth over several years, the Defense sector has seen its weight reduced, to the benefit of other sectors, in both absolute figures and in relative shares. Conversely, the development of Services activities, particularly in Africa, weighs significantly on our results. At the same time, the ramping up of all our activities related to the decarbonization of energy and mobility, as well as those related to the overall reduction of the environmental footprint of industries, is increasingly auguring well for fast and durable growth.

Non-financial indicators

The roadmap structuring the Group's ESG initiative is being developed. The priority areas and the commitments were defined in 2021. The indicators to be monitored and their objectives are currently being formalized, as is the methodology for collecting and compiling relevant data at Group level. Here are the first available non-financial indicators. At this stage, not all of them cover the overall scope of the Group. Their scope is specified in each section. Note that some data is still being collected.

Environment

Scope: Seraing site (Belgium)	2019	2020	2021
Workforce as of December 31 (in number of people)	798	781	**709**
Carbon footprint (in tons of CO_2 equivalent)	17 000	11 000	**in progress**
Industrial waste (in tons)	358.19	178.28	**in progress**
Total energy purchases (in MWh equivalent for gas and electricity)	7 189.96	6 196.93	**in progress**
Production of photovoltaic panels (in MWh)	1 460	1 500	**1 629**
Distance traveled by bicycle on the home/work journey (in km)	unmeasured	unmeasured	**9 000**

First launched at its Seraing headquarters in 2021,the methodology established by the Group for measuring the carbon footprint of its sites will be extended over time to all of its entities. Read the chapter 'Reducing our own environmental footprint'.

Governance

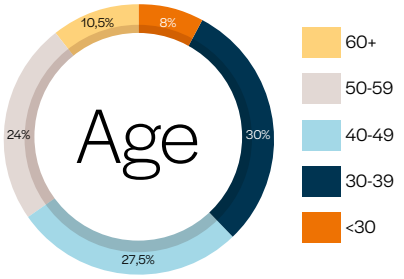
	2019	2020	2021
Attendance rate of the Ethics Committee	88%	80%	**86%**
Attendance rate of the Board of Directors	95.4%	95%	**95.4%**
Attendance rate of the Audit Committee	94%	100%	**94%**

In 2021, the Group's governance was adjusted to the new positioning of the Group, and participation in its main governance bodies has been assiduous. Read the chapter 'Governance'.

Social

Scope: Group	2019	2020	2021
Workforce as of December 31 (in number of people)	5 741	5 176	**5 480**
Rate of participation in the biennial internal opinion survey	82%	NA	**78%**
Rate of sustainable engagement of employees	79%	NA	**79%**
Frequency rate of work accidents with halt to work (FR) *	2.28	2.03	**2.75**
Severity rate of work accidents with halt to work (SR) *	0.09	0.072	**0.064**
Attrition rate *	4.9%	3.9%	**5.8%**
Scope: Belgium			
Annual average number of training days recorded per employee**	unmeasured	unmeasured	**3.75**

* **FR:** Number of accidents X 1 000 000 / hours worked
SR: Number of days lost X 1 000 / hours worked
Attrition rate: Number of people who left on a voluntary basis / Average workforce during the period
** Scope: Belgium, employee central



As an employer, John Cockerill continued to pay particular attention to its employees in 2021, whether in terms of their health, their safety, their quality of life at work or, more generally, their development. Read the chapter 'Improving the experience of our employees'.

Diversity indicators	2019	2020	2021
Proportion of women / men (in %) *	13 / 87	13 / 87	**13 / 87**
Nationalities (number)	48	50	**60**
Average age** (in years)	42	43	**43**

*All staff excluding employees in Brazil, India, China and the United States
** All staff excluding employees in Brazil, India, China and New Caledonia

Scope: Group	2019	2020	2021
Number of solidarity actions supported by the John Cockerill Foundation	13	20	**22**
Number of people who have benefited from an action by the John Cockerill Foundation	348	24 832*	**4 488**
Number of Group employees involved in Foundation actions	284	89	**607**

In 2021, the John Cockerill Foundation took stock of its mission and mobilized a growing number of employees to participate in its increasingly focused and numerous projects. Read the chapter 'Making the life of the Community more dignified'.
*Number strongly impacted by donations of sanitary materials (gel, masks...) to fight against Covid-19.

Protecting the Group

The diversification of John Cockerill is a source of opportunities, but also of potential risks. In order to protect itself, the Group has developed robust cross-functional practices over time. Here is an overview for 2021.

1 Commitment Committee

Prior to the selection of projects, a Commitment Committee evaluates the various aspects of the project (technical, financial, contractual, etc.) and issues resolutions to be applied during the negotiation and execution of the project.

More than **160** committees were organized in 2021.

2 Contracting, trade & export finance

And still before even signing the contract, the contracting teams always review the contractual clauses, the payment terms and the bank guarantees, and work out possible financing solutions.

They handled nearly **400** files in 2021.

3 Insurance

250 insurance policies

representing approximately 12 million Euros in annual premiums, cover the Group against risks of all kinds. The number of claims is decreasing year by year. In 2021, 52 claims were handled, compared to 111 in 2018.

4 Back to profitability

'Back to Profitability' is a mechanism that is activated when certain activities show signs of structural non-profitability.

In 2021, **9** entities benefited from a tailor-made assistance plan

(improvement of design, digitization, simplification of processes and organization, etc.), the cumulative implementation of which should lead to a return to break-even from 2022.

5 Financial partners

The commercial, technological and geographical diversification of the Group has led to the need to expand our network of financial partners. At the end of 2021, the Group can count on

15 major financial players

i. e. 3 times more than the previous year; each being consulted according to their area of expertise.

6 Cybercrime

Faced with the omnipresence of cybercrime, John Cockerill has taken this risk fully into account and invested in a vast prevention plan. Over the last six months of 2021, thanks to the installation of filtering and blocking systems and staff awareness programs,

John Cockerill identified and destroyed **143** types of malware.

The vigilance of employees, supported by the 2 240 e-learning sessions they have followed, has made it possible to identify as spam or fishing 51% of e-mails received.

7 Health security

Preventive measures in the areas of physical safety are now well established, in particular through the conduct of regular audits, safety talks in the field or the organization of the Group Safety Day. As a result of the Covid-19 pandemic, health prevention has been added to the agenda, piloted by a dedicated unit for the past two years. Prevention measures combine the layout of offices and workshops, the provision of tests and prevention equipment and, of course, widespread awareness-raising among staff about the importance of adopting new types of behavior.

In 2021, there were only **3** contamination outbreaks recorded at John Cockerill.

8 Internal audit

One of the principal missions of the internal audit is to evaluate the risk management processes. The team launched an extensive risk mapping program in 2021, involving many group players.

Of the **170** risks identified, the **25** with the highest priorities were assigned to an 'owner', who is in charge of deploying the actions designed to control them.

A dynamic of innovation

When cooperation and digitalization equate to innovation

At John Cockerill, innovation is above all a state of mind, a way of looking at things. In addition to technological innovation, which is essential for the engineering and services activities of the Group, an innovation drive also requires an open-minded approach to all of the company's activities, the operating methods and processes. In 2021, this saw John Cockerill's teams step up the number of initiatives (partnerships, international exchanges, digitalization of processes, etc.) designed to tackle their activities from a fresh perspective and thereby improve their immediate and future operational efficiency.

Anne-Françoise Laime, General Delegate for France at John Cockerill, entered into a partnership with Arts & Métiers Business Angels in October 2021 with regard to themes such as industry 4.0, new materials and, of course, the energy transition.

Interacting and collaborating, to create value collectively

The MecaTech and GreenWin competitiveness clusters in Wallonia and Materalia in Lorraine, the CEBEDEAU water research and expertise center, the A-SPIRE European association, the Tweed cluster in Wallonia (Energy, Environment and Sustainable Development), the Arts & Métiers and ParisTech Business Angels, and so on. John Cockerill has expanded the opportunities to interact and collaborate with the economic and academic fabric in 2021. The objectives: to exchange points of view, to learn collectively, to create value together and to participate in the deployment of economic activities that make sense.

In June 2021, on the occasion of his appointment as chairman of the Mecatech competitiveness cluster, Jean Jouet, Chief Technology Officer at John Cockerill, emphasized this philosophy: *"I'm convinced of the crucial role that industry has to play in the development of the economy. The period of recovery from the Covid crisis that we are currently experiencing offers us a unique opportunity to bounce back by thinking differently. So let's go!"*

Three first start-ups supported by Industrya

In 2021, Industrya, the investment fund launched in 2020 by John Cockerill together with LRM, Noshaq, SFPI and SRIW, supported its first three start-ups that are active in its areas of interest: new materials, energy transition and industry 4.0. French enterprise SupAirVision develops digital solutions for the diagnosis of wind turbine blades. Flemish start-up Deltaray is developing an accelerated X-ray technology dedicated to improving the non-destructive quality control of products on their production line and the speed of the production line. And the Walloon company VOCSsens is developing an environmental camera technology for revealing invisible gas molecules.

Jean Jouet, Chief Technology Officer at John Cockerill: *"This way of supporting innovation through an investment fund is very rewarding for the John Cockerill teams. This allows them to listen to more ideas, including sometimes iconoclastic ideas, which we would not have otherwise thought of".*

Industrya will launch a new call for applications in 2022.

UN CLIMATE CHANGE CONFERENCE UK 2021

IN PARTNERSHIP WITH ITALY

John Cockerill at COP26

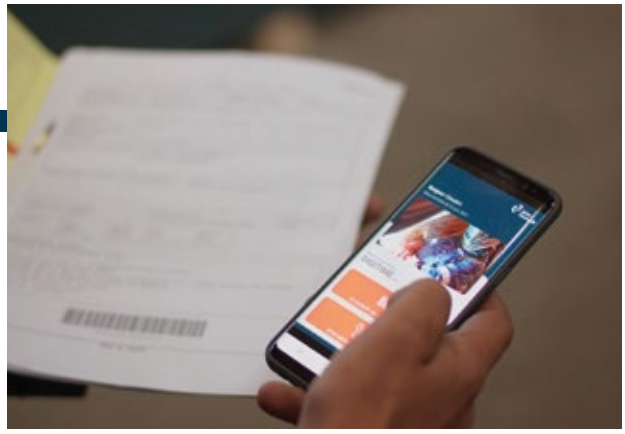
John Cockerill took part in the COP26 in Glasgow (Scotland), an international conference on climate change organized by the United Nations. Its teams used this platform to share various innovative initiatives to which John Cockerill contributes: in Morocco, the development of a center for the capture and use of carbon and the development of the hydrogen sector; in Belgium, the Columbus and HECO2 projects dedicated to the transition towards a low-carbon industry, and the HaYrport project, which aims to supply the captive fleet of Liège Airport with green hydrogen. These are all opportunities to flesh out these projects with the feedback received from the four corners of the planet.

60%

of the projects carried out by the Corporate development teams in 2021 contribute to the environmental transition.

