

# Inspired by the World

Activity report 2017



Cockerill Maintenance et Ingénierie





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## Tuned to the needs of our time

“We are struck by John Cockerill’s personality because, like all visionary managers, he realized the needs of his time. He understood them and found solutions to these.” Times change, problems change, but 200 years later, we are still driven by the same ambition.

*\*Robert Beckers, CEO of CMI from 1982 to 1989.*







# Message from the Chairman

## Vital resources for everyone

# 1

Reducing consumption of natural resources and waste, sanitizing and purifying water and air, and providing access to drinking water are some of the challenges the CMI teams are tackling.





## Inspired by the World

*This year, 2017, will go down as a milestone in the history of the Group. In terms of results, CMI achieved its third best year. On the operational front, the activity was uneven. Orders booked in 2017 should however lead to a promising financial year 2018. But what will be remembered most about 2017, is that the Group laid down its roots for the future. In celebrating its bicentennial with its customers, stakeholders and personnel, the CMI community has become aware that the entrepreneurial spirit and desire to contribute to a world in progress have been part of its DNA for 200 years. And this is not about to stop...*

## New answers to social concerns

In 2017, the Group's technology portfolio has taken two significant steps. For one, CMI has invested in the storage of green energy with a view to providing autonomous solutions to supply communities which are not sufficiently served today. At the heart of the energy transition, CMI Energy Storage ultimate goal is to tackle the main barrier to renewable energies, namely intermittent supply.

Secondly, CMI has invested in the development of mobility to help promote public transport. Thanks to the acquisition of CIM in France and Transurb in Belgium, the Group can now provide guidance and support to communities around the world seeking to develop rail or urban networks. The range of CMI's interventions extends from the supply of locomotives and rolling stock to track laying via signalling, spare parts, training simulators and maintenance workshops.

## Technologies at the service of a more sustainable world

These new activities supplement CMI's responses to the struggle against climate change. Many contracts were signed in this field in 2017: the supply of drinking water in Kenya, the treatment of fluoride emissions in Morocco, the supply of steel/surface treatment lines where (particularly thermal) performance is constantly improving. Not to mention the recurrent activity involving the modernization and maintenance of production tools of all types, to enable these to operate under optimal conditions.

Regarding energy transition, CMI will contribute to the installation of new solar energy generation capacities in China and to the production of biomass pellets to be used as replacement fuel in coal-fired power stations.

In the geopolitical domain, some regions in the world were afflicted by heightened tensions in 2017. Governments focused on preserving balance more than ever before. CMI Defence is doing its share, particularly by stepping up its cooperation with the U.S. Army to develop the defence systems of the future.

## Addressing local needs on all continents

The expansion of CMI's technology portfolio is being accompanied by the ever widening international reach of a Group historically rooted in Belgium. In France, first of all, CMI's coverage has been strengthened with new sites. These are intended to expand local services in water treatment (CMI Environment), provide hydraulic maintenance services (CMI Services) or heat treatment facilities in aeronautics (CMI Industry).

As for CMI Defence and CMI Environment, new subsidiaries were opened in the United States, the region at the cutting edge of Industry 4.0 in the world. The established power of China and the promising capacity of India and Brazil have long been covered by our existing activities. Finally, the arrival of CIM at the end of 2017 bolsters the Group's presence in South America and opens up new prospects in Central America.

## Prospects for development in Africa

In 2017 the CMI Group also strengthened its presence on the African continent to help meet the enormous infrastructure needs. New sites have been opened in the Ivory Coast and Morocco. Another is being set up in Kenya. The projects backed by the Group are geared to providing access to or purifying drinking water, generating green electricity or improving passenger and goods transport. In the very early days of 2018, CMI managed to win a major contract with OCP Group in Morocco to help them reduce their emissions and have more environment-friendly production sites.

## Ensuring growth

With 65 million Euros of operating profit from a turnover of 934 million Euros, 2017 is the Group's third best year. The orders booked in 2017 augur a promising 2018.

This respectable result underscores the Group's capacity to continue to grow despite the uncertainties. In fact, operations faced some difficulties: a delay in the registration of large contracts by CMI Services, the finalization of former projects at CMI Industry and the delay in ramping up production for an important contract at CMI Defence.

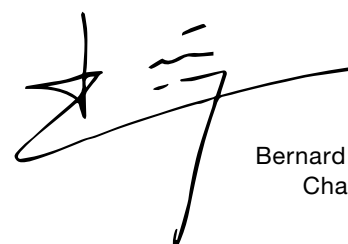
This operational activity is supported by an innovation momentum at all levels: more and more digital responses,

simulations, and connected objects are appearing in the Group's portfolio. Keen interest is being observed for the development of energy storage technologies, among which hydrogen seems to be a credible alternative. In addition to the existing mechanisms to stimulate innovation, the Group has created a platform to accelerate and incubate projects in start-up mode. The way in which Industry 4.0 technologies can generate new business is being tried and tested way upstream. This platform hosted its first internal teams in 2017 and will be opened to the outside world in 2018.

## 200 years of future

We also strengthened the Group's governance in 2017 to face the future with total peace of mind. A position of Chief Executive Officer was created and entrusted to Jean-Luc Maurange. He joined the Board of Directors after having headed several sectors of the Group. This delegation of the day-to-day management is accompanied by the appointment of three new Directors and the establishment of an Strategy and Innovation Committee under the Board of Directors.

Finally, one of the major achievements of 2017 pertains to our intangible heritage. The celebration of the Group's bicentennial was a considerable feature of 2017. It was an opportunity to travel in time and space and share the industrial saga initiated by John Cockerill in 1817. It was above all an opportunity to remind our staff, customers and the civil society, who we are today and, even more, who we want to be tomorrow: a group inspired by the world striving to provide technological and pragmatic responses to the challenges of its time.



Bernard Serin  
Chairman









2017 in brief

# Guaranteeing mobility

# 2

Accessibility, multi-modality, soft mobility, sustainable cities, etc. CMI is providing guidance and support in the development of public transport, in particular in urban areas.

# Key figures

After the exceptional years of 2015 and 2016, 2017 turned out to be the third best year of the CMI Group. The reference year 2002 is the benchmark for measuring how far CMI has come since it became an independent group.

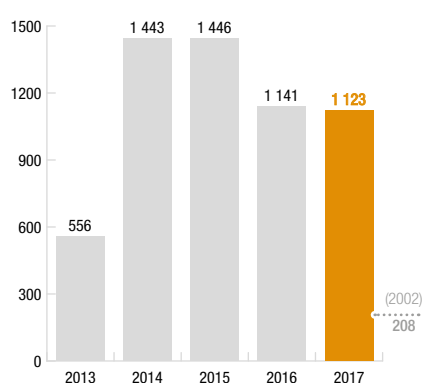
In thousands of Euros	2002	2013	2014	2015	2016	2017
Shareholders' equity	45 201	88 108	132 320	192 256	282 369	262 671
Cash flow	98 030	32 770	306 029	267 832	268 741	96 254
Order entries	208 205	555 873	1 443 426	1 446 225	1 140 751	1 123 056
Turnover	358 280	646 836	896 059	1 317 439	1 227 119	933 665
Operating result	6 083	11 586	52 582	113 701	114 134	65 057

The data presented since 2015 are those of the CMI Consortium which consists of all the Group's sectors and real estate activity. In view of the stake held by the Consortium (directly or indirectly) in each of the subsidiaries included in the first consolidation scope, most of the Consortium's companies are consolidated by the full consolidation method.

The data are published according to the International Financial Reporting Standards (IFRS). The application of these standards guarantees a homogeneous consolidation of the Group's accounts for its entire scope. This also makes it possible to gauge and understand its international performance. All financial data are available in the CMI Financial Report.

## Order entries

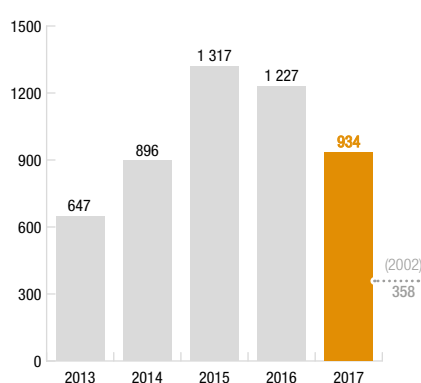
(EUR Mios)



The level of orders booked in 2017 is in overall terms comparable to that of 2016. The significant improvement of CMI Industry and CMI Energy (+91% and +95% respectively compared to 2016) offset a drop in order entries for CMI Defence.

## Turnover

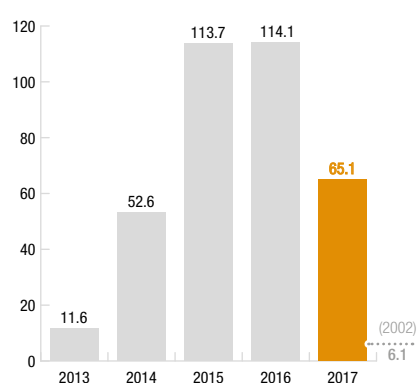
(EUR Mios)



The low level of orders booked by CMI Energy and CMI Industry in 2016, combined with a reduction of the turnover at CMI Defence, yields a drop in turnover for 2017 compared with the previous years (-24%).

## Operating result

(EUR Mios)



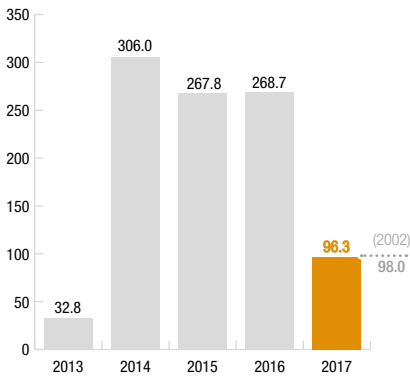
Although down by comparison with the two particularly profitable years, 2017 nevertheless closed with one of the best operating results ever for the Group.