Digitalization to improve operational efficiency

2021 was a year of digitalization at John Cockerill. The IT teams worked alongside the operational staff to develop digital solutions that improve efficiency. Sales, project and time management, these three processes were digitalized during the year. The result: information gathered in shared digital platforms, possibilities for analysis and data processing, automated activities, and therefore time freed up for high value-added activities. In short, enhanced operational efficiency.



Our technological solutions contributing to a more sustainable world

Facilitating access to low-carbon energy: using the sun, water, biomass or the wind to produce electricity, store it and make it accessible where and when it is needed.

In 2021, the John Cockerill's teams have worked, among others, on these emblematic projects:

Producing responsibly: producing without destroying. Focusing on the performance of production capacities and infrastructures while minimizing the use of resources, energy and emissions throughout their lifecycle.

In 2021, the John Cockerill's teams have worked, among others, on these emblematic projects:

Preserving natural resources: reducing consumption and waste of natural resources, cleaning and purifying the water, the air or the rare-earth elements, etc.

In 2021, the John Cockerill's teams have worked, among others, on these emblematic projects:

Purifying water and recovering waste: John Cockerill, a player in the circular economy pg. 32

Contributing to greener mobility: offering the public, cities, companies and public authorities 'softer' and more sustainable mobility and transport solutions.

In 2021, the John Cockerill's teams have worked, among others, on these emblematic projects:

Reduce the carbon impact of the mobility of people and the transport of goods pg. 34

Fighting against insecurity: helping governments protect their citizens against threats and maintain the major equilibria within alliances. Helping the operators of sensitive sites secure their installations.

In 2021, the John Cockerill's teams have worked, among others, on these emblematic projects:

Securing states, their borders and sensitive sites pg. 38

Facilitating access to low-carbon energy

Reaching the 4 corners of the world

As the world's leading supplier of molten salt solar receivers, John Cockerill confirmed its position as market leader in 2021 with the signing of a contract to design and supply a thermo-solar receiver for South Africa. With now 5 reference projects for this 100% green electricity production technology around the world, John Cockerill is more than ever positioning itself as a major player in the energy transition.

Five years after the commissioning of Khi Solar One, John Cockerill is returning to South Africa to deliver a new generation thermo-solar receiver. Its second reference project in the country, and the fifth in the world.

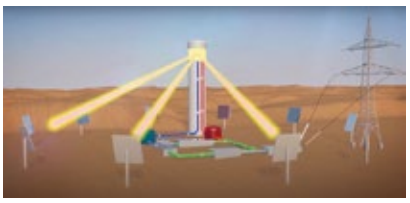
440 000
tons of CO_2 emissions avoided

Double coup in South Africa

A John Cockerill thermo-solar receiver will equip the prestigious Redstone solar tower in South Africa from 2023. This new commercial success was achieved in 2021, five years after the start-up of the Khi Solar One thermo-solar power plant in Upington, for which John Cockerill designed and supplied the receiver. This order is the result of the perfect synergy between the John Cockerill teams, who are working to perfect their technology by drawing on more than 10 years of experience in the field and the latest innovations from the in-house Research & Development experts. With its 100 MWe, it will supply 200 000 homes with electricity and avoid 440 000 tons of CO_2 emissions per year.

The ABC of solar thermal energy at John Cockerill

State-of-the-art thermo-solar technologies designed by John Cockerill make it possible to produce solar electricity 24 hours a day, thanks to the use of molten salts as a heat transfer fluid. These salts are heated to a temperature of up to 565 °C in the John Cockerill receiver, which is installed at the top of a tower. They can then be stored for 10-18 hours, thereby making it possible to produce electricity day and night. This type of technology makes it possible to avoid the production of several hundred thousand tons of CO_2 per plant and hence make a significant contribution to the reduction of pollution on the planet.



It shines in Dubai

In November, when the eyes of the world were riveted on Dubai and its Universal Exhibition, John Cockerill invited the Belgian delegation and the Minister-President of the Walloon Region to visit the MBR Solar Park energy complex. A John Cockerill thermo-solar receiver is in operation here, at the top of a 262 m concrete tower. This technology is impressive both in terms of its dimensions and its capabilities: a giant interlacing of pipes, tanks and heat exchangers, the element weighs 1 500 tons and is itself about forty meters high. As the technological heart of the plant, it enables the supply of electricity to 320 000 households and the avoidance of 1.6 million tons of CO_2 emissions per year.

1.6 million tons of CO_2 emissions avoided

320 000 households supplied with electricity

French only

Thermo-solar power plants are one of the essential elements of the technological mix that is necessary for the energy transition and the decarbonization of human activities. Here, mirror fields of the MBR Solar Park photographed from the top of the tower.

CO_2 as a heat transfer fluid

The maximum temperature of molten salts, i. e. the heat transfer fluid currently used in'tower' thermo-solar power plants, is 565 °C. In order to further increase this temperature and thereby increase the yield and performance of thermo-solar power plants, John Cockerill's teams are developing solutions that will allow molten salts to be replaced by new heat transfer media that is capable of storing and transferring heat. One of the solutions under study is a suspension of solid particles whose temperature may approach 700 °C. This may be able to supply a density of energy storage 2.5 times greater for an energy storage cost cut in half. Another idea under study, this time within the context of the COMPASsCO2 research project is the use of supercritical CO_2 as a working fluid within the thermodynamic cycle for the production of electricity. Here too, research is progressing with the same objective: providing technological responses to the challenge launched by the European Union, the decarbonization of the economy by 2050.

From solar to nuclear

Drawing on its technological expertise in molten salts, and working together with Terrestrial Energy and Engie Laborelec, John Cockerill has been participating in the development of Small Modular Nuclear Reactors (SMRs) since 2021. The contribution of John Cockerill's teams to this development is focused on studying the corrosion to the various components of these future reactors caused by the molten salts used in SMRs. John Cockerill's experts have begun the development of a test loop enabling corrosion on these future reactors to be studied over a long period. For John Cockerill, this activity constitutes the perfect bridge between its activities in renewable energies and those in nuclear energy, and confirms John Cockerill's ambition to facilitate access to low-carbon energies.

Facilitating access to low-carbon energy

When integrated renewables reduce the carbon footprint and energy bills

Industrialists, transporters and communities: in order to reduce their carbon footprint and their energy bill, John Cockerill offers integrated renewable solutions to three categories of users. At the heart of these solutions: John Cockerill's Energy Management System, coupled with a skillful combination of solar panels, batteries and specific technologies, depending on the project. The solutions that our teams began in 2021 will avoid more than 10 000 tons of CO_2 emissions per year. The energy transition is underway.

Electrifying Chad through energy storage

In 2021, John Cockerill won a contract with the Chadian energy company ZIZ to supply and install a lithium-ion battery energy storage system and a transformer. This equipment will make it possible to finalize the hybrid solar electric mini-grid of the city of Mongo, in Chad. Around 3 000 households, artisans, industries and administrative services will thereby be connected to the mini-grid by the end of 2022.

This battery storage system alone will prevent the production of 300 tons of CO_2 per year. With these technologies, John Cockerill's teams are positioning themselves as partners of private energy operators in Chad, on whom the state authorities rely to electrify the country, whose rate of access to electricity is currently only 11%.

John Cockerill is supporting Chad in the gradual deployment of mini-grids, i. e. relatively small, local, green electricity production units (between 10 kW and 10 MW) that are isolated from other power grids.

9 000 tons of CO_2 less for the fries from Lutosa

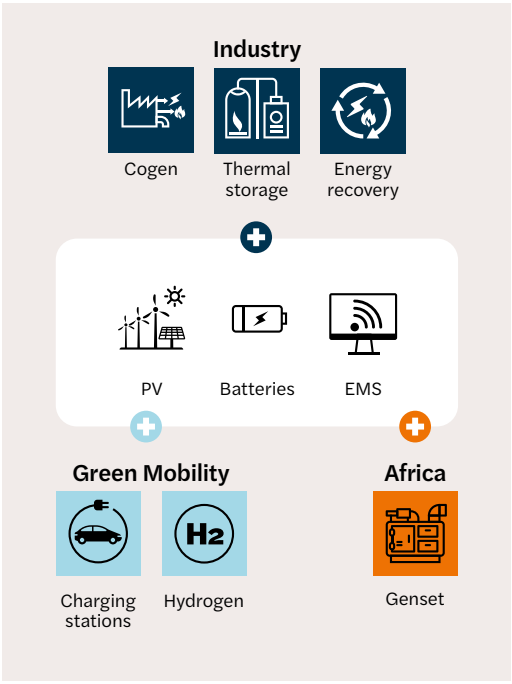
This is, of course, happening in Belgium: John Cockerill is helping French fries producer Lutosa to reduce its carbon footprint and to produce in an eco-responsible way. It is installing biogas co-generation at its Leuze-en-Hainaut site, which will enable it to reduce its CO_2 emissions by 9 000 tons a year.

The installation consists of a 1.5 MW electric motor, a 20 bar steam boiler, an acoustic box and auxiliary equipment. John Cockerill is taking charge of the implementation from A to Z: the design, supply and delivery, construction and assembly, on-site installation and commissioning. The start-up is planned for the second half of 2022.

In 2021, John Cockerill continued to support the waste collector Renewi in its efforts to electrify its truck fleet. John Cockerill has equipped its site in Seraing (Belgium) with a recharging infrastructure coupled with MiRIS, its green electricity production and storage unit. Renewi has carried out full-scale tests with different types of vehicles. The objective for both partners: a zero-carbon waste collection for the city of Liege.

Dieter Hasevoets, Manager of Integrated Renewable Solutions activities:

« With our integrated renewable solutions, we are proud to participate in the decarbonization of the economy and the fight against climate change. »



3 applications, 3 combinations of technologies

The key elements of the integrated renewable solutions from John Cockerill are solar panels, batteries and the Energy Management System (EMS). In the case of industrial projects, they are combined with thermal solutions (co-generation, thermal storage and energy recovery). In Africa, they are combined with already existing generators in order to reduce consumption. In the case of green mobility, they are complemented by either high power, fast electric chargers, or by green hydrogen production and distribution stations.

Facilitating access to low-carbon energy

Hydrogen: in pole position to decarbonize the economy

Five years after its strategic and pioneering decision to invest in the hydrogen sector, John Cockerill saw its technological and commercial leadership strengthened in 2021. In addition to the design and supply of electrolyzers, John Cockerill worked on the development of gigafactories in several countries around the world this year, with France and India in the lead. This dual position as the world leader in the market for large-capacity electrolyzers and a pioneer in gigafactories makes John Cockerill a major player in the decarbonization of industries and mobility.

The most powerful electrolyzers in the world

In 2021, John Cockerill designed, produced and delivered two electrolyzers of 1 300 Nm^3/h and 6.5 Megawatts of unit capacity to China Huaneng Group. These electrolyzers, the most powerful in the world, are a technological innovation straight out of the workshops of Cockerill Jingli Hydrogen, the Group's Chinese subsidiary. It should be noted that John Cockerill took 100% control of this subsidiary during the year, acquiring all the shares and full intellectual property of the technologies.

The teams celebrated this technological world record in the presence of the customer, local authorities, suppliers and research institutes. This industrial prowess is accompanied by an innovative force: our R&D teams have continued their research to further increase the capacity of John Cockerill electrolyzers, which are already the most impressive in the world, in terms of both their size and their power.

First gigafactory under construction

In 2021, John Cockerill completed several key stages in the establishment of a European industry for the manufacture of electrolyzers, starting with the filing of the permit applications necessary for the transformation of its Aspach-Michelbach site in Alsace (France) into a gigafactory. The new plant will be operational at the end of 2022, and the production of electrolyzers will gradually intensify: from 350 MW of capacity produced in 2023, it will reach one gigawatt before the end of the decade.

With the construction of gigafactories, John Cockerill is Facilitating access to low-carbon energy, and supporting the deployment of hydrogen sectors in the four corners of the world. A partnership with Greenko, the Indian leader in renewable energies, for the deployment of gigafactories in India was concluded in 2021. Other contacts have been made elsewhere in the world. This is the case in Australia, Saudi Arabia and Morocco, where John Cockerill is cooperating with leading local players in setting up hydrogen sectors.

Raphaël Tilot, Head of Renewables and Hydrogen activities

« With 33% of the market share of large capacity alkaline electrolyzers in 2021, we are consolidating our global leadership and demonstrating our ability to support global markets on the path to the decarbonization of industry and mobility. »

First European order

Hydrogen produced from renewable energy is of interest to European industrialists wishing to decarbonize their activities. Among these, the Spanish oil company Repsol ordered a 2.5 MW pressurized alkaline electrolyzer from John Cockerill this year in order to reduce its environmental footprint.

This first European reference for John Cockerill will generate the first renewable hydrogen in the Basque Country. In particular, it will supply buses and light vehicles at the logistics platform of the Petronor refinery, the first hydrogen station in the Basque Country.

Following China, where the hydrogen market is already well developed, Europe and the rest of the world should soon see the launch of hydrogen sectors, whether for the decarbonizing of mobility or of various industries, such as petro-chemicals and steel-making first.

151

This is the number of megawatts installed worldwide with electrolyzers from John Cockerill, compared to a global installed market of **458** MW.

1300 Nm³/h and **6,5** MW

This is the record unit capacity offered by the alkaline electrolyzers from John Cockerill.

Collaborations with a green future

John Cockerill stepped up its cooperation activities within the European hydrogen sector in 2021. It has thereby taken part in the work of the France Hydrogène association and of the Hyve consortium in Belgium, with Colruyt, DEME and Flemish research centers.

It has also taken part in two pioneering collaborative projects, which made significant progress in 2021: H2GridLab, which was initiated by the Brussels electricity and gas network operator Sibelga, aims to develop a 'Power-to-Gas' pilot based on green hydrogen via a Fluxys station. Columbus, which is being developed together with Carmeuse and Engie, is set to enable the capture and use of carbon from a new type of lime kiln. This CO_2 is combined with green hydrogen, produced by a 75 MW electrolysis plant, to become e-methane, a renewable gas. Winner of a Febeliec Award this year, Columbus is the largest project of its type in the world.

In addition, John Cockerill has also joined forces with the Belgian consortium Hyoffwind and with BESIX to build a Power-to-Gas installation in Zeebrugge (Belgium). Objective: to convert renewable electricity from wind turbines in the North Sea into green hydrogen.

Facilitating access to low-carbon energy

Wind power is breezing ahead

The wind turbine maintenance adventure began for John Cockerill in 2008. In 2021, its teams almost doubled the number of wind turbines under maintenance contract, going from 110 wind turbines in 2020 to 200 in 2021. In Belgium, France and Brazil, the energy transition specialists at John Cockerill aim to improve the reliability, performance and efficiency of wind farms in strict compliance with safety rules.

On land and at sea

John Cockerill won several offshore and onshore operations and maintenance (O&M) contracts in 2021.

The company won orders for onshore wind power in France and Brazil, and concluded major blade maintenance and repair contracts. In Brazil, its specialists will maintain wind farms for an additional 3 years, while, in France, they will provide maintenance, including the supply of spare parts, to two new wind farms.

In Belgium, John Cockerill won the renewal of a contract for the maintenance of an offshore wind farm located off Ostend, for a period of 4 years. Some 21 of its specialists have been maintaining it since 2008, to the great satisfaction of their client.

Since starting work in the wind power sector, John Cockerill has never stopped diversifying its offering. It now offers a full range of services: in addition to maintenance services, the supply of spare parts, inspections, blade repairs and end-of-warranty equipment audits, John Cockerill also offers the replacement and repair of major components.

800 000
This is the number of tons of CO_2 that John Cockerill's work on wind turbines helps to avoid each year.

500 000
This is the number of homes supplied with renewable energy from wind turbines maintained by John Cockerill technicians.

200
This is number of wind turbines maintained by John Cockerill's teams in 2021.

130
This is the number of wind experts deployed by John Cockerill in France, Belgium and Brazil.

Top flight technicians

Combining technology and expertise, John Cockerill mobilizes a network of local intervention units, including industrial climbers, with workshops and technology centers around the world. Its 130 experts, whose technical competence is well established, carry out maintenance operations on offshore wind turbines, thereby extending the availability of wind turbines and strengthening access to renewable energy. In 2021, the teams based at Ostend (Belgium) managed the feat of 4 000 days without accident in the maintenance of offshore wind turbines.

John Cockerill's leitmotiv in wind power: extending the life of wind turbines to develop access to renewable energy.

SupAirVision, first fundraising

Industrya, the investment fund set up in 2020 by John Cockerill and 4 Belgian public partners, began its support of French startup SupAirvision in 2021. In view of John Cockerill's experience in wind power, the industrial link with SupAirVision was self-evident. SupAirVision now has the support necessary to digitalize the diagnosis of wind turbine blades in Europe and around the world. Its innovation efforts will be mobilized, in particular, to enable the development of Volta, the first system for diagnosing lightning paths by drone, and its deployment on the German and Northern European markets.

In addition to the quality of the services offered, SupAirVision was also an obvious choice due to its ability to meet the needs of our time: to develop products that are needed today and to offer innovative technical and operational solutions. Through its onshore and offshore wind turbine maintenance activities in France, Belgium, Spain, Brazil and Morocco, John Cockerill will undoubtedly have a role to play in supporting the development of SupAirVision.

50 years in the service of low-carbon energy: nuclear power

With the strength of more than half a century of experience in keeping nuclear power plants safe behind it, John Cockerill contributes to maintaining the safety of the sites and components of the power plants, as well as the safety of the populations, local residents and professionals who live around them. This is because participating in the transition to low-carbon energies not only means developing renewable solutions, but also taking care of the nuclear sector.

13

2021 is the thirteenth consecutive year in which the women and men of John Cockerill have contributed to the maintenance and safety of nuclear power plants. This activity in France has enabled the Group to complete its historical expertise in Belgium on maintenance operations and projects. The scope of interventions is more and more varied. They now extend to the maintenance of the large components of nuclear circuits (such as the reactor tank and the steam generators), of mechanical machinery and rolling gantries, pipework and fixing systems, up to projects for the modification or modernization of installations for the manufacture of ultra-secured equipment for contaminated waste. All of these operations have the aim of prolonging the life of the power plants and of improving their safety.

Recognized performance in France

After having passed the milestone of a million hours of 'tap & pipework' worksites in 2019, John Cockerill moved up to a new level in 2021 when it became the second largest national player in this segment, seeing itself mandated with the maintenance of 12 nuclear units: four at Tricastin, four at Cattenom, two at Chooz and two at Belleville.

The diversification of activities and clients in 'Large Component Operations' was also concretized by a contract with Framatome for maintaining equipment before the start of the EPR at Flamanville.

These contracts bear witness to the confidence of the nuclear operator and of major clients in the sector, convinced by the daily commitment of the teams of John Cockerill in order to guarantee safer and better performing equipment.

Belgium: John Cockerill remains a partner for both maintenance and dismantling

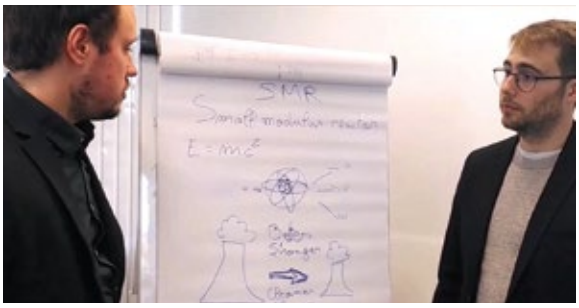
The debate on the extension of the operation of nuclear power plants has raged for a long time in Belgium and continued to do so in 2021. John Cockerill leaves this political, or even ideological debate to the competent authorities, and is at their disposal as a technological expert. For whatever the outcome, one thing is certain: John Cockerill will remain a partner of choice when it comes to supporting the operators of the country's nuclear power plants.

In 2021, John Cockerill thereby accepted the invitation from Belgian Ministers to organize the end of life of nuclear reactors, and to manage the dismantling activities. In the event of the creation of a Belgian dismantling sector, John Cockerill intends to play a central role: already the partners of existing plants, John Cockerill's teams have the skills to dismantle them if a decision is taken to do so.

Training, a guarantee of performance and safety

Convinced that safety results from the behavior of people at least as much as from the reliability of machines, John Cockerill has continued to invest in the training of its intervention personnel in 2021. Its teams are specifically trained in nuclear site operations.

John Cockerill has always paid great attention to the safety of its teams and of its personnel, along with to the development of the Safety Culture. It also obliges itself to strictly conform to legal norms, references and directives in the domain of exposure to radio-activity.



Solar at the service of SMRs

In 2021, as a world leader in molten-salt thermo-solar receivers, John Cockerill collaborated with Terrestrial Energy, the Canadian pioneer of Small Modular Reactors (SMR): modular nuclear reactors that are simpler to build, more efficient and less expensive than traditional reactors. *“We are currently developing a test loop which will enable the corrosion of these future reactors to be studied”*, explains Adrien, R&D engineer. *"This is further proof, if more were needed, that John Cockerill puts its strengths in technological innovation and the diversity of our activities at the service of low-carbon energies. "*

Boosting energy output and reducing the carbon footprint

John Cockerill's qualified engineers and technicians travel tens of thousands of kilometers each year around the world to provide technical solutions to power plant operators and to industries which produce their own electricity. Despite Covid restrictions, in 2021 they thus installed, modernized or inspected electricity production equipment, whether of John Cockerill manufacture or not. Their interventions have made it possible to extend their lifespan, improve their output and significantly reduce their CO_2 emissions.