## Cash flow

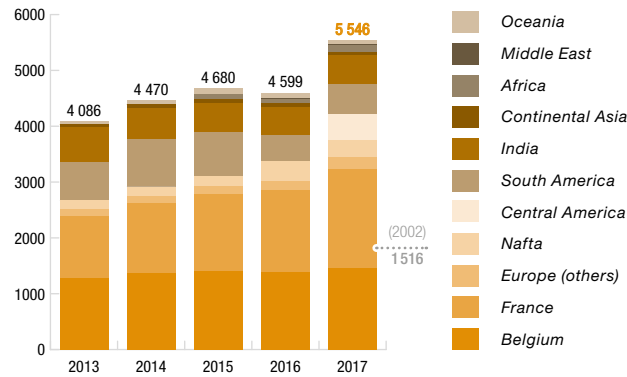
(EUR Mios)



The cash flow for 2014 to 2016 was strongly impacted by the sizeable advance payments collected by CMI Defence. The rapid advance in projects in 2017 consumed these advance payments significantly.

## Workforce

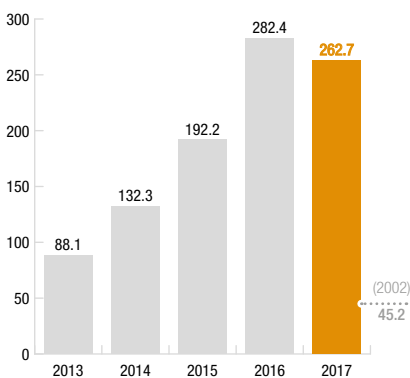
(On 31 December 2017)



On 31 December 2017, CMI employed 5 546 people throughout the world, which is an increase of one thousand members of staff in one year. This increase is explained first by the acquisitions made 2017 (more than 600 staff) and by organic growth, essentially in France, India, the Czech Republic and Morocco. With the acquisition of CIM in particular, the Group is getting a foothold in Central America.

## Shareholder's equity

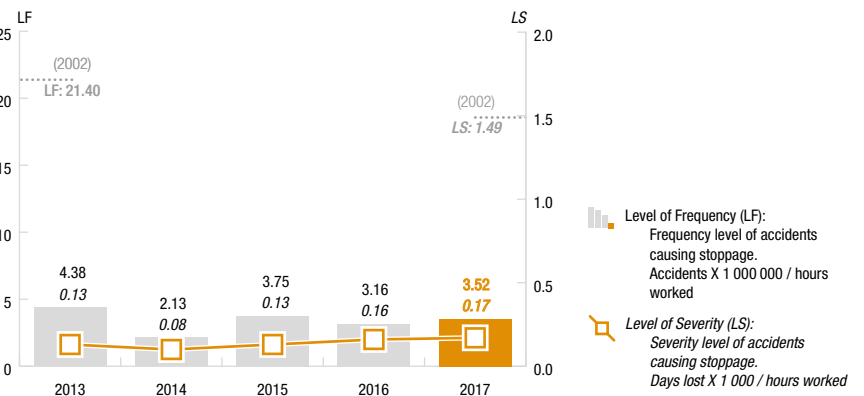
(EUR Mios)



The Group's equity remained at a significant level at the end of 2017, slightly down (-7%) compared with 2016.

## Safety performance

(On 31 December 2017)



Ensuring the safety of men and women is the CMI Group's number one priority. The efforts made over the years are bearing fruit, even if the Group has registered a slight resurgence in 2017 with 3.5 accidents per million hours worked. CMI is continuing its information and prevention efforts, with particular attention paid to newly acquired companies.

# 2017 in brief

*Upholding the tradition established by John Cockerill and his successors, CMI provided in 2017 technological and innovative solutions throughout the world to tackle the challenges of its time. A selection of flagship projects is given below.*



## ● Securing vital resources:

Rational use of natural resources and reduction of waste, water and air sanitation and purification, infrastructure and accessibility to drinking water...



## ● Ensuring mobility:

Efficient and responsible mobility, accessibility to infrastructure and facilities, multi-modality, sustainable cities...



## ● Producing sustainably:

Sustainable design of industrial production tools, energy efficiency, reduction and treatment of polluting emissions, limitation of their impact on health and the environment, recovery of unused calories, recovery and recycling of waste...



## ● Generating greener energy:

Use the sun, water and air to generate environment-friendly energy, make it accessible at a reasonable cost where and when needed...



## ● Tackling insecurity:

Guaranteeing safety and peace, preservation of balances, protection against threats...

## Armenia ●

CMI won the order to revamp a molybdenite concentrate roaster to boost the capacity of an existing multiple hearth furnace.

## Austria ●●

CMI will carry out the pipeworks for the drilling of a new tunnel over 27 km in Lower Austria and will refurbish the air treatment installation of a fertilizer producing company.

## Belgium ●●●●●

CMI will supply a generator to the largest activated carbon reactivation centre in the world; it will participate in the refurbishment of the reactors at the Doel power station, and is launching a new energy optimization activity for industrial cooling.

CMI has created CMI Energy Storage, a new activity dedicated to green energy storage; it is developing its Transport Pole with the acquisition of Transurb in Belgium and CIM in France and is creating an innovation department to focus on materials, robotization, advanced vision and cyber-security in defense. CMI is developing a prefabricated water treatment station with a carbon balance that is clearly more favourable than in traditional facilities. The Group is working on a device to generate hydrogen by electrolysis using green energy.

## Bangladesh and Burma ●

CMI will supply four galvanizing lines, one organic coating line, a rolling mill and a complete steelmaking complex for JSW, Bushan, Meranti and PHP.

## Brazil ●

CMI is growing in the wind power sector and winning several contracts.

## Canada ●

CMI will build its first stripping installation for a composting center as an alternative to the burying of organic matter.

## Chile ●

CMI won a contract for the revamping of a boiler on the Nehuenco site and one for four precipitators (electrostatic fibres to purify gases or fumes) for GE.





### China ●●

CMI sold five recovery boilers and took its place as the world's number one supplier of recovery boilers with 37 sold. It will build furnaces and heat treatment lines for Nanshan. A major milestone, CMI will participate in the installation of new solar energy generation capacities in China. The electric power station concerned is part of an important multi-energy Chinese program which combines thermal solar, photovoltaic and wind energy on the same site.

### France ●●●

CMI acquired EFR in Lyon, thereby boosting its expertise in industrial heat treatment. CMI created CMS Hydro to carve out a position in hydroelectric maintenance. It won several orders for industrial effluent treatment, in particular at Safran, in winemaking or refining sugar industry.

With the acquisition of Aguha in Paris and the creation of three new sites, CMI Aquaged has expanded its network and signed framework agreements with Engie Cofely and Dalkia. An innovation partnership agreement has been signed with the French authorities for water treatment plant sludge treatment and for the organic part of household waste. In the Corrèze department, CMI will build a first furnace for the production of roasted wood pellets to be used as an alternative fuel in coal-fired power stations.

### India ●

CMI developed a compact and innovative painting line, entirely transportable in containers.

### Ivory Coast ●

CMI signed a memorandum of understanding to supply drinking water in the country.

### Mexico ●

CMI won contracts for a lacquering line and a skinpass at Galvasid as well as complete surface and effluent treatment installations in the automobile sector.

### Morocco ●●

CMI set up a subsidiary dedicated to the environment and continues to develop its maintenance activities for thermal and hydroelectric power plants.

### New Caledonia ●

CMI broadened its offer with the refurbishment of boilers and an important lifting contract on the entire VALE site for a period of five years.

### Indonesia ●●

CMI won an order for ten turrets for the Indonesian Army under a five-year program and will supply three recovery boilers for the Grati power station.

### Kenya ●

CMI signed a third large contract for the supply and treatment of drinking water.

### Middle East ●●

In Iraq, CMI won an order for four boilers for the Besmaya site and ten boilers through its licensee Wuxi. In the United Arab Emirates, CMI presented its latest innovation at the IDEX fair: a drone integrated into a turret with an Agueris® immersive simulator.

### Poland ●●

CMI will supply its first Euronorm design boiler for Mitsubishi, a surface treatment line to Lisi Aerospace and a painting section to ArcelorMittal Poland.

### Portugal ●

CMI organized a demonstration of its CPWS turret which is favorably received.

### Russia ●

Severstal selected CMI to build two new steel coating lines.

### Spain ●

CMI will build a new cold-rolling mill in the Santander region.

### Tunisia ●●

CMI supplied three locomotives to the Compagnie des Phosphates de Gasfa and won a third order for an HRSG boiler for Mitsubishi.

### United Kingdom ●

CMI is entirely renovating the boiler at the King's Lynn power station: a world first for a revamping of this scope.

### United States ●●●

CMI supplied two equipment prototypes for the U.S. Army: for the MPF program, geared to 105 mm turrets, and the CRADA program, geared to 30 mm turrets. CMI sold four large capacity HRSG boilers and a heat treatment boiler for a titanium alloy producer.

# Consolidated financial statements

## Assets

In thousands of Euros	31/12/2017	31/12/2016
<b>Non-current assets</b>	<b>440 844</b>	<b>393 477</b>
Goodwill	76 937	66 660
Intangible assets	54 318	44 372
Property, Plant and Equipment	127 052	109 878
Investments in associates	11 518	10 298
Other financial assets	45 219	58 673
Other non-current assets	121 995	93 795
Deferred tax assets	3 805	9 801
<b>Current assets</b>	<b>869 263</b>	<b>819 082</b>
Inventories	103 870	88 315
Trade and other operating receivables	612 600	406 917
Trade debtors	422 000	240 203
Costs and earnings in excess of billing on uncompleted contracts	165 530	144 421
Other operating receivables	25 070	22 293
Income tax receivable	13 448	28 494
Other financial assets	30 753	8 360
Cash and cash equivalents	96 755	271 723
Other current assets	11 837	15 266
Assets classified as held for sale	0	5
<b>TOTAL ASSETS</b>	<b>1 310 107</b>	<b>1 212 559</b>