Missions all over the world

Continuing with their momentum of previous years, the Aftersales specialists carried out 12 interventions in 2021. They landed contracts in Singapore, Argentina, Chile, Mexico, the Dominican Republic, Algeria, Tunisia, Saudi Arabia, Belgium, France and Greece. The missions mandated to the teams consisted in modernizations and upgrades of boilers, the renewal of burners, ten-year qualification, and the remaining life-time assessments of many boilers. These interventions are set to increase still further in 2022 and the years to follow.

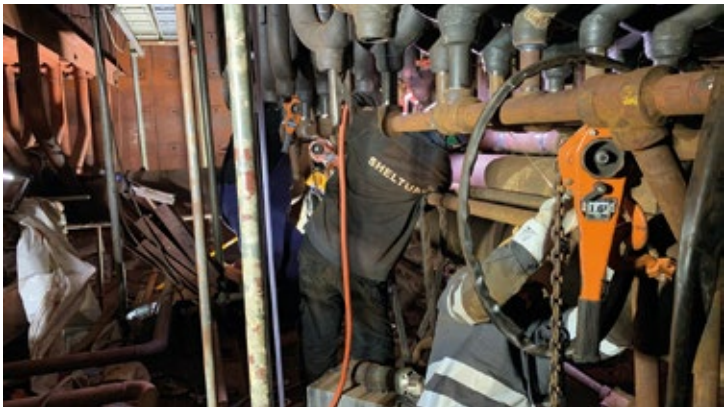
John Cockerill's teams offer solutions to improve the efficiency of power plants and reduce CO_2 production.

-9 000 tons of CO_2/year

In 2021, John Cockerill won its first order as a contractor in renewable energies with the installation of biogas co-generation for Lutosa, enabling this Belgian agri-food manufacturer to reduce its CO_2 emissions by 9 000 tons a year.

Race against time in Singapore

John Cockerill's teams carried out engineering, manufacturing, transport and replacement operations on several economizers as well as other modifications on boilers from a competing brand for a client in Singapore. John Cockerill dismantled the old heat exchangers and fitted the new components, while upgrading the boiler in order to eliminate the leaks that had plagued it. Mobilized for several weeks in the midst of the Covid crisis, the teams compelled to comply with strict health regulations and had to demonstrate great agility in dealing with the hazards caused by the pandemic, particularly in terms of transport, while providing impeccable work to the complete satisfaction of the client. The result of this success: John Cockerill is entrusted with a similar mission for 2022 by the same client.



Co-generation in Australia

In 2021, John Cockerill signed a contract with GE Power for the design and supply of two heat recovery steam generators. Equipped with additional fresh air firing capabilities, these boilers will provide continuous steam production for the process of a co-generation facility in Australia. This equipment will be largely pre-assembled in the workshops, which will simplify transport, speed up on site assembly, and consequently reduce costs. The heat recovery process allowed by John Cockerill's boilers will enable its client to improve the efficiency and performance of its process, while reducing its energy consumption. A must in the current context of global warming.

Towards 100% carbon-free steel production

Faced with the challenges of climate change, John Cockerill teams innovate every day to enable their steel-making customers to move towards 100% carbon-free steel production. Their new production lines incorporate the most advanced technologies in terms of energy efficiency and environmental performance. Their maintenance and modernization work is also moving in the same direction. And on top of this, John Cockerill is resolutely investing in R&D partnerships aimed at developing completely new processes, which no longer aim to simply reduce the CO_2 emissions of current processes, but to invent new, 100% zero carbon processes.

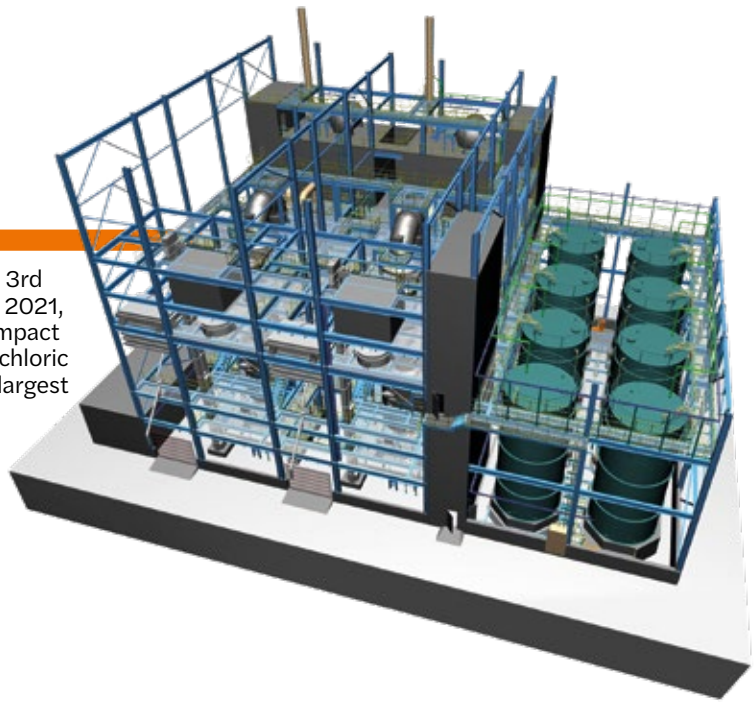
Revolutionizing steel production

In 2021, John Cockerill has continued to collaborate with ArcelorMittal and other partners on the breakthrough Siderwin innovation project, which sets out to develop a steel production process that is no longer based on the combustion of iron ore, but on electrolysis.

Carbon is replaced by electricity in this completely new technology. There is no longer any need for agglomeration, coke ovens, or blast furnaces. The old process is completely replaced by direct electrification. Which means: no more CO_2 emissions, only oxygen.

At the end of 2021, a first prototype had already demonstrated the effectiveness of the process using small quantities. The large pilot unit installed at ArcelorMittal in Maizières (France) will make it possible to continue developments in 2022, in order to change scale, and to thereby go from the production of a few kilos of steel to around a hundred kilos. And all this still without any CO_2 emissions!

Zero-carbon steel, soon to be a reality, thanks to the Siderwin innovation project.



The Chinese steel giant Baowu ordered a 3rd pair of ARPs (acid regeneration plants) in 2021, in order to minimize the environmental impact of its steel strip pickling processes using chloric acid (HCL). This equipment will form the largest and most environmentally-friendly acid regeneration facility in the world.

Reducing CO_2 emissions in India

In 2021, John Cockerill teams helped two major Indian steel-makers to produce steel more sustainably. Despite the operational difficulties posed by Covid-19, they were able to make progress with the delivery of two galvanizing lines and an annealing line to Tata Steel in India. They also worked hard at the very start of 2022 to win a contract from ArcelorMittal NipponSteel India to supply two new steel-treatment lines featuring the most cutting-edge technologies in terms of energy efficiency, optimization of zinc consumption and resistance to corrosion.

Together, these five lines will allow an annual production of 2.5 million tons of steel. In addition to the high levels of quality, reliability, flexibility and safety that they guarantee, their environmental performance will enable these two giants of the world steel industry to continue to progress on the path towards sustainable and responsible steel.

And still in 2021, a major American steelmaker selected John Cockerill for its new continuous galvanizing line.

Sequestering CO_2 in Dunkerque

In 2021, John Cockerill continued its work on CO_2 capture, an essential element for achieving carbon neutrality objectives. As part of the European 3D project, John Cockerill has also finalized its study work dedicated to the generation of steam from the waste heat of the steel-making process. This contribution makes it possible to optimize the cost of the CO_2 capture solution using an amine loop developed by the project's lead partner, IFP-EN. The John Cockerill teams are now collaborating with IFP-EN and its subsidiary AXENS to propose an industrialization of the solution.

Working together with European steelmakers to decarbonize their factories

John Cockerill teams are working in steel factories throughout Europe in order to improve the environmental performance of these factories and to reduce their CO_2 emissions.

In 2021, they installed three high-capacity buckets on the Fos-sur-Mer (France) steelworks site, which will enable the use of more recycled steel and thereby reduce the CO_2 emissions of the site. They also carried out various maintenance operations in Belgium, on the NLMK sites in La Louvière and at the Clabecq and Eurogal sites of ArcelorMittal Belgium in the Liège region.

The buckets installed in Fos-sur-Mer will make it possible to use more recycled steel, and thereby reduce CO_2 emissions.

Jean Jouet, Chief Technology Officer of John Cockerill:

« The energy and environmental transitions remain at the heart of our innovation efforts. We are in particular working on this through partnerships, such as Green Steel or Process4Planet. »

For more sustainable planes and helicopters

In 2021, John Cockerill teams developed and installed surface treatment lines in the aerospace industries in the United States, Europe and China. All of them now benefit from the latest technologies from John Cockerill in terms of energy efficiency and effluent treatment. The durability of the aircraft and helicopter parts treated on these lines is thereby doubly enhanced: on the one hand by the extension of their lifespan that this treatment brings, and on the other by the reduction of the energetic and environmental impact generated by their treatment.

Extending the life of helicopter parts in China

In mid-2021, John Cockerill teams commissioned four surface treatment lines in China at one of the leaders of the Chinese aerospace industry. The treated parts, which are components of helicopter turbines, will have their mechanical and structural properties strengthened, and their lifespan will be considerably extended. The plant has also seen its energy efficiency and its environmental footprint significantly improved: in addition to optimizing the energy consumption of the lines, John Cockerill has also installed a wastewater treatment station at its customer's premises, making it possible to meet the most stringent standards in this domain.

The equipment was designed and manufactured by the French (John Cockerill Sleti) and Chinese (Cockerill Tempro) teams of John Cockerill. The equipment was installed in Harbin City, and other installations of this type are set to follow at this same customer. This makes the activities of this big name in aerospace increasingly respectful of the environment and natural resources.

95%

of water recycled

In 2021, John Cockerill's French teams installed a new surface treatment line at a major Parisian player in the aerospace industry. In addition to providing anti-corrosion protection for the parts produced, this line also ensures perfect traceability. It's indeed being equipped with sensors that measure and monitor all the operating parameters of the installation. This is a must for the aerospace industry, which is subject to very strict and standardized operating rules.
A specific feature of John Cockerill is that its surface treatment facilities can be coupled with 'in-house' effluent treatment units. This is the case here, with recycling of more than 95% of the water used in the treatment. The result is a plant that is tailor-made, with maximized yield and optimized environmental performance.

The pandemic hasn't grounded the sustainability of aeronautics

In 2021, John Cockerill's Finnish teams achieved the feat of delivering within schedule two highly automated surface treatment lines - a chemical cleaning line and a stripping line - to the American aerospace industry.

Faced with the supply and travel difficulties caused by the pandemic, the team in charge of the project was able to demonstrate remarkable agility: online and remote interactions at first, and then an extended stay (6 months) at the customer's site for the project manager. Going beyond the two eco-designed surface treatment lines, John Cockerill proposed a waste treatment unit, making the factory even greener. The result: an increasingly sustainable American aviation industry.