## Liabilities and shareholders equity

In thousands of Euros	31/12/2017	31/12/2016
<b>Total equity</b>	<b>262 671</b>	<b>282 369</b>
Capital	47 019	47 019
Reserves	203 856	226 119
Non controlling interests	11 796	9 231
<b>Non-current liabilities</b>	<b>94 154</b>	<b>129 501</b>
Employee benefits	14 864	11 538
Provisions	12 008	4 273
Borrowings	33 287	69 833
Other financial liabilities	2 470	3 918
Other non-current liabilities	7 610	1 696
Deferred tax liabilities	23 915	38 243
<b>Current liabilities</b>	<b>953 282</b>	<b>800 689</b>
Employee benefits	45	40
Provisions	10 080	10 498
Borrowings	48 951	22 968
Other financial liabilities	8 633	8 035
Trade and other operating payables	878 760	752 620
Trade payables	405 871	565 261
Billings in excess of costs and earnings on uncompleted contracts	192 811	10 636
Other operating payables	280 078	176 723
Income tax payable	394	349
Other current liabilities	6 418	6 181
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>1 310 107</b>	<b>1 212 559</b>



## Consolidated profit and loss account

In thousands of Euros	31/12/2017	31/12/2016
<b>Operating income</b>	951 346	1 238 500
Turnover	933 665	1 227 119
Other operating income	17 681	11 381
<b>Operating charges</b>	-867 195	-1 108 086
Raw materials and consumables	-413 568	-678 939
Other goods and services	-149 958	-170 819
Employees' expenses	-270 589	-258 048
Impairment losses	-16 713	-2 046
Reversal of impairment loss	1 272	1 921
Provisions	-3 760	8 716
Other operating expenses	-13 878	-8 870
<b>EBITDA</b>	84 151	130 415
Depreciation and amortisation	-19 094	-16 281
<b>EBIT</b>	65 057	114 134
<b>FINANCIAL PROFIT (LOSS)</b>	-10 340	-3 963
Share of result of associates	167	25
<b>Profit (loss) before tax</b>	54 884	110 196
Income tax	-30 211	16 660
<b>Profit (loss) after tax</b>	24 673	126 856
Profit (loss) attributable to non-controlling interests	-954	793
<b>Profit (loss) attrib. to equity holders of the shareholders of CMI</b>	25 627	126 063







Operational activities

# Producing in a sustainable manner

# 3

Every one of us aspires to benefit from technological progress without affecting life on the planet. CMI is committed to making production tools and infrastructures less energy-consuming and more environmentally-friendly: reducing energy consumption, treating polluting emissions, recovering unused calories, recycling waste, etc.



# CMI ENERGY



## Technology, efficiency, flexibility

CMI Energy designs, supplies, installs and upgrades steam generators for combined cycle (gas and steam or integrated solar), thermal solar, co-generation or industrial electric power plants. These generators are a key element to the performance of these electric power plants.

CMI heat recovery boilers can be installed behind gas turbines of all capacities and makes, and burning all types of fuel. They are particularly adapted to operating in cycles entailing frequent start-ups and shutdowns of electric power plants, depending on electricity demand.

CMI Energy also develops boilers for 'tower' solar thermal power plants. Installed on top of a tower, these boilers capture solar energy and can generate energy round the clock, thanks to long-term energy storage. This procedure represents an economic alternative to the use of fossil fuels to generate electricity.

In terms of storage, CMI Energy is building the largest pilot industrial energy storage system in Europe on its industrial site. As an assembler, CMI Energy provides photovoltaic

panels connected to flow and lithium-ion batteries for energy generation and storage.

The offering of CMI Energy also extends to industrial boilers for sectors such as chemicals, petrochemicals, the food processing industry, biomass...



In parallel, CMI Energy provides expertise and technical assistance, retrofitting and upgrading services for all types and makes of boilers. CMI Energy also boasts a Welding Expertise Center featuring the latest welding techniques for all types of materials.

CMI Energy also has a Mexican workshop specialized in the manufacture and maintenance of boiler components, particularly pressure parts.

In all these fields, CMI Energy capitalizes on its technological know-how and project management expertise throughout the world. Its teams are based in Belgium (Liège and Willebroek), in the United States (Erie - Pennsylvania and Charlotte - North Carolina) and in Mexico.

## 2017 in brief

The year 2017 was characterized by a varied energy market. Several giants in the sector announced massive job cuts. But experts agree that most electricity generation will mainly come from thermal sources in the short and medium term, with gas remaining an important source of energy with an upward trend. This holds out bright prospects for the historical products of CMI Energy.

Within this context, CMI Energy continued its business strategy and the development of its aftersales activity. These strategies produced results in 2017 with CMI winning several contracts, confirming its technological and commercial leadership and emerging as the world's number one supplier of recovery boilers with 37 units sold, in particular in Iraq, Poland, China and the United States, and to several new clients. Furthermore, CMI continued its developments in thermal solar energy and booked a new order in China – a highly promising market. CMI Energy also won contracts to retrofit boilers (manufactured by competitors) that had exploded. Finally, CMI Energy is now positioned on the energy storage market with the creation of CMI Energy Storage. The target is to break through as a turnkey integrator on the renewable energy sources market for energy storage and stored energy management.



## A brilliant technology

CMI Energy won a contract to design and supply a molten salt thermal solar receiver to be installed at the Haixi thermal solar power station (50 MWe) in China. This contract was signed with the Shandong Electric Power Construction Corporation III (SEPCO III).

This electric power station is part of an ambitious Chinese multi-energy program. It combines thermal solar energy, the use of photovoltaic panels and wind generators – a unique mix of renewable energies on the same site.

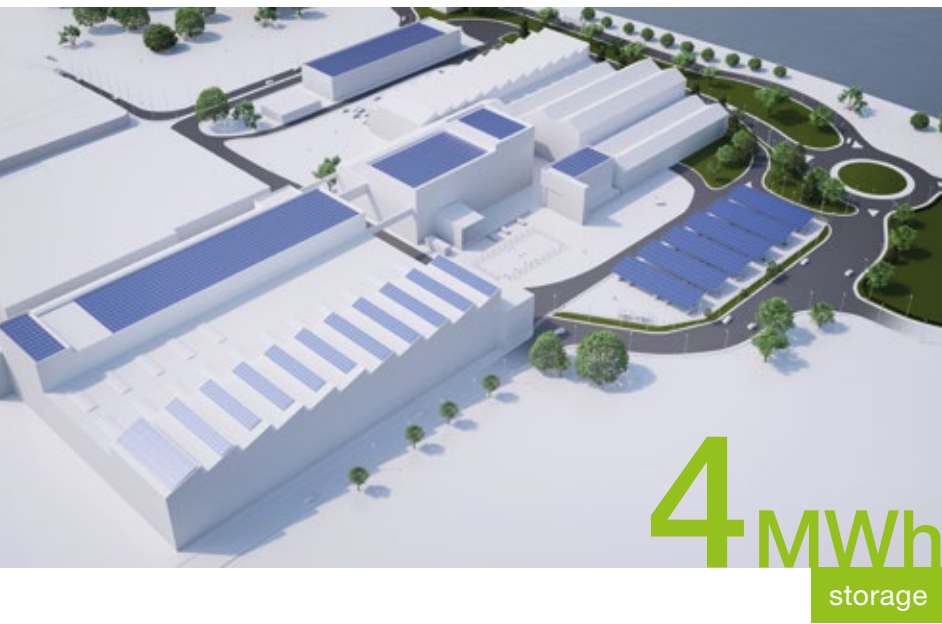
Following the commercial success of CMI Energy in South Africa and Chile, this new contract confirms its leadership in molten salt receivers.

## Cutting edge revamping

The Aftersales Department of CMI Energy completely revamped an old CMI boiler at King's Lynn (United Kingdom). The owner of the power station decided to replace the gas turbine, retrofit the steam turbine, and replace the lower part of the boiler. CMI Energy totally re-engineered this part, dismantled the parts and assembled new modules. The teams also repaired the inlet ducts and the insulation – high-end work that constitutes a world first.







## The future: energy storage

In 2017, CMI Energy created a new business unit dedicated to energy storage and green electricity management: CMI Energy Storage. This is positioned as a turnkey integrator and supplier of integrated electricity generation, storage and management units. CMI will launch a pilot facility in Seraing in 2018. Composed of photovoltaic panels, the facility will include several storage technologies (flow and lithium-ion batteries), which could, but do not need to be, connected to a medium-voltage grid. The long-term objective is to provide tried and tested solutions to users in accordance with their profile and needs.

## Continuous innovation

In a changing energy world, CMI Energy is not resting on its laurels, but is continuing to innovate. The Sector distinguished itself at the third edition of the CMI Awards, the Group's internal innovation competition, where it won three of the awards conferred!

The first relates to thermal solar energy. The teams developed a new product: a molten salt steam generator.

The second award recognized the integration of piping into the inlet duct of large capacity boilers – a fine example of improving a historical CMI product.

Finally, the third award highlighted the quality of the approach that led to the creation of CMI Energy Storage. A multi-disciplinary CMI team drew attention to the need to develop tailored solutions for storing electricity generated by photovoltaic panels or wind turbines.







## Decreasing the energy footprint

In 2017, CMI was ranked as the leading worldwide supplier in terms of recuperation boilers. By recovering the heat from burned gases, these boilers generate steam which enables the energy efficiency of power plants to be increased by 50%. For the past 50 years, the teams of CMI have been putting in place methods for decreasing the energy footprint within the framework of 300 projects in 49 countries, with a total installed output of 131 gW. These CMI solutions have also been marketed through licence agreements with players in China, India, Korea and the Middle East.



199

Turnover (EUR Mios)

242

Order entries (EUR Mios)



## Outlook

In 2018, CMI Energy plans to maintain and consolidate its position as world leader in heat recovery boilers and thermal solar receivers, thanks to its technological lead and the quality of its project management. CMI Energy will also boost the development of its aftersales activities.

In addition, green energy is more than ever at the heart of the diversification strategy of CMI Energy. The energy storage activity being built in Seraing is promising and should enable CMI to emerge as a key player in the management of these renewable energy sources. Biomass is also being explored. The quality of its equipment, diversification and innovation are CMI's assets in maintaining its strong position in a rapidly changing energy market.