Samuel Crets, Director of Surface Treatment Activities :

« With our up to the minute technologies, we are proud to support our customers with their environmental initiatives. In addition to aerospace, we also do this for other industries, such as automotive or energy in particular. »

Reducing the environmental footprint of a helicopter equipment supplier

In 2021, John Cockerill won a contract with a European aerospace equipment manufacturer to equip its new factory in Gyulia (Hungary).The project involves the design and supply of a wastewater treatment plant and a non-destructive testing line. These John Cockerill technologies will reduce the environmental footprint of this new aerospace technical center.

Purifying water and recovering waste: John Cockerill, a player in the circular economy

John Cockerill's innovative technologies in water, air and waste treatment are helping to make today's world even more sustainable tomorrow. Because the preservation of natural resources is a major issue, John Cockerill has designed equipment in 2021 to enable energy companies and local authorities to treat their effluents, and to even recycle them in an industrial process.

Stripping to treat the waste material of a leader in natural gas

As a major player in natural gas in Europe,Teréga is investing in order to purify its industrial effluents, in accordance with evolving standards. It is to John Cockerill that Teréga has mandated the installation of a liquid and gaseous waste treatment station in the south-west of France.

The objective of Teréga: control the impact of its activities on the environment. On the one hand by treating liquid waste which is produced by the two stages of dehydrating natural gas stored in the two underground reservoirs of the client's compression platform, and on the otherby eliminating a maximum of the organic charge, in other words all of the Volatile Organic Components and the odors from these waste materials. A good example of our combined expertise in water and air at the service of players in the energy transition.

Two treatment stations to improve the water from the nuclear industry

Framatome produces a third of the world's zirconium (Zr), which is an essential element for the nuclear industry. Demand for Zr continues to grow, and also impacts the aerospace, medical and electronics fields. This production involves the treatment of several hundred thousand cubic meters of liquid effluent per year. This is where John Cockerill comes in: in 2021, Framatome called on our expertise to design, build and install two treatment stations, and to thereby improve the quality of process water at its Jarrie site (France).The treatment unit is complemented by a new pre-treatment station, smoothing basins and two physio-chemical filtration lines. This equipment allows Framatome to improve the quality of its water.

The BeFlow® innovation for treating our municipal wastewater more efficiently

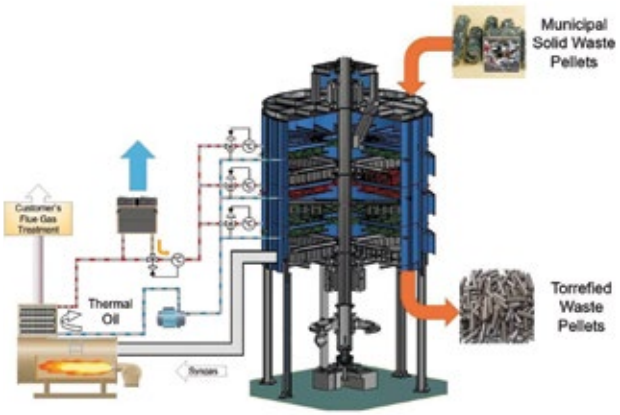
Innovation to better treat the waste water from municipalities. This is the case with BeFlow®, a technology that has proved itself in Namur (Belgium) in 2021: *"This continuous flow process requires no chemical reaction and can be applied to liquid effluents produced by both municipal and industrial installations"*,points out Olivier, Process Expert Engineer. *"What distinguishes BeFlow® from traditional installations is its compactness, which makes it energy-efficient, as well as its capacity absorb output peaks. The results are conclusive, as the pilot installation already effectively purifies the wastewater of several hundred inhabitants around the Namur wastewater treatment plant".*

A first MEDIX® order for the elimination of pharmaceutical micro-pollutants

Our micro-pollutant treatment solution MEDIX® made the headlines in 2021. It is featured in a report by the European NGO Health Care Without Harm, which looked at the pharmaceutical load of the wastewater discharged into the environment by hospitals. Further recognition of the effectiveness of MEDIX® in treating the threat that these micro-pollutants represent for the environment and public health. To end the year on a high note, MEDIX® was the subject of a first order.

Cométha to recover organic waste from our wastewater

The whole point of the Cométha project is the development of a brand new process for the co-methanation of organic residues from household waste and sludge from wastewater treatment plants. The construction of a pilot installation began in the Paris region in 2021. *"This demonstrator should validate the expected performance of this project. Cométha aims to maximize biogas production, to recover as many by-products as possible, such as nitrogen and phosphorus, and to minimize the final non-recoverable residue,"* explains Olivier, CTO of our Water activities. If the demonstrator proves its worth, it's a safe bet that other customers will start looking at this innovation...



Produce hydrogen from recycled waste

The German energy company RWE is building a pilot plant in Niederaussem to test the production of raw material pellets obtained from waste. The objective of this project is to optimize a key step in the process of transforming household waste into hydrogen. To achieve this, RWE is partnering with John Cockerill to equip its facility (a roasting plant) with the MHF/100/0™ technology. In this Multi Hearth Furnace by The NESA Solution® of John Cockerill, pelletized waste is roasted under a reducing atmosphere, in particular to improve its grindability. These roasted pellets are then pulverized and gasified to produce a synthesis gas that is rich in hydrogen and carbon monoxide. 50% of the recycled H_2 is considered as green, while the other 50% forms part of a circular economy context, where waste is re-used as a raw material for the chemical industry.

Reduce the carbon impact of the mobility of people and the transport of goods

Railways, waterways and roads: in 2021, John Cockerill teams continued to develop technological solutions to reduce the carbon impact of the mobility of people and the transport of goods. Renewable energy, green hydrogen or even the digitalization and modernization of infrastructure and equipment were at the center of their projects.

White smoke for HaYrport®

In April 2021, John Cockerill and Liege Airport obtained the green light from the Walloon Government to deploy a green hydrogen production and distribution infrastructure at the Liège airport site. This 100% clean eco-mobility project will benefit from a regional grant of 6 million Euros. The production capacity will be 200 kg of hydrogen a day, produced using energy from the airport's photovoltaic panels. This is enough to cover 20 000 kilometers a year for the airport's fleet of logistics vehicles and shuttles traveling to and from the airport.

Prior to the commissioning in 2023, a pilot hydrogen refueling and production station will be installed and tested on the John Cockerill site in Seraing, about fifteen kilometers from the airport. The objective is to even further improve mastery of this technology.

Starting from a 2 MW photovoltaic installation on the roofs of the workshops of John Cockerill's headquarters, MiRIS pools the storage capacities of four different technologies, to reach a total of 2.5 MW of power and 5.5 MWh of energy capacity. The whole system is installed on an electrical network controlled by intelligent software developed by our experts, allowing different configurations to be replicated. At the same time, MiRIS supplies the Group's headquarters with renewable electricity, and participates in the greening of John Cockerill's car fleet.

Waterway infrastructures that are more available and intelligent

In 2021, inland waterways and river sites came one after the other for John Cockerill. Results followed: maximum availability of the waterways infrastructure. In France, over 25 million tones of freight were thus able to be transported in a year by inland waterways. This was enough to avoid three million truck journeys on the roads.

"Waterways traffic, which has increased sharply in recent years, is in enormous demand," explains Sébastien, Head of Public Markets France. *"4 500 of the 8 500 kilometers of French canals are navigable, including 2 500 intended for heavy transport. When you realize that a barge of 4 500 tons corresponds to 250 trucks, you will immediately understand the importance of waterway transport: it's four times less polluting than road traffic. Best of all, it doesn't emit fine particles! "*

The main challenge is time

Stoppages of waterway traffic are rareand are defined well in advance. All interventions are therefore concentrated over very short periods of time: all the work has to be carried out over two or three weeks, or even just one, in order to avoid disrupting navigation as much as possible.

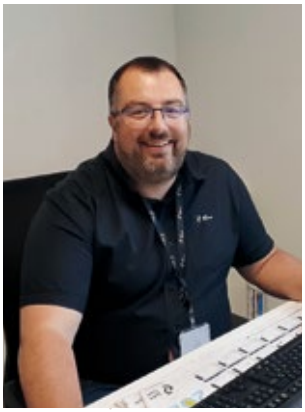
In 2021, the John Cockerill teams intervened throughout France, in Toulouse, Strasbourg, Marseilles, Saint-Dizier and Normandy, as well as in Belgium, to carry out the renovation and modernization of locks and dams. Their work involves skills in mechanics, boiler-making, automation and electricity, as well as in water treatment.

Towards smart locks

Innovation and technology are at the heart of these interventions. *"When we replace the motorization of a lock"*, continues Sébastien, *"we design new systems that integrate the latest technologies in terms of security and data recording, such as torque measurements and force sensors that provide the operator with new information about its equipment."* This will create river infrastructures that are ever smarter, and therefore ever more available. And thereby considerably reduce road traffic and its CO_2 emissions.

3 million

This is the number of truck journeys avoided on the roads thanks to the interventions of John Cockerill on French waterways.



Sébastien Simon, Public Markets Manager in France :

« Our waterway interventions maximize infrastructure availability. This will make waterway transport more attractive, and considerably reduce road traffic and its many nuisances. »

Panama: the metro to make the air more breathable

Following the first line of the Panama Metro, John Cockerill finalized the study, maintenance and supply of the second line in record time in 2021. *"Our teams"*, says Thomas, Managing Director of CIM, *"the French subsidiary of John Cockerill, designed, manufactured and installed the workshop equipment needed for train maintenance, as well as the work for laying the track and the catenary."*

In 43 months, John Cockerill thereby commissioned this second line, which is 21 kilometers long and consists of 16 stations. This project is a response to a strategic urban mobility challenge: to offer 40 000 passengers an hour a green, fast and secure mobility alternative.

The first metro in the Caribbean, and a world example in terms of safety and comfort, the Santo Domingo metro transports more than 100 million passengers a year. In 2021, and for the fourteenth year in a row, John Cockerill teams managed the installation and maintenance of the train track. Enough to relieve the traffic in the capital of the Dominican Republic.

Africa: fostering international rail mobility

With the strength of their expertise in rail technology behind them, the Transurb teams at John Cockerill facilitate the connection of the rail lines of several African countries. This was the case in Cameroon and in Chad, which have decided to finalize the railway corridor between Douala and N'Djamena. As a catalyst for opportunities, in 2021John Cockerill provided the two states with technical assistance in the analysis of the feasibility study of the operation. The integration of the infrastructure networks of these two countries will make it possible to offer populations common inter-modality solutions.

Elsewhere, in Algeria, John Cockerill supervised the works and commissioning of the Rocade Nord project. Equipped with the ERTMS rail traffic management system, this high-speed Trans-Maghreb network connects Morocco to Tunisia via Algiers. In 2021, the John Cockerill Transurb teams supervised the works on, and commissioning of three sections, over a total length of 390 km. Studies, planning, design, works control and monitoring: a supervision mission that ultimately leads to certification.