**CMI DEFENCE**

# Cockerill<sup>®</sup>, undisputed leader in weapons systems integrated on high-mobility armored vehicles

Among the top defense companies in the world, CMI Defence is the undisputed technological leader in multifunctional, high-power systems for light and medium weight armored vehicles. It provides complete and innovative solutions:

- **Gun-turret systems for the entire 25 mm to 120 mm caliber range.** CMI Defence designs, integrates, produces and upgrades modular Cockerill<sup>®</sup> weapons systems that combine high fire power with light weight for high mobility armored vehicles, guaranteeing performance and protection for the crew.
- **Training and simulation.** CMI Defence customizes and provides training on Cockerill<sup>®</sup> weapon equipment and systems for its customers and partners. Such training encompasses theoretical and practical instruction, including firing and training on the simulators developed and marketed under the Agueris<sup>®</sup> brand.
- **Lifecycle support.** CMI Defence provides services and support to its customers throughout the lifecycle of their Cockerill<sup>®</sup> weapons systems. These services include support for integrated logistics, technical assistance, operational maintenance, system modernization, documentation, spare parts, tools, etc.
- **Innovative enhancement** aimed at developing the capabilities of Cockerill<sup>®</sup> weapons systems (either new or already in operation) in accordance with their users' operational requirements.

This entire offering benefits from the cutting-edge expertise of CMI Defence in software, ballistic and mechatronic engineering and from high-level production and assistance processes in both technical and human terms. CMI Defence is also right at its customers' and users' side, in Saudi Arabia, Belgium, Brazil, the United Arab Emirates, the United States, France, Indonesia, Poland and Singapore.

## 2017 in brief

As in 2016, the teams of CMI Defence went through an intense year in 2017. After the prototyping and pre-series phases, the major program for the delivery of 'AB' modular turrets entered the series production phase with several dozen turrets already produced and delivered. At the same time, CMI Defence continued its optimization efforts in commercial, innovation and organizational terms, geared to achieving the 'Target 22' strategic objectives.

The United States is one of the priority target markets. CMI Defence has positioned itself on that market for the renewal of medium and large caliber turrets for the U.S. Army. A 30 mm turret prototype has been delivered under the CRADA program, a phase leading up to the invitation to tender for the modernization of the Stryker fleet. Additionally, a consortium has been formed with ST Kinetics and SAIC to submit a revised offer for the MPF program to acquire 105 mm systems.

On the organizational front, CMI Defence has deployed a vast continuous, multi-theme improvement initiative, involving nearly a quarter of its staff on a voluntary basis. It was also the first Belgian player to obtain the latest version of ISO EN9100 certification. CMI Defence also formalized its innovation activities by creating a dedicated department and developed immersive turret simulation using virtual reality goggles.

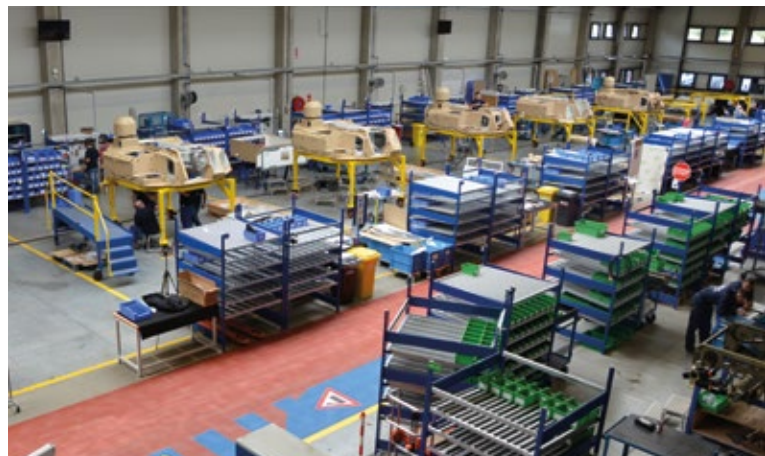
Finally, the reputation of CMI Defence has been enhanced considerably by its candidacy to acquire the French vehicle maker RTD. Although the acquisition did not go through, due to the seller's Volvo Group decision not to proceed with the sale, the steps taken proved very positive by providing extensive visibility for CMI Defence and confirming its status as a major player on the international stage.



## AB in the production phase

The AB program entered its multi-site production phase, with its production and assembly lines divided among Distroff (France), for the production of large caliber guns, Aubange (Belgium), for the production of turret shells and the assembly and commissioning of turrets, and Loncin (Belgium), for the assembly and commissioning of turrets.

Having managed the production launch and the complexity of the supply chain, these facilities have gradually stepped up their efforts to come close to the cruising speed expected in 2018. At the end of 2017, they had produced several dozen turrets, all shipped to the customer.





## The United States, a commercial priority

Extensive work was carried out in 2017 to enable CMI Defence to respond to two equipment supply programs for the U.S. Army.

Under its research and development partnership (CRADA) with the engineering center of the U.S. Army (ARDEC), CMI Defence delivered a 30 mm turret prototype. Its testing phase is underway. The U.S. Government will use its conclusions to draw up the contract procedure and the specifications relating to the invitation to tender for the modernization of its fleet of Stryker systems. CMI Defence should then be in a favorable position to compete for this program.

Furthermore, with a view to the MPF program for the procurement of tanks equipped with 105 mm gun-turrets by the U.S. Government, CMI Defence joined forces with the Singapore-based vehicle manufacturer ST Kinetics and the U.S. integrator SAIC. Together, they integrated a

2  
programs



Photo: SAIC

Cockerill® 3105 turret into the STK vehicle. In 2018, this system will be proposed as a sample for the invitation to tender. CMI Defence aims to be part of the consortium selected by the U.S. Army at the end of 2018 to participate in the next phase of this invitation to tender.

It is worth noting that the sales and marketing teams of CMI Defence have continued to canvass other markets such as the Middle East, South-East Asia, Europe and Latin America.



## CMI at the forefront of European defense

In the ranks of the world's leading defense companies since 2016, CMI Defence consolidated its status and ambitions in 2017. In March, it invited the senior French political, military and industrial authorities to the Cockerill Campus in Commercy to present its ambitions and capability to meet French needs in defense equipment and services.

CMI Defence also declared its ambitions by bidding to acquire Renault Truck Defense (RTD) from Volvo. The operation did not go through, due to the seller's decision not to proceed with the sale, but it afforded CMI Defence an opportunity for visibility and recognition: CMI is more than ever recognized as a top-notch player in the European defense industry.



## Innovation at the heart of activities

CMI Defence continued to innovate in 2017. It developed an immersive simulation solution using virtual reality goggles for a very realistic experience in all Cockerill® line turrets. It is now possible to become familiarized with the cockpit of the turrets and its sound and sight conditions, at a lower cost.

CMI Defence has also established an innovation department whose efforts concentrate on four fields of exploration: materials, robotization, advanced vision and shut-down systems for maintenance.

Finally, CMI Defence made progress with its cyber-security practices, in particular with regards to the very strict requirements of U.S. programs.



## Outlook

On the operational front, 2018 will be marked by the AB program: production will continue at a sustained pace in multi-site mode and the training activities will start in the second half of the year. Some one hundred trainees will be hosted at the Cockerill Campus in Commercy (France), to be trained in the operation and maintenance of the Cockerill® 3000 Series modular turrets.

Where commercial activities are concerned, 2018 should be the year for reaping the benefits of the efforts made over several years throughout the world, by signing new contracts, whether in the United States, South-East Asia or the Middle East. On its domestic market, CMI Defence will continue its efforts to convince the Belgian authorities to call on CMI for the renewal of their fleet of armored vehicles equipped with medium-caliber turrets.

CMI Defence will continue to innovate in 2018 in new products. Its remotely-operated CPWS protected station will be upgraded to make it even lighter, more versatile and more competitive.

Finally, CMI Defence will continue with its strategic ambition to be a major player in the European defense industry. It will thus keep an eye on upcoming opportunities to grow through acquisitions so as to consolidate its position on the market and develop the scope of its offering, in order to provide its customers with optimized products and services in terms of cost, performance and availability.

# 259

Turnover (EUR Mios)

# 331

Order entries (EUR Mios)





# CMI INDUSTRY



## Technologies to turn strategic needs into performance

CMI Industry draws on its expertise in industrial processes to improve the overall performance of its clients' facilities by deploying innovative, tried and tested processes to manufacture all the products required by the target market in an economical and reliable manner.

Its offering covers:

- **Equipment and services relating to reheating furnaces, pickling, acid regeneration, cold rolling, strip treatment, and automation** for steel and non-ferrous metal treatment;
- **Heat treatment furnaces** for the molding and forging industries;
- **Electrolytic and chemical surface treatment** facilities for different types of industries.

Whether for complete industrial complexes, specific equipment or technical solutions, CMI Industry can respond to the overall and customized needs of its clients, throughout the lifecycle of their equipment: from design to commissioning of facilities, as well as their conversion and modernization.

Moreover, CMI Industry provides customized aftersales services and spare parts to minimize downtime. It also advises and supports clients in improving the performance of their facilities through training, expertise, services and remote assistance.

CMI Industry is established in North America, China, Europe, India and Russia. It can also call on the worldwide network of the CMI Group.



## 2017 in brief

In 2017, the orders booked by CMI Industry attained a level unparalleled since the 2008 crisis. Recovery is on the agenda in the steel industry and the Sector's metallurgy activity is back on track. CMI Industry booked many orders for new facilities in Europe, Asia and Africa as well as on the American continent. The Sector has also been very successful in modernizing existing production lines.

This positive trend is not limited to activities related to steelmaking. The results of surface treatment in 2017, stemming from the diversification strategy, are also very encouraging. These activities are being developed in France and internationally. The acquisition of the majority shareholding stake in the Lyon-based company EFR this year bolsters the CMI Group's expertise in heat treatment.

In 2017, CMI Industry continued to implement an internal organization in line with its two major strategic issues: innovation and diversification. Innovation is not just a matter of technology. In 2017, CMI Industry implemented significant processes to optimize the management of its projects in terms of costs and technological solutions proposed to clients. CMI Industry is also continuing to consolidate a centralized organization through its 11 entities across the world, whilst the optimization of project management processes constitutes another lever on which the Sector wants to count so as to continue to improve its performance.



*In December 2017, Russian steelmaker Severstal inaugurated its new high performance organic coating line supplied by CMI. This is the fourth process line ordered by Severstal over the past ten years.*

## Recovery in the air for the Metals activity

After the lean years that followed the 2008 economic crisis, the situation is more favorable in the steel sector. This is leading to significant investments by clients of CMI Industry. The order book was filled to bursting in 2017. CMI Industry thus surpassed its order booking objectives by a wide margin, including several major deals: seven galvanizing lines, two organic coating lines, an annealing line, two cold rolling mills, etc.