Towards zero-emission buses and dump trucks

John Cockerill, Metz Métropole and the UEM group formalized a partnership in October 2021 aimed at developing a hydrogen sector in Metz (France) dedicated to the eco-mobility of buses and dump trucks. The project aims to create a green hydrogen ecosystem, starting with thirteen buses by 2025, and then a gradual conversion of all buses and refuse collection vehicles by 2030. The first will hit the road in 2025 – without the slightest emission of CO_2!

There is a similar objective, but a different technology in Liège (Belgium). Here, John Cockerill has been supporting the waste collection operator Renewi in the electrification of its fleet of vehicles since 2020. In September 2021, John Cockerill carried out a charging test for an electric truck via MiRIS, its green energy storage and management station. *"This test was an important milestone towards Renewi's zero-emission collection goal, as the energy that MiRIS generates and stores is 100% solar, ensuring that their trucks have completely carbon-free propulsion,"* explains Antonio, Business Development & Sales Manager.

Simulation, energy-efficient training

Thirty simulators to train its operators: in 2021, SNCF Réseau opted for the portability and flexibility of the Transurb® solutions from John Cockerill. These 30 nano-simulators, supplemented by six instructor stations, a preparation station and an observation station, meet the needs of the French rail network operator whose training centers are located in different regions of France.

Thanks to this equipment, SNCF Réseau can train its operators at a lower energy cost, in conditions that are close to reality, with all the expertise of the market leader ETCS (European Train Control System) within a simple suitcase.

In Belgium, the Brussels operator STIB made its choice in 2021, guided by the same energy-efficiency argument, acquiring a compact simulator dedicated to training in the use of its new generation trams.

Augmented reality at the service of security

Safety is the top priority, at both John Cockerill and Infrabel. In 2021, the Belgian railway infrastructure operator acquired a new state-of-the-art training tool: a 3D Transurb® track simulator equipped with augmented reality.

This innovative technology makes it possible to train track maintenance personnel in safety procedures, immersing them in their daily work environment without the risks of being in the field. This immersive simulation solution proposed by John Cockerill contributes to making the Belgian railway network one of the safest in Europe.

Securing states, their borders and sensitive sites

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

In 2021, John Cockerill increased its initiatives and projects for supporting states, their armed forces and operators of sensitive sites with regards to security. The design and delivery of innovative weapon systems, the training of battalions, research and development around new concepts: all over the world, John Cockerill teams are taking decisive action to achieve a common goal, fighting insecurity.

The Tank Boat can carry up to 60 soldiers and reach a speed of 50 knots. With its average operational range of 600 nautical miles, it is particularly suitable for securing the Indonesian coasts.

Strengthened partnership in Indonesia

In 2021, John Cockerill teams continued to support the Indonesian armed forces in their fight against insecurity. The Tank Boat, a catamaran equipped with a Cockerill® 3030 turret, has thereby successfully completed its first nautical miles and fired its first rounds. As a truly multi-purpose maritime platform, this craft has been specially designed to respond to all types of support needs and threats, with reduced acquisition and operating costs. Christened 'Antasena' by Indonesian Defense Minister Prabowo Subianto in September, the first Tank Boat is now 'mission ready'.

John Cockerill has also taken new steps in supporting the Indonesian Army. While it has had Cockerill® CSE90 systems for several years, its troops have been able to benefit from training on simulators in Bandung this year. Over five days, the soldiers learned, in particular, how to operate the CSE90 systems from the positions of gunner, vehicle commander and pilot. For in addition to being able to keep the equipment in service, it is essential to ensure that the crews are also ready to carry out any intervention to secure the country.

Remaining with the land Army, John Cockerill teams have also continued production operations of Cockerill® 3105 turrets for the Army, as part of the Indonesian TNMT program.

Training at the heart of the AB program

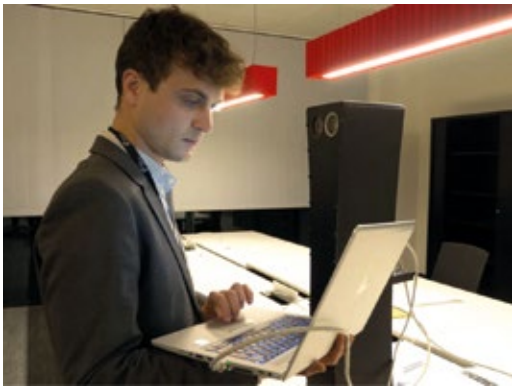
In 2021, while John Cockerill was finishing the production of the AB program systems intended for a country in the Middle East, its teams continued the training related to this program, which was started at the end of 2020. Some 80 turret operators and maintenance staff thereby completed their training during the year. The program will continue in 2022, allowing users of the systems to operate them safely and keep them in top working order.

As the latest addition to the range of Cockerill® turrets, the C1030 successfully fired its first rounds in September 2021. Combining lightness, compactness and firepower, this medium caliber system (30 mm) is designed to equip lighter vehicles that better meet the needs of today's and tomorrow's armed forces.

Digital innovation at the service of European Defense

In 2021, John Cockerill, along with 18 other European defense players, was selected to participate in the FAMOUS project (European Future Highly Mobile Augmented Armored Systems), which is focused on the development of a new generation of European light armored vehicles and the modernization of the current platforms. Similarly, in 2021, it also collaborated in the French DGA project Cognisim, a program aimed at developing capacities for assessing the stress and cognitive load of a soldier learning on a simulator. The result: the simulator will eventually become more than just a training tool, but also a tool for verifying the quality of the training received by the trainees.

Through its participation in the FAMOUS and Cognisim programs, John Cockerill confirms its position as a major player within the defense industrial base in Europe, as well as its determination to contribute to the development of future security solutions for the European Union.



Digital eyes to protect sensitive sites

The Fortress® Multi-Iris, a unique intelligent stereoscopic detection technology dedicated to the perimeter protection of sensitive sites, won the 2021 Innovation Trophy 'Security-Safety' at the Expo-Protection show in Paris in September 2021. This technological solution, which combines stereoscopic vision, thermal sensors, artificial intelligence and advanced algorithms, is part of the portfolio of technological solutions dedicated to safety and security that John Cockerill now offers to sovereign players and operators of vital importance (OIV) around the world.

Thierry Renaudin, President of John Cockerill Defense:

« With our Fortress® technologies dedicated to securing sensitive sites, we are further expanding the spectrum of technologies that we offer to fight against insecurity. »

Reducing our own environmental footprint

Measuring in order to change gear

While John Cockerill provides solutions to decarbonize human activities and preserve natural resources, the Group is also committed to reducing its own environmental footprint. This transition in its practices is part of its social responsibility, and, more broadly, its ESG (Environment, Social and Governance) approach. In 2021, John Cockerill set out to structure its approach to amplify its impact and raise awareness of the need for change among all players.

First carbon footprint assessment

In 2021, John Cockerill carried out its carbon footprint assessment using the 'GHG protocol' method. The Group's headquarters in Seraing (Belgium), where more than 700 employees work, served as a pilot. From 17 000 tons of CO_2 equivalent in 2019, the total emissions fell to 11 000 in 2020. This represents a decrease of 35%, partly due to specific situations which have arisen as a result of the health crisis.

This first measurement of the carbon footprint made it possible to distinguish the sources of emissions and to make a diagnosis based on factual criteria. This diagnostic has two objectives: to start reducing the carbon footprint on the site and to test a methodology, which will then be rolled out across the entire Group.

The report highlights the relative weight of business travel and the mobility in the carbon footprint of the Seraing site. The pandemic and its confinement have led us to develop new ways of working, such as using remote communication to avoid certain trips, or remote working. These changes in habits will continue to have a positive impact on our CO_2 emissions. This assessment has also shown other sources of rapid progress, which can be gradually applied to other Group sites around the world.

Half the amount of industrial waste

The study carried out in 2021 also showed the evolution of the weight of industrial waste produced on the Seraing site. A decrease has been observed: from 358 tons in 2019 to 178 tons in 2020, 69 tons of which are to be upgraded through various channels. The production of waste has therefore decreased by almost 50% in one year.

Exploiting all the possibilities for producing green electricity

With a concern for reducing its own environmental footprint and improving its efficiency, the Group is modernizing its facilities. It is in view of this that the latest renovation work at the Headquarters has made it possible to significantly improve its energy efficiency. Supplied with green electricity from the 15 000 m² of photovoltaic panels installed in 2018, the site moved closer to energy self-sufficiency in 2021, thanks to the optimization of the storage and management of this green electricity, via its MiRIS pilot production, management and storage station.

With a fleet of vehicles that is becoming greener, and a 2 MWc production capacity from its solar roofs, John Cockerill installed 90 terminals in 2021 for recharging the electric vehicles of its employees and visitors. This recharging capability is mainly powered by green electricity produced and stored by MiRIS.

9 000

This is the number of kilometers cycled by our employees in 2021 in their journeys between their home and their workplace.

The Brazilian example

In Brazil, in December 2021, John Cockerill's teams in Macaé inaugurated the largest consumption unit in the region with micro-generation of electrical energy by photovoltaic panels. The production capacity of the installed solar modules represents all of the consumption necessary for the activities of the site. With this pilot project, this entity now has the capacity to achieve self-sufficiency in electricity. John Cockerill has become the only company in the Macaé region to be supplied with 100% renewable energy.

A solar bike race to raise awareness of greener mobility

In 2021, John Cockerill supported The Sun Trip, the solar bike race across Europe. This daring human adventure, whose aim is to raise public awareness of green mobility and the possibilities of alternative travel, stopped off at John Cockerill in June.

The participants in this atypical race, which included a crew supported by John Cockerill, passed through our site in Aspach-Michelbach (France), and then through the Group Headquarters. John Cockerill's employees had many opportunities to join in this adventure: some mounted their bikes to accompany the peloton on the prologue route, while others shared and promoted this adventure on social networks, and others attended the post-race testimony session by Géry, one of the competitors sponsored by John Cockerill, who completed his 11 000 kilometers in 61 days.

During its visit to John Cockerill in Seraing, the Sun Trip peloton visited MiRIS, the pilot station for the production, storage and management of photovoltaic electricity.

French only

Improving our employees experience

The ambition that drives us is to allow all the Talents in the Group to enjoy a fulfilling professional experience, contributing to the objectives pursued by John Cockerill. In 2021, the Group continued its efforts to combine quality of life at work and operational efficiency in the context of a pandemic, while ensuring their health and safety.

Covid-19, a life and work habit

In this second year of the pandemic, the protection of employees and activities to face up to Covid-19 have become a structural activity under the coordination of the health monitoring unit. The result: barrier actions, adjusted presence in workspaces, teleworking, teleconferences and systematic pre-mission risk analyses have demonstrated their effectiveness in all aspects of business life. New habits have been adopted, and have drastically limited the sources of infection in the workplace, while allowing the teams to continue to stay as close as possible to their customers and partners.