By obtaining a number of contracts to modernize existing production lines, CMI Industry is also giving concrete form to its ambition to break into this market.

The Sector enjoys an excellent reputation on the market. It is capitalizing on the innovation momentum and is able to call on a range of unique technologies, such as strip stabilization following the zinc bath or several innovative strip cooling technologies, along with the latest generation of its coaters.



*In September 2017, CMI acquired a majority share in French company EFR. Leader on the industrial thermal treatment market since 1928, the company capitalizes on renowned brands such as CFR, CECF, FOFUMI and RIPOCHE.*

*In 2017, the teams in charge of surface treatment took up the challenges which had been set in terms of volume and the internationalization of orders.*



## Wind in the sails of surface and heat treatment

CMI Industry entered the electrolytic and chemical surface treatment market with the acquisition of the French company Sleti in 2015. In 2017, CMI Sleti continued to grow in France, where its expertise is recognized as it is internationally, with sizeable orders in Poland and Mexico.

The second competence center that brings together teams specialized in heat treatment was bolstered by the acquisition of EFR. A specialist in surface treatment and the leader on its market, EFR has developed a wide range of industrial furnaces which supplements that of CMI, in particular in the field of aluminum.

The acquisition of EFR reflects CMI's determination to continue to develop in major sectors such as aeronautics and the automobile industry. This operation paves the way for many synergies in the expansion of the Sector's product and solution range along with perspectives for business development worldwide.



## Turning green

Innovation and diversification are at the heart of the strategy of CMI Industry. The Sector is mobilizing its skills to position itself in the segment of green technologies.

A third of the energy potential of wind or photovoltaic technology cannot be used because this energy is available when the grid does not need it. CMI Industry is working on a device that can use this energy potential to produce hydrogen – clean energy that can be stored and used for all types of industrial activities. The Sector is studying different applications based on onsite hydrogen production on demand, adapted to its client's needs. In other words, production that reconciles productivity with social responsibility.

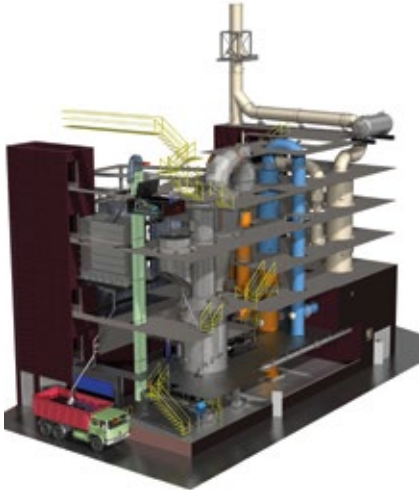






4<sup>th</sup>

modernization



*In October 2017 CMI was certified by Russian steelmaker NLMK for achieving the performances of an acid regeneration plant, following its total refurbishment. This is the fourth total modernization of this type that NLMK has mandated to CMI over the past five years.*

## A compact and innovative color coating line

CMI FPE, the Indian entity of CMI Industry, won the public prize at the internal innovation competition organized by the Group. Its 100% in-house project meets a growing demand for efficient and compact color coating lines intended for clients producing limited quantities.

CMI FPE has consequently developed a compact color coating line mounted on skids. This solution can be transported in containers and assembled and commissioned in two weeks. Simple in design, this solution considerably limits the infrastructure and works needed for its installation. It is already eliciting interest from clients in different countries.

## Outlook

The more favorable world economic climate, with steel demand and production on the rise, strengthens the investment capacity of steelmakers. CMI Industry has booked orders at a level not seen since the start of the 2008 crisis.

CMI Industry relies on its many references, the quality of its products, and an innovation capacity that meets the demands of a market constantly calling for more added value. Combined with the fundamental work on team organization and process optimization, 2018 is set to be a positive year.

Innovation and diversification are more than ever at the heart of the strategy of CMI Industry. Steelmaking remains an important market. New prospects are opening up, in particular through heat and surface treatment in aeronautics and the automobile industry.

139

Turnover (EUR Mios)

214

Order entries (EUR Mios)







## CMI ENVIRONMENT

# Customized overall solutions at the service of environmental performance

CMI Environment makes its expertise and innovative capacity available to design customized overall environmental solutions for water, air and waste treatment, along with energy efficiency:

- Industrial and municipal water treatment
- Preventive and curative industrial and tertiary water treatment solutions
- Corrosive, harmful and odorous gas emissions treatment
- Solid waste treatment: biomass, activated carbon (multiple hearth and straight furnaces – The Nesa Solution®)
- Energy efficiency solutions (hydro-electric, bio-methanization, support for energy performance, reference trainers for Afnor).

The know-how and expertise of CMI Environment in the entire environmental field enable it to meet all the needs of communities and industrialists in all sectors, by constantly adapting to local economic and regulatory constraints.

CMI Environment is capable of participating at all levels of a project: from design to commissioning. The solutions provided apply to existing or new facilities.

CMI Environment is established in Belgium, France, Hungary and the United States. It can also call on the worldwide network of the CMI Group to provide its expertise on all five continents.

## 2017 in brief

For its first complete year of operation (CMI Environment was created on 1 August 2016), the Sector's priority was to structure itself and acquire the skills needed for the optimal implementation of its strategy within the framework of major export projects. A dedicated project management team was set up in Liège (Belgium).

CMI Environment did not, however, overlook its historical markets in Europe, mature markets where projects developments in national legislation and where opportunities mainly arise in the area of the modernization of existing facilities or the development of new processes.

CMI Environment has gained great recognition for its expertise and its innovation capacity. In water treatment, CMI Aquaged is now the reference in France among major players such as Dalkia and Engie. Another recognition for CMI expertise: CMI Proserpol has entered an innovation partnership in France. The aim is to provide solutions for sludge from treatment plants and for the organic part of household waste.

2017 was more difficult in the air treatment sector as several major projects were postponed. This is a delicate situation for the teams dedicated to energy efficiency: the overall context of low energy prices is hindering investments.

In waste treatment, 2017 closed on a more positive note with several orders, including an all-metal furnace in Corrèze (France) intended to process forest waste into roasted pellets that can replace coal to generate electricity.

## An organization on the move

CMI Environment is continuing to re-shape its structure with a twofold objective: first to consolidate the organization of a sector which has grown through acquisitions and second to hone the skills to secure growth on the historical markets and clinch major projects internationally. CMI Environment continues to strengthen its geographic network, particularly by creating new agencies in France.

The new organization also entails growth in the workforce and the acquisition of specific skills, in particular in order to become a global brand. A unit is henceforth dedicated to major export projects. It brings together the specific skills for optimally targeting, assembling and completing projects in the field.

## Water: now among the greats

Good things come in pairs. While CMI Balteau was winning a third major contract in Kenya for the treatment and supply of drinking water, CMI Aquaged joined the ranks of the mighty in the water sector in France, thanks to two major customers: Engie Cofely and Dalkia. These framework agreements open up major prospects in terms of orders.

CMI Proserpol continues to see its turnover grow. This regular increase is fueled by diversified projects in physico-chemical solutions for the industry, and in biological treatments, with a first project in sugar refining.



*Rehabilitation and extension works of the treatment installation and distribution network for drinking water in Kenya.*





Horizontal 'Plug & Play' gas scrubber.

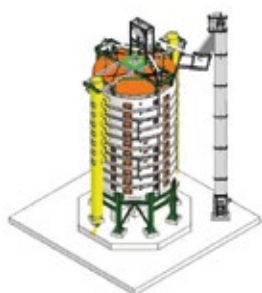
## Innovation partnership with the French authorities

CMI Environment is participating in an innovation partnership in France headed by two Parisian syndicates in charge of water treatment (SIAAP) and household waste (SYCTOM). Several groups of specialized companies have been commissioned to study solutions for the recovery of sludge from treatment stations and the organic part of household waste. The consortium led by CMI Proserpol has qualified for the development phase of a bio-methanization solution in the laboratory to address energy neutrality and the maximum reduction of final solid residues.

## Promising developments in biomass

In waste treatment, The Nesa Solution® is continuing its development with several contracts, including one to increase the capacity of a molybdenum treatment furnace in Armenia and another for the installation of the largest activated carbon regeneration site in the world, at Chemviron in Belgium.

Furthermore, The Nesa Solution® sold an all-metal furnace for biomass treatment in Corrèze (France), which will be used to process forest residue into roasted pellets. The team is also conducting tests to process various types of materials containing carbon into an activated carbon equivalent.



## Air: a year of transition

2017 was not a great year for air treatment activities, and was in fact difficult on the business front for CMI Europe Environment. Many projects on the verge of being concluded were postponed for political and economic reasons, or because of delays in obtaining permits. Several of these suspended projects will materialize in 2018.

## Target: standardization

CMI Environment is working on the development of solutions to expand its product portfolio. Several projects have a point in common: standardization.

CMI Balteau, in partnership with the neighboring company Eloy Water, more precisely its civil engineering department, has developed a prefabricated station solution for water treatment. This solution makes it possible to reduce both production costs and project duration. Another advantage is a clearly more favorable carbon balance as compared to traditional installations.

CMI Environment is also working together with the start-up Care4Water to develop standardized, small-sized electro-chlorination machines for water treatment. The markets targeted are making water drinkable (in isolated areas, for instance), recreational water treatment, and more generally cooling systems for industry.

Standardization is also the order of the day in air treatment. CMI Europe Environment designed a standard horizontal scrubber, easier to transport, install and maintain.



Perfect economic and environmental combination for this new concept in purification station made up of pre-fabricated concrete elements.

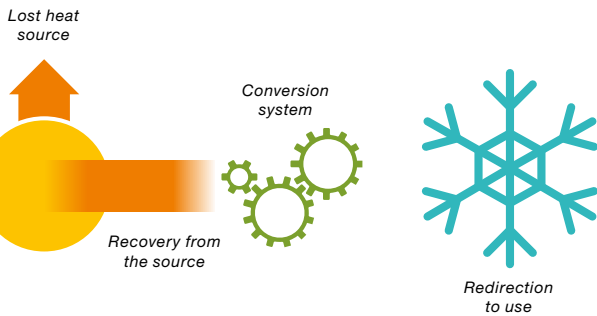




## Energy efficiency: producing cold from heat

The optimization of energy management remains a major challenge, but the low energy prices in 2017 affected the profitability potential of the projects. The teams therefore focused their efforts on other fields. Simulation skills are placed at the service of all the Group's sectors. CMI Energy Efficiency also launched a new energy optimization activity for industrial cooling.