That said, Covid-19 did not spare the employees of John Cockerill. As has been the case in civil society, the internal statistics on infection and disease have experienced a few spikes. In India, we had to mourn the death of an employee, whose already fragile health deteriorated following his infection with Covid-19.

Gaëtan Lefèvre, Co-President of the Health Monitoring Unit :

« In order to best protect our employees and our activities around the world, we have followed the evolution of the health situation on a weekly basis, geographical area by geographical area. On this basis, we have adapted the barrier measures and developed other possibilities to interact with our customers and partners. »

Accident frequency rate: **2.75**

Accident severity rate: **0.064**

A 100% digital Health & Safety Day

Under the circumstances of the limitation of physical contact, or even lockdown, John Cockerill completely digitalized its annual Health and Safety Day. Eight thematic workshops were offered online in three languages, bringing together nearly 700 participants.

These practical and dynamic training courses have been designed to meet the needs, in particular, of confined teleworkers, focusing on ergonomics in the tele-workplace, well-being, gentle gymnastics, diet or even to the management of stress, sleep and personal energy.

4 000 days without accidents at John Cockerill Services, North West Region: a major achievement recorded in 2021.

Growth and new Talents

In order to support the development of its activities, John Cockerill recruited more than 350 Talents in 2021. Among the teams that have expanded the most, let us mention the one in charge of developing green hydrogen production channels. As today's world leader in the manufacture of large capacity alkaline electrolyzers, with 33% of the world market in 2021, John Cockerill has seen its workforce grow by 250% in order to support the growth of this activity in Europe, India, Africa and in the Persian Gulf.

In addition to John Cockerill Renewables, John Cockerill Services in France and Africa has also significantly increased its workforce in 2021. It should be noted that there is also a high demand for new Talents in the activities of John Cockerill in the environmental field (water, air and solids treatment).

Expatriate to enrich your skills

One of the strengths of John Cockerill is its international presence, and travel and international mobility are thereby an integral part of its DNA. Moving from one activity to another within the Group, taking on missions abroad and expatriations: John Cockerill offers these and many more development opportunities to meet the individual aspirations of its Talents.

With their unmistakable appeal, these missions make it possible to enrich their skills and broaden their experience. This inevitably has a positive impact for the employee, but also on the company: the circulation of resources, the harmonization of operations and the sharing of good practices. John Cockerill is investing in its Talents through this internal mobility, bringing worlds together and developing a real Group spirit.

John Cockerill Awards: honoring the best innovations of 2021

For the 7th consecutive year, the Group has organized its John Cockerill Awards, thereby rewarding teams that have demonstrated innovation in technology, business models, digitalization and Safety, Health & the Environment.

This year's winners are:

- **Technology**: The TNCB, a catamaran equipped with a Cockerill® 3030 turret and dedicated to securing the coasts of Indonesia.
- **Business models**: The diversification of solar thermal technologies at the service of the nuclear energy of tomorrow.
- **Digitalization**: Connect, the internal television news, which reminds everyone of the good sense of the activities carried out across the Group throughout the year.
- **Security, Health and the Environment**: E2BET, the well-being at work program at John Cockerill Europe Environnement in Alsace (France).
- **Public Award**: The improvement of the performance of a 6-Hi cold rolling mill by teams from John Cockerill India.

Bringing technology creators together

As has been the case every year since 2010, John Cockerill brought together some 200 technologists at the beginning of the year, to explore their common passions and expertise: technology, research and development and innovation.

This international meeting took place remotely once again this year. This did not damp the spirits of John Cockerill's collaborators and experts however: exchanges of ideas, enriching interactions and sometimes surprising discoveries marked this 12th edition of the International Technological Meeting. This is further proof that, at John Cockerill, the interest in technology goes well beyond the community of technologists, with more than 450 employees from all backgrounds and professions watching the sessions in replay.

79% sustainable engagement rate

In 2021, John Cockerill launched its 4th biennial survey to gage the opinion of all its employees. Available into 11 languages, this survey makes it possible to obtain feedback about the feelings – both positive and negative – of each person, and to engage in a constructive dialog aimed at improving the employee experience.

The participation rate, which has been stable from edition to edition and which amounted to 78% this year, gives a representative view of the opinion of John Cockerill employees around the world. Their rate of sustainable commitment remains at 79%. More specifically, this 2021 edition points to a better feeling in terms of well-being at work, leadership and recognition. It also raises the changing expectations in terms of development prospects, understanding of strategic decisions and exemplary leadership.

Finally, this survey highlighted a great disparity of results according to region, profession, status or age. All these lessons will be used to provide specific responses through the 'Employee Experience 2023' plan.

Through the new internal 'We Are John Cockerill' video channel, which was launched in 2021, employees have the opportunity to share their professional passion and enthusiasm. This diversity of profiles enriches the Group and encourages internal vocations and mobility.

181

This is the number of managers and experts trained by the Leadership@ JohnCockerill development program in 2021.

John Cockerill held its first Hall of Fame in 2021. This event recognized the contribution to the influence of the company made by the ten first iconic experts. Together, they have 365 years of experience and commitment in serving the Group.

25%

This is the proportion of managers trained in the prevention of psycho-social risks in Belgium in 2021. This is a way for John Cockerill to reaffirm the importance it attaches to the health and well-being of its employees.

Anne-Françoise Laime, General Delegate for France at John Cockerill, interviewed at Europe 1.

Media and international exposure

In 2021, John Cockerill strengthened its good name by multiplying its publications on social networks. With more than 200 publications, its LinkedIn account has passed the milestone of 40 000 followers. During the year, John Cockerill also attracted the attention of several renowned audiovisual media, such as TF1 and Europe 1 in France or RTBF, RTL-TVI and LN24 in Belgium, which devoted reports and interviews to the technologies developed by John Cockerill.

Beyond the media, participation in international events such as the COP26 in Glasgow (Scotland) or the Dubai 2020 World Expo has given visibility, not only to the Group, but also to its Talents. This serves as a source of pride of them and of inspiration for the younger generations, and even for the not-so-young.

Diversity, a lever for development

Diversity is at the heart of the Group's reality: diversity of activities, diversity of locations, diversity of customers, diversity of technologies. And there is also diversity within the Group's workforce: 60 nationalities, a balance between the age groups, a balance of statuses (37% workers, 32% employees and 31% managers), etc.

The only downside: the low representation of women, which is only 13% of the workforce. In order to try to remedy this imbalance, the Group has initiated several actions in 2021: a survey of women within the Group in order to assess their feelings and collect their proposals, support for the Belgian 'Womenpreneur' initiative, aimed at removing the obstacles to hiring young graduates, the establishment of the 'Women@JohnCockerill' working group that will be in charge of raising awareness on the subject, and the publication of portraits of female employees for International Women's Day.

Pierre Dosogne, Global Workforce Manager and HRBP Corporate:

« Our objective is to offer everyone, whether they already work at John Cockerill or are still on the job market, an employee experience designed to meet their aspirations and our needs. »

Making the life of the Community more dignified

In addition to the five major needs of our time to which its teams are providing technological answers, John Cockerill is also committed to make the lives of the communities in which it operates more dignified. This investment takes two forms: the implementation of commercial projects to develop infrastructures dedicated to improving living conditions and, through the John Cockerill Foundation, support in the form of technological, human and financial resources for humanitarian initiatives and projects. For example, in 2021, John Cockerill and its Foundation rolled out a large number of actions in Belgium, Ivory Coast, Kenya and Malaysia.

60

This is the number of projects carried out by the John Cockerill Foundation over its first 5 years.

Kenya: clean drinking water for 116 000 persons

Faced with numerous water shortages throughout the Homa Bay region (Kenya), the local authorities have decided to rehabilitate, modernize and secure the water supply and treatment infrastructure. Within this context, John Cockerill has designed and built a device that will provide 8 500 m^3 of clean water to some 116 000 people every day. What's more, the technological solution from John Cockerill is close to carbon neutral, as it is powered to 80% by solar energy.

In itself, this project was already likely to improve the lives of local populations. But the John Cockerill teams on the spot realized that neither the market nor the nearby school were part of the master plan of the local authorities. They alerted the John Cockerill Foundation, which decided to finance the connection of these two entities to the new water network. Together, the John Cockerill Group and its Foundation have thereby been able to considerably improve the health conditions of the populations.

Accompanying children on prison visits

Preserving the bond with their parents is a fundamental right for every child. In Belgium, approximately 17 000 children are faced with the imprisonment of their father and/or their mother, and half of them never have the opportunity to visit the prison. In order to increase the number of visits and thereby allow children to reconnect with their parent(s), the John Cockerill Foundation has chosen in 2021 to support the 'Itinérances' program set up by the Belgian Red Cross.

This is a network of more than 400 volunteers who are specially trained to accompany the children on prison visits. The child is always accompanied by the same two volunteers, who are trained to establish a quality relationship with the child, and to guide him/her gently in the very specific environment of a prison. Through this support, the John Cockerill Foundation participates in the (re)creation of balance and ties for the younger generations.

More than just philanthropy

John Cockerill India Ltd, a company listed on the stock exchange, has for many years had its own entity in charge of carrying out societal actions in India. Its motto: beyond philanthropy.

Among its 2021 projects, 3 065 people were helped in medical camps, 2 200 students from a boys' school benefited from new health infrastructure and remote connections, 3 000 Covid self-test kits were distributed to populations close to our factories, and 20 045 trees were planted with 32 farmers made aware of the necessity of planting a variety of tree species.

1 346 employees mobilized to bring water to 650 young ivorians school children

On the request of the John Cockerill team in Côte d'Ivoire, in 2021, the John Cockerill Foundation supported the Marg'EAU association's humanitarian operation, aimed at installing a water network for a school in Abidjan. This took the form of a sporting challenge, sponsored by the Foundation, in which 1 346 Group employees took part, covering a total of 25 819 km on foot or by bike.

This massive mobilization made it possible to raise funds to finance the design and installation work, the drilling and connection phases of which should be completed by the end of 2022.

The result: 650 school children will benefit from access to water. They will then be able to live and study in sanitary conditions, allowing them to carry out the simple, natural and elementary actions of daily life, such as washing their hands, going to the toilet, drinking, etc.

The ' Move for Marg'EAU' challenge was taken up by the John Cockerill teams: the more than 25 000 km covered in 72 hours on foot or by bike have made it possible to finance the connection of a school in Abidjan to a drinking water network.

In 2021, the John Cockerill Foundation redefined its strategy for the period up to 2025. It now defines itself as a 'builder of initiatives for a better world'. It has chosen to focus on supporting concrete projects in line with the Sustainable Development Goals of the UN, in order to improve the living conditions of all communities around the world and make them more dignified. Its action will be mainly based on the real wealth of the John Cockerill Group: its talents and its technologies.

Fruit stalks, a natural fuel whose energy yield is maximized in the John Cockerill pilot unit in Malaysia.