Climate change is bringing with it an increase in energy consumption for air conditioning. CMI Energy Efficiency is working on a promising device to generate cold from the lost heat generated by industrial equipment.



## Outlook

CMI Environment has set major milestones towards its diversification and international development strategic targets. The well-filled order book should help achieve this objective.

The Sector is consolidating its position in its historical territories by developing solutions that meet the specific needs of a mature market. Thanks to this continuous innovation momentum, CMI Environment is adapting its products under a standardization rationale that is further improving its competitiveness, and should enable it to enter new areas and gain customers in the entire European market.

The Sector is also turning to exports where there is high need for new infrastructure and facilities, particularly in the water sector. The team dedicated to the development of major international projects is focusing on South-East Asia and Africa.

In general, CMI Environment wishes to further increase the technological content of its offers, in particular through innovation projects and targeted partnerships, and focus its commercial efforts on offers that will enable it to stand out from its competitors.

84

Turnover (EUR Mios)

89

Order entries (EUR Mios)



Treatment plant for liquid waste from the aeronautical industry.

# CMI SERVICES



## Men and Women working on better performing equipment

CMI Services provides advice and support to industries and operators of public facilities in the assembly, operational management, maintenance and modernization of their industrial facilities. It carries out scheduled or unscheduled specialized interventions, and provides local services to improve

the technical, economic and environmental performance of their equipment.

Present in  
**23**  
countries

CMI Services relies on an interconnected network of intervention units, workshops, specialized engineering offices and on the on-site support of specialists and managers.

CMI Services is established in Europe but its geographic coverage spreads widely across Africa, North and South America, Asia and New Caledonia.

Thanks to a very wide technological offer and to its marketing and sales organization, CMI Services serves a very large number of customers in sectors including rail, ports, waterways, aeronautics, mines and

quarries, the chemical industry, steelmaking, public infrastructures and institutions, petrochemicals and energy.



## 2017 in brief

In 2017 CMI Services was able to make great strides in its geographic and technological diversification strategy.

With the acquisition of Transurb in Belgium, and CIM in France, CMI Services has substantially expanded its offering and now provides a full range of products and services for rail and urban transport players. The Transport Pole created in the Sector is a sound base for its strategy.

In Brazil, CMI Services is emerging from a difficult situation in a country still marked by the economic crisis. The Sector is developing in wind energy and has obtained several contracts. In New Caledonia too, in spite of the low price of nickel during the first ten months of the year, satisfaction is justified with the conclusion of several contracts that make it possible to diversify activities there.

In France and for exports, the creation of CMS Hydro enables CMI Services to position itself as a major player in hydroelectric maintenance.

CMI Services is also consolidating its services as a quality provider in the nuclear industry in France and Belgium with several substantial contracts.

The development ambitions in Africa are taking shape thanks to major commercial efforts and the establishment of a new company in Ivory Coast. Although these efforts have not led to the signing of a major contract in 2017, contacts and prospects make us optimistic.

## Global player in transport

With the acquisition of Transurb and CIM (Compagnie Internationale de Maintenance), the CMI Group henceforth has activities, expertise and resources in all rail and urban transport areas.

Transurb, hitherto a subsidiary of the SNCB (Belgian Rail), brings to CMI Services competencies in rail project management, along with its leading position in signaling systems and advanced simulators dedicated in particular to train drivers and operators.

With the acquisition of CIM, CMI's offering is expanding further by integrating the maintenance activity, the supply of equipment and spare parts and the management of major rail and urban transport projects.

All activities relating to transport, including the historical locomotive activity, are grouped in a 'Transport Pole'. By calling on the skills of the CMI Group in putting together complex financing packages, this pole is thus capable of carrying out all types of rail and urban transport projects.



## An expanding range



In the new Transport Pole, the locomotive activity takes pride of place. A historical activity of the CMI Group, it has benefited from many innovations in recent years and the range of solutions has been expanded considerably.

Long limited to low-power hydrostatic locomotives – ideal for shunting – the CMI offering has been considerably expanded with hydrostatic, diesel-electric and hybrid models with a capacity of up to 1600 HP.

## Europe: diversification underway

The diversification strategy initiated several years ago is continuing and is bearing fruit.

CMI Services is a recognized service provider in the nuclear industry in Belgium and in France. The Sector was given the highest 'A' rating for its services in French nuclear power stations. Key to this: new business opportunities to service steam generators, anti-corrosion treatment of seaside power station pipes, or a water treatment contract.

In the steelmaking industry, CMI Services is the official partner of ten ArcelorMittal power stations in Europe and also works, at national level, for Constellium, an aluminum specialist.

The Sector is entering the automobile industry with a first reference at PSA. Together with the new developments in port facilities, public infrastructures or hydroelectric maintenance via the creation of CMS Hydro, the diversification drive is making good progress at CMI Services.



*In Belgium, CMI Services is now a recognized player for the quality of its maintenance of steam and gas turbines, along with rotating machinery.*

## Brazil and New Caledonia on course again

In spite of the economic crisis that continues to impact the country, CMI Services is doing well in Brazil. CMI Serviços Brasil won a five-year contract for the maintenance of the land bases of Petrobras and the revamping of four precipitators at GE Power Services.

In New Caledonia, CMI Klein has relied on reinforcement from the teams of CMI Morocco to refurbish an SLN boiler. The entity also obtained a five-year contract for lifting operations with VALE.

These teams are working well in their respective territories and are exchanging with each other more than ever, particularly for the successful transfer of technology in off-shore wind turbines in Brazil, and the introduction of boiler maintenance services in New Caledonia.



## Developments in Africa

CMI Services is multiplying contacts in Africa, particularly in Burkina Faso, Benin, Congo, Cameroon and Senegal. The Sector is also expanding its coverage on the continent with the opening of CMI Ivory Coast in Abidjan. CMI Services has also signed a memorandum of understanding to supply drinking water to the country. CMI Services is henceforth active in 11 African countries and is monitoring 28 projects on the continent.

## Diversification of activities in Morocco and Algeria

In Morocco, CMI Services has reinforced its hydro-mechanical portfolio by acquiring various entities. The existing thermal activity has diversified into railways and hydro-mechanics. Praytech Maroc is continuing to make good progress and to become established at the OCP with maintenance projects. Overall turnover achieved in Morocco is growing and is being accompanied by an increase in the workforce of almost 30%.

In Algeria, CMI has successfully completed the project for the rehabilitation of the Sider sinter plant. Development is continuing in the other fruitful sectors of the country, particularly petrochemicals and infrastructures.

For the past two years, Transurb has been active in the rail sector in Algeria and is acting as assistant to the project manager for the renovation of four major rail lines. Recently, Transurb has won an order for several feasibility studies for public transport in the Algiers wilaya.





## Growing workforce

Between 31 December 2016 and 31 December 2017, CMI Services registered net growth of almost 900 people in its workforce. This growth is chiefly explained by the acquisition of CIM which currently employs sizeable teams for the construction of an underground railway in Panama. The Sector has also hired some 100 people in the South of France.

These recruitments and the stabilization of activities in Belgium and Brazil are fueling a net growth in the number of employees.

## Safety at the heart of priorities

With a growing workforce, concern for safety is more than ever an overriding priority, and despite mixed results in 2017, it pilots the day-to-day processes of CMI Services. All the entities are certified for



and practice a culture geared to safety, and more widely, health and well-being at work.

*The Sector wants to ensure optimal working conditions for all the members of its teams, which includes the introduction of processes for optimal skills management.*

# 253

Turnover (EUR Mios)

# 248

Order entries (EUR Mios)

## Outlook

In order to entrench its geographical and technological diversification, CMI Services will put a new organization in place:

- The Transport Pole now has the capacity to respond to all requests from rail and urban transport players. It relies on a solid commercial network and on a constantly expanding geographic coverage.
- The Europe Pole combines all other technologies, with a sub-unit dedicated to 'Power' activities. It brings together CMI Services Energy and the activities in the nuclear industry and its aim is to promote cooperation schemes.
- The activities in Africa, New Caledonia and Brazil have the aim of continuing with growth and of developing synergies between the different activities of the Sector.

Potential bridges between activities have already been identified. Simulation, a major area of expertise within the Sector, thanks to the Transport Pole, could develop maintenance training and assistance activities, particularly for the nuclear industry.

In parallel, CMI Services is adapting its processes to the significant growth in its workforce and ensuring optimal working conditions for all its employees. The emphasis is on safety: all business units are certified and are sparing no effort to make progress towards 'zero accidents'.

Endowed with highly diversified technologies, markets and geographic regions, CMI Services is structuring itself to consolidate an agile, flexible and creative organization, capable of proposing virtually tailored solutions for all its customers.







Strategic  
orientations

# Facilitating access to green energy

The generation of environmentally-friendly renewable energy and access to energy constitute key elements in the sustainable development of our societies. Using the sun, water and air to generate electricity round the clock, store it and make it accessible where and when needed, lie at the heart of innovation at CMI.

# On course for 2022

*CMI's ambition is materialized in a ten-year strategic roadmap charted in 2012 and christened CMI 2017-2022. It outlines the contours for growth toward a turnover of 2 billion Euros and profitability of 6 to 8%, with a volume of business activities evenly distributed across the operational sectors. In 2017, the Group continued to pursue actions geared to growth, innovation, international development and enlargement of its technology portfolio.*

## Enlargement of the technology portfolio



The creation of a '**Transport Pole**' is undeniably one of the major strategic achievements of 2017. The historical base of the Group, specialized in the supply of locomotives and rail maintenance, was strengthened by the acquisition of Transurb (Belgium) and CIM (France). As a result, CMI is now able to provide guidance and support throughout the world in construction, implementation or improvement projects for networks, as well as equipment and maintenance operations for rail and urban transport facilities.

The production of **green energy** is also on the Group's development agenda. CMI continues to hone solutions to counterbalance its main inconvenience: intermittence. More than one third of green energy cannot be recovered because it is not generated at the time the network needs it. CMI has therefore created a business unit in charge of organizing the connection of green energy generation units (photovoltaic panels, wind turbines, etc.) to storage units (conventional batteries and flow batteries). An Energy Management System is used to determine when it is no longer necessary to charge or discharge the batteries according to their charging level, weather forecasts, the price of energy and the estimated needs.

In 2017, the CMI teams also designed a new steam generator for second-generation thermal solar power plants that can generate energy round the clock by using molten salt. This generator is specially optimized to the characteristics of this fluid, in particular by avoiding corrosion and deposit issues.

Storage by hydrogen generation is also part of the solutions under study at CMI. The principle consists in recovering green energy and using it to hydrolyze water and produce hydrogen.

This hydrogen can then be used as a fuel for vehicles, as a back-up for natural gas or in industrial processes. This idea will continue its course in 2018...

Finally, the use of biomass as a substitute fuel for coal-fired power stations has reached a new stage with the transition to the industrial phase of the wood roasting process developed by CMI in cooperation with CEA-LITEN in France.







With regard to defense equipment, the design of **modular turrets** that make it possible to change calibers in 48 hours has made good progress. Two prototypes were delivered to the U.S. Army within the context of programs to renew its equipment. In another field, after the integration of drones expanding the field of vision for crews, the teams developed immersive **simulation** tools to improve crew training.



CMI's reputation in the defense industry led it to bid to acquire Renault Truck Defence, put up for sale by the Volvo Group. In spite of an attractive and credible offer by CMI, the acquisition of this defense vehicle designer was not finalized because Volvo Group decided not to sell after all. Independently from this setback, CMI is determined to participate in the consolidation movement taking place in the **European defense industry**.

CMI continues to diversify in **aeronautics**, particularly through its expertise in surface and heat treatment. In the latter field, the acquisition of the French company European Furnace Ropion (EFR) consolidates the Group's expertise, particularly in the treatment of aluminum.



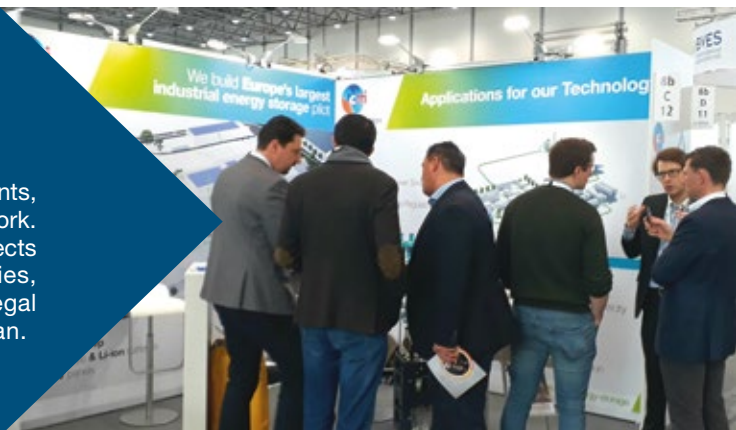
In **water treatment**, the CMI teams developed new standardized solutions for electrochlorination and the prefabrication of water treatment stations. CMI also strengthened the capacity of its plant for water treatment products in the French Ardennes.

In energy efficiency, the expertise of the teams was bolstered for the **production of industrial cooling**. Finally, CMI Services expanded its expertise in the maintenance of **hydroelectric power stations** with the creation of CMS Hydro in France.

This technological diversification is supported by **transversal projects** coordinated by Corporate to provide the support they need in order to grow. The efforts in 2017 particularly focused on the deployment of resources and processes to guide and support the globalization of activities, project financing, innovation, talent development and management.

## International development

CMI's international presence has expanded on the five continents, particularly with the acquisition of CIM, which has a large network. CMI Defence established a foothold in the USA to support projects in progress. In Africa, the Group is now active in 11 countries, particularly in Burkina Faso, Benin, Congo, Cameroon, Senegal and Ivory Coast, with a new company established in Abidjan.

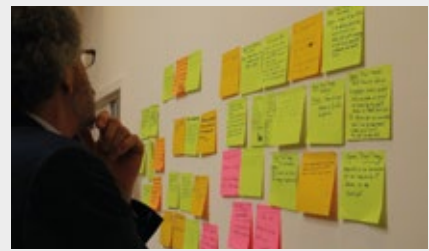
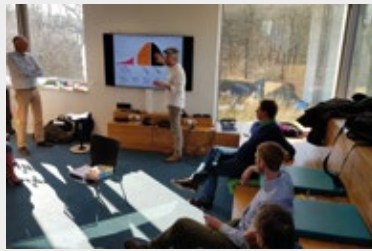


# Innovation

In 2017, the Group expanded its arsenal of tools to promote innovation by creating its 'Innovation Platform'. Based on the 'lean start-up' method, this platform has hosted an initial pilot wave by way of a bootcamp and an acceleration phase of four dedicated projects led by internal players. The purpose of this platform is to accelerate and incubate the development of new – internal or start-up – activities. Two new waves are planned in 2018.

CMI also organized the ninth edition of the International Technology Meeting to share the state of the art in innovation with the community of the Group's technologists. This year's edition was devoted primarily to 'Industry 4.0' applications.

Finally, the third edition of the CMI Awards rewarded the Group's best innovative achievements. The 51 entries proved yet again the involvement, inspiration and capacity for innovation of the CMI teams throughout the world.



# Talents

Men and Women are CMI's most valuable resource. The Group has made health and safety its overriding priority. CMI has conducted a pilot project to root the development of its talent in sustainable dynamics so as to meet both individual aspirations and Group needs. Supported by transversal activity management and by an approach to the training of the management line, it will be expanded to the entire Group in 2018.

Knowledge Management initiatives are multiplying. They provide methodological support to the consolidation and transmission of the Group's expertise. The pride of belonging of all the teams has been reinforced by sharing the heritage and values cultivated over the 200 years of the Group's existence – a further source of inspiration throughout the world...



## John Cockerill Foundation

In 2017, to commemorate the industrial Group's 200<sup>th</sup> anniversary, CMI structured its preservation and transmission approach by creating the John Cockerill Foundation, headed by Nicolas Serin. The aim of this foundation is to chart the sponsorship policy of the CMI Group, in Belgium and abroad, by supporting actions that contribute to the preservation of history and industrial heritage, as well as cultural, social and humanitarian initiatives.

In 2017, the John Cockerill Foundation embarked, alongside CMI, on organizing events relating to the bicentennial and supporting the project to revive the Maison de la Métallurgie et de l'Industrie [House of Metallurgy and Industry] in Liège (Belgium). It is also involved in supporting art. On the occasion of its bicentennial, CMI in particular contributed to restoring a work by Roger Jacob, and constructed in its workshops a work by Bernar Venet, installed in Seraing with a copy standing in the renovated park at Group headquarters.



The John Cockerill Foundation aims to preserve history and industrial heritage, as well as cultural, social and humanitarian initiatives. Above: the inauguration of the restored Roger Jacob work (a Belgian artist whose work varies between abstraction and the figurative, for installation in public areas). Below: the Arcs by Bernar Venet (an internationally renowned artist).



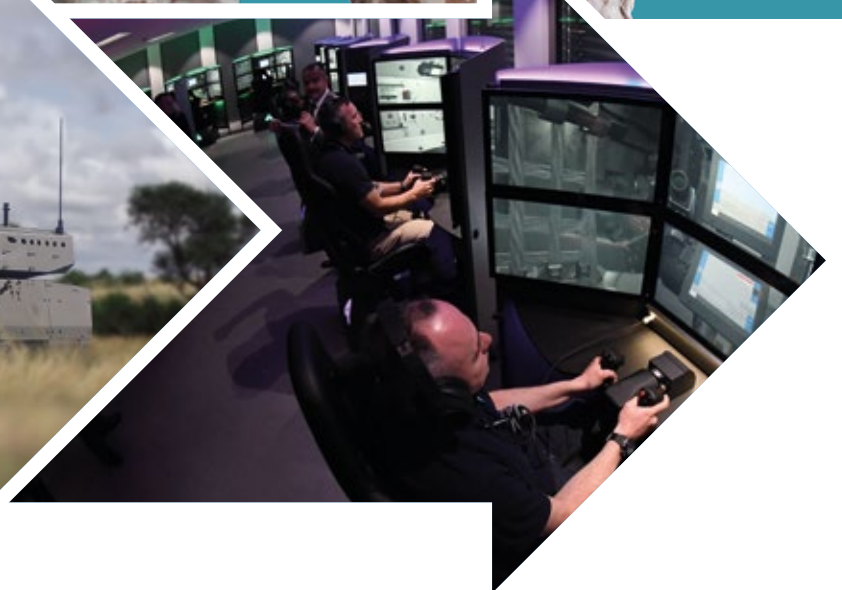
In 2017, a group of volunteers called on their colleagues to provide support for the families of staff members of the CFCO in the Republic of Congo, with essential, educational and recreational supplies and equipment. 5.7 tons of supplies were collected, sorted, bundled into 489 parcels and dispatched. Many CMI volunteers were mobilized and gave their time in a relaxed and friendly atmosphere to contribute to the well-being of the local population.



## Corporate citizenship

Steeped in a proud past, the CMI Group is resolutely turning toward the future. It is intent on playing a leading role in the development of sustainable industrial progress to the benefit of its customers, staff, shareholders and the communities in which it is established. To this end, the CMI Group is deploying a fundamental multi-pronged approach, by providing quality jobs, strengthening good governance, encouraging responsible behavior, developing green technologies in order to reduce its environmental footprint and that of its customers, being a corporate citizen and supporting local development.







## Tackling insecurity

# 5

Protecting themselves against threats is now a priority for States. The CMI Group has opted for and assumes the commitment to help States protect their citizens and alliances to maintain broad balances by means of defense equipment suited to the needs of armies.