Increasing the value of residual biomass in Malaysia

Various agricultural productions in Southeast Asia generate large volumes of residual biomass, particularly in the form of fruit stalks. This biomass is currently used as a renewable fuel in the energy sector, but its high moisture content reduces its energy efficiency.

Convinced that this abundantly available natural fuel could be better used as a substitute for fossil fuels in the production of electricity, the John Cockerill teams are currently developing a pilot project in Singapore based on their multiple hearth furnaces technology The NESA Solution® . The objective: to increase the calorific value of this biomass in order to both reduce CO_2 emissions per unit of electrical power produced and to use it as a renewable source of energy, as a substitute for coal.

Several steps were taken in 2021: the search for suppliers, the negotiation of raw material supply contracts and long-term production purchase contracts, the structuring of the project financing, and the definition of the complete production line. These actions will continue in 2022 in order to help launch this new energy sector.

The John Cockerill teams are proud to put their electro-mechanical know-how at the service of the people of Diest (Belgium), so that they can continue to live safe from flooding.

Belgium: avoiding floods by regulating the flow of the River Demer

The Flemish region of Diest (Belgium) has long suffered from frequent flooding. To avoid this, the River Demer was partially buried, and diverted around the city in 1960. After this decades-long diversions, the authorities have decided to give back the Demer to the people of Diest, in order to improve their living environment, while ensuring, of course, that they continue to be protected against flooding.

A vast renovation and redevelopment project was therefore launched along a total length of 1.5 km. The Flemish Environment Agency, the public body in charge of the non-navigable waterways in Flanders, has entrusted,in 2021, the electro-mechanical part of the project to the teams at John Cockerill: the low voltage installation, the supply and assembly of 18 motorized valves and 4 large tilting valves, the instrumentation, the electrical connection and programming, and the trenching work for the laying of cables between the various sites.

The population of Agboville used to cross the river by raft in precarious conditions. The bridges built by John Cockerill will allow for safer crossings, for the transportation of both people and equipment.

Bridges for safe river crossings in Ivory Coast

As part of the implementation of the very large contract signed with the Ivorian State for the construction of 15 bridges in the bush and the realization of 4 road inter-changes in the city of Abidjan, the works were officially launched in mid-October 2020.

All the studies for the bridges have been finalized in 2021, and the first metal elements have been installed on the civil engineering supports. The studies for the interchanges have also been finalized, and the rerouting of traffic necessary to set up one of the work sites was started in 2022.

Annexes

Governance

Management of the Group

John Cockerill is overseen by a Board of Directors with a long-term commitment to the Group's industrial project. It is made up of executive and non-executive directors, chosen for their extensive strategic, industrial, financial, social and commercial experience and their attachment to the John Cockerill Group.

In order to carry out its missions, the Board of Directors relies on governance bodies dedicated to the sound management of the company, whether in terms of strategy, control, risks or operations:

- an **Audit Committee**
- **Strategy & Innovation Committees**
- an **Ethics Committee**
- a **Nomination and Remuneration Committee**
- a **Development Committee**
- an **Executive Committee**, whose members may be invited to attend meetings of the Board of Directors when items within their area of expertise are on the agenda.

These coordination forums ensure the interconnection of the Group and the cohesion of the actions undertaken across the board. Their respective responsibilities are clearly defined.

For full details of the Group's governance bodies: www. johncockerill. com

Note in 2021

The composition of the Group's Board of Directors did not change in 2021. Something new: aware of its responsibilities and their evolution over time, however, the Board of Directors has decided to affiliate the Group to 'Guberna', the Belgian Institute of Directors; this is a way to stay informed and be trained in good administration. The attendance rate in the Board of Directors was 95.4% in 2021.

Several changes took place in the Executive Committee between the end of 2020 and the start of 2022.

Following the developments in the energy market, the Energy sector was split into two independent sectors, John Cockerill Renewables and John Cockerill Energy Solutions. This operation should allow each of them to better adapt to their respective market dynamics. From January 2022 onward:

- John Cockerill Renewables has brought together technologies and expertise in solar thermo-energy, storage, hydrogen, assembly activities (EPC) and technological integrator cells. These activities continue to be managed by Raphaël Tilot.
- John Cockerill Energy Solutions brings together the technologies of heat recovery boilers for combined cycle power plants, industrial boilers and associated services. John Cockerill Energy Solutions has been placed under the responsibility of Eric Absil.

In addition, Christophe Cassant joined John Cockerill in 2021 to take over the management of the Environment teams. He has 25 years of experience in the environment, in particular at Veolia and Suez. He succeeds Jean Gourp, who has become President of John Cockerill Asia-Pacific.

Patrick Paramore, the Commercial and Legal Director, has passed the baton to Thierry Josz, while remaining available to the Group for high-level expert missions. Patrick has been working for John Cockerill for more than 31 years. Over the years, he has traveled the world and developed unparalleled expertise in international contracts and commercial negotiation. Thierry Josz worked together with Patrick for more than 6 years as Head of Contracting. He will be keen to continue to develop the solid team that Patrick has built around him.

In order to consolidate the development of the Group and respond even better to the needs of our time, John Cockerill has created a new function of Chief Investment Officer & Public Affairs. This function has been entrusted to Michel Vanhaesbroucke, who joined the Group in January 2022. Michel has 30 years of experience in the energy transition, capital investment funds, the development of new businesses and the establishment of innovation ecosystems. As Chief Investment Officer, Michel's mission is to identify sources of private or public financing and partnership opportunities in order to support the Group's strategic challenges. With regard to Public Affairs, Michel's role will be to support the businesses of John Cockerill in the regulatory and statutory fields, with the aim of making John Cockerill more visible at the level of European decision-making bodies.

Finally, Anne-Françoise Laime, already Group Strategy Director, was appointed General Delegate France in February 2021 as part of the ambition of John Cockerill to achieve strong growth in France.

For its part, the Ethics Committee has been strengthened with additional operational representation: Nancy Davis, General Manager of John Cockerill Balteau, joined the Ethics Committee in October 2021. The rate of participation in the Ethics Committee was 86% in 2021.

Still on the subject of ethics, the Committee has taken the ethical questions raised by employees into account by expanding its policy on ethical practices, with an additional chapter on human rights. Following the setting up of this Committee in 2013, more than 4 200 employees have been made aware of ethical practices.

From 2022, the new e-learning module dedicated to ethics will allow each new employee to attend an ethical awareness training course as soon as they join the Group.

On June 1st 2022, John Cockerill welcomed a new Managing Director: François Michel. He succeeds Jean-Luc Maurange who will continue to work together with John Cockerill as a member of the Group Board. More information on www.johncockerill.com.

The United Nations Sustainable Development Goals (SDGs)

In 2015, in order to address the urgency of global social, environmental and economic challenges, the members of the United Nations (UN) adopted the 2030 Agenda and defined 17 major sustainable development goals broken down into 169 more specific targets. Following the States, institutions, communities, private and public organizations have largely adopted these 17 goals to guide their policies and practices in favor of sustainable development. This Purpose report highlights John Cockerill's participation to these global challenges. It makes a link between its activities and the SDGs to which they contribute.

End poverty in all its forms everywhere

Zero hunger, achieve food, security and improved nutrition and promote sustainable agriculture

Ensure healthy lives and promote well-being for all at all ages

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Achieve gender equality and empower all women and girls

Ensure availability and sustainable management of water and sanitation for all

Ensure access to affordable, reliable, sustainable and modern energy

Promote inclusive and sustainable economic growth, employment and decent work for all

Build resilient infrastructure, promote sustainable industrialization and foster innovation

Reduce inequality within and among countries

Make cities inclusive, safe, resilient and sustainable

Ensure sustainable consumption and production patterns

Take urgent action to combat climate change and its impacts

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Protect, restore and promote sustainable use of territorial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss

Promote, peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Strengthen the means of implementation and revitalize the global partnership for sustainable development

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Our Purpose report online:
2021.johncockerill.com.

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

Ce rapport de mission est également disponible en français sur demande à 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

Produced by

The Communication Department of the Group, in collaboration with AZprint, Tradas, Vectis consult and Visible.be.

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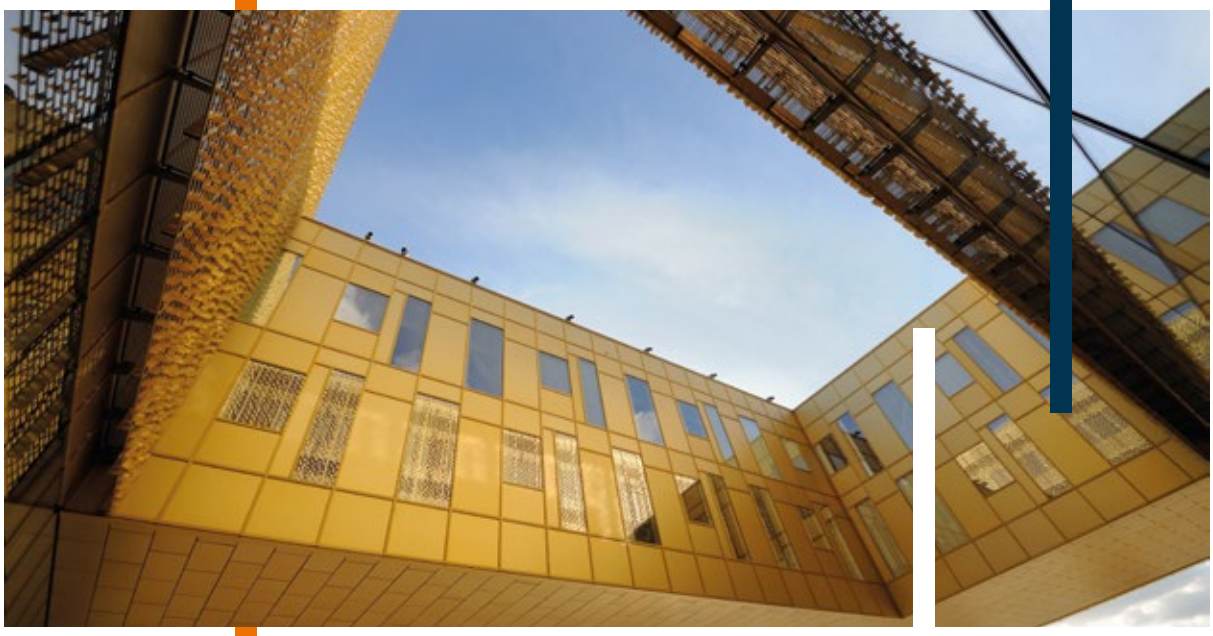

The John Cockerill Group develops large scale technological solutions to meet the needs of our time: facilitating access to low-carbon energy, producing responsibly, preserving natural resources, contributing to greener mobility and fighting against insecurity.

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 5 480-strong workforce of the Group enabled it to achieve turnover in 2021 of 947,46 millions Euros in 23 countries across 5 continents.

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