# Governance

*CMI is managed by a Board of Directors with a long-term commitment to the Group's industrial project. It is supported by the governance bodies needed for the sound management of the company in terms of strategy, operations and support. These coordination instances ensure the Group's meshing and the consistency of transversal actions. Their respective responsibilities are clearly defined.*

*In 2017, governance was strengthened to prepare for the future and to address the increasingly international dimension of the Group. The Board of Directors and the Executive Committee have recorded several movements in parallel with this strategic development.*

## Strategic development

Keen to prepare a smooth transition, Bernard Serin entrusted the Group's day-to-day management to Jean-Luc Maurange who was hitherto in charge of CMI Defence. He thus joins the Board of Directors as Chief Executive Officer. He will also attend the meetings of the Audit, Appointment and Remuneration, and Strategy and Innovation Committees.

Yves Honhon, Financial and Administrative Manager, joins the Board as an Executive Director. In this capacity, he will also attend the meetings of the Audit and the Strategy and Innovation Committees.

## Movements in the governance bodies

In June 2017, the death of Libert Froidmont after a long illness deprived CMI of a first-rate director. Libert Froidmont was a member of the CMI Board of Directors continuously since 2002, first as a representative of Sogepa (an investment fund that supports business redeployment initiatives driven by a sustainable economic and industrial project) and then, in a personal capacity, given the quality of his contribution.

Another first-rate director, Albert Henon resigned from the Board in February 2018 for health reasons. Aged 86, Albert Henon advised and supported the Board of Directors for more than 15 years by sharing his experience and knowledge of the markets.

Diego Aquilina joined the Board as an independent director in April 2017. Aged 58, he brings his expertise in finance and insurance to the Board. He chairs the Audit Committee and attends the meetings of the Appointment and Remuneration Committee.

In the Executive Committee, Jean-Michel Gheeraerds succeeded Pierre Melin as President of CMI Energy in May 2017. Aged 49, he has an international experience in the world of engineering and energy in particular. Finally, Thierry Renaudin succeeded Jean-Luc Maurange as President of CMI Defence. Aged 54, he has been manager for Operations at CMI Defence for four years.





## A new Chief Executive Officer for the Group

Jean-Luc Maurange has been appointed Chief Executive Officer of the CMI Group. Aged 56, he has more than 30 years of commercial and managerial experience in international environments. He joined the CMI Group in 2013. He advised and guided CMI Energy in its recent developments before becoming President of CMI Defence in 2015. He has chaired the Executive Committee since February 2018.



From left to right:  
 Maurice Semer, Louis Smal, Diego Aquilina, Gérard Longuet, Jean-Luc Maurange, Yves Honhon, Bernard Serin,  
 Paul Thonon, Nicolas Serin and Jean-Pol Poncelet.

## Board of Directors

### **Bernard Serin**

Representing Ebenis SA  
 Director, Chairman

### **Nicolas Serin**

Director, Vice-Chairman

### **Diego Aquilina**

Representing ABNM SPRL  
 Independent director

### **Yves Honhon**

Executive director

### **Gérard Longuet**

Independent director

### **Jean-Luc Maurange**

Chief Executive Officer

### **Jean-Pol Poncelet**

Representing Poncelet MC2  
 Independent director

### **Maurice Semer**

Representing S2M Productions SPRL  
 Independent director

### **Louis Smal**

Representing Louis Smal Consulting SPRL  
 Independent director

### **Paul Thonon**

Representing Path Consulting  
 Independent director

## Shareholding of the CMI Group

By a rationalization mechanism of the different companies involved in the Group's shareholding, Bernard Serin and his family directly hold 80.65% of the Group's shares. The remaining 19.35% are held by executives of the Group and Ebenis SA through Dodeca SA.

### **Auditor**

DELOITTE

Reviseurs d'Entreprises SC s.f.d. SCRL - Represented by Laurent Weerts  
 Rue Alfred Deponthière, 46 - BE - 4431 Liège (Loncin) Belgium  
 Expiry mandate: April 2019





From left to right:

Jean-Marc Kohlgruber, João Felix Da Silva, Franck Pasqualini, Jean-Michel Gheeraerds, Jean-Luc Maurange, Patrick Paramore, Jean Jouet, Yves Honhon, Thierry Renaudin and Brigitte Coppens.

## Executive Committee

### Jean-Luc Maurange

Chief Executive Officer

### Brigitte Coppens

Chief Human Resources and Communication Officer

### João Félix Da Silva

Executive President of CMI Industry

### Jean-Michel Gheeraerds

Executive President of CMI Energy

### Yves Honhon

Chief Financial and Administrative Officer

### Jean Jouet

Executive President of CMI Environment and Chief Development Officer

### Jean-Marc Kohlgruber

Chief Strategic Planning Officer

### Patrick Paramore

Chief Sales and Legal Officer

### Franck Pasqualini

Executive President of CMI Services

### Thierry Renaudin

Executive President of CMI Defence

## Governance bodies of the Group

**Board of Directors**  
(quarterly)

**Audit Committee**  
(quarterly)

**Development Committees**  
(quarterly per sector)

**Ethics Committee**  
(quarterly and ad hoc)

**Appointment and Remuneration Committee**  
(half-yearly)

**Strategy and Innovation Committees\***  
(half-yearly per sector)

**Executive Committee**  
(monthly)

**Extended Executive Committee**  
(quarterly)

**Sectors Committee**  
(monthly)

**Operational Entity Committees**  
(monthly)

\*The Strategy and Innovation Committees were established in 2018. They bring the Chair and some directors together twice a year to discuss the future of each sector of activity.





## Inspiration from the past to better build the future

# 6

Building on the industrial heritage handed down by John Cockerill, the CMI Group is guided by its core values to chart its future and root its action over the long term. Like the founder of the Group, and his successors, Group staff members are entrepreneurs, responsible, human-minded, committed, innovative and customer-oriented.

# Roots for the future

The celebration of its 200 years of existence afforded the Group CMI an opportunity to step back to better appreciate its roots, reconsider its current identity, and project into the two coming centuries.

Being one of the last heirs of the industrial history of John Cockerill, and the only one which still bears his name, entails the responsibility to preserve this heritage. The Group accordingly undertook a series of actions throughout the year with its staff, customers and stakeholders. The restoration of the Château Cockerill was finalized, a book was published, a TV documentary was produced and a mapping show was organized. The King also paid a visit to the company, family and heritage days were organized, a colloquium on the role of the industry was held and a roadshow travelled through the countries where the Group is established. All of this provided ample opportunities to widely share the Group's history and appreciate its timeless nature.

This exercise enabled the Group to take in the main characteristics of its roots and extract its immutable DNA. John Cockerill and his successors have incarnated, developed and preserved essential skills that are still found in the four corners of the Group today: entrepreneurship, innovative spirit, sense of responsibility, sense of humanity, commitment and customer-orientation. All this without forgetting to project beyond borders with a view to expand activities internationally.

All the people who shape the Group today can identify with this meaningful history. The bicentennial celebrations have undeniably added soul and cohesion to what was already a strong identity. Customers, partners and stakeholders became aware of the Group's geographic, historical and sectorial scale and of its technology portfolio. The events organized for the bicentennial consolidated the brand recognition and reputation of CMI through the identity of its founder, John Cockerill, and his successors.

It is with full awareness of this DNA and this vision that CMI is proceeding with its roadmap for the 200 years to come. This involves the essential skills it feels responsible for perpetuating and handing down, the mission to tackle the challenges of our time, whether in terms of mobility, protection against threats, sustainable industry, energy transition, access to resources, or any other challenge that the Group will choose to take up, thus providing pragmatic answers through a combination of technologies and expertise.







In 2017, CMI celebrated its bicentennial – an opportunity to share this industrial saga launched by John Cockerill in 1817 and perpetuated by its successors to the present day. These events, their publicity and their repercussions made it possible to raise awareness among more than 1.7 million people and were rewarded by a 'Caïus du Mécénat en Patrimoine' [heritage patron award, conferred by Prométhéa, the main Belgian reference in this domain].

- Re-enactment of the signing of the deed of purchase of the Château with 1000 members of staff, who chanted "there is a bit of John Cockerill in all of us"
- Finalization of the restoration of the Cockerill Château and its park, the CMI Group headquarters
- Production of a documentary film in partnership with the RTBF (French-speaking Belgian broadcasting corporation)
- Publication of a book on the Château and the recent history of the Group, published jointly with the Institut du Patrimoine wallon [Walloon Heritage Institute]
- Celebration of the 200<sup>th</sup> anniversary of the Cockerill Château, in the presence of His Majesty, King Philip of the Belgians, extended by a weekend dedicated to the families of staff members
- Production of a mapping show on the past, present and future of the Group
- Mounting of a major exhibition at the Musée Liégeois de la Boverie [Liège Boverie Museum]. 'John Cockerill : 200 ans d'avenir' [John Cockerill: 200 hundred years of future]
- Participation in the Heritage Days in Wallonia
- Organization of an international colloquium 'Deux siècles d'industrie, et après?' [Two hundred years of industry, and after?] in cooperation with the Royal Academy of Belgium and the University of Liège
- Organization of a roadshow to celebrate the bicentennial with members of the staff, customers and partners throughout the world
- Creation of the John Cockerill Foundation, to coordinate and support non-profit actions linked to the history of Cockerill and, more widely, to industrial heritage and culture in general.



# Consolidated companies at 31 December 2017

Company	Country	% ownership	Energy	Defence	Industry	Environment	Services	Real Estate	Corporate
ACTE INDUSTRIE SARL (*)	France	100					●		
AGUERIS SAS	France	100	●						
AGUHA	France	100			●				
ALPHA INDUSTRIES SAS	France	51			●				
AMPLAST CORP	United States	100			●				
AQUAGED SARL	France	100			●				
AQUAPERF (*)	France	100			●				
AQUION SAS	France	100			●				
AXIOME INDUSTRIE SAS (*)	France	100					●		
BALTEAU SA	Belgium	100			●				
BASE DE BARONVILLE	Belgium	46	●						
CAMPUS COCKERILL SAS	France	100							●
CERI PHOENIX FURNACE LTD	China	20		●					
CIM (Compagnie Internationale de Maintenance)	France	57.44					●		
CMI AMERICA INC.	United States	100							●
CMI INDUSTRY AUTOMATION PVT LTD	India	100		●					
CMI BRASIL LTDA (*)	Brazil	100		●					
CMI BRAZIL PARTICIPACOES LTDA (*)	Brazil	100							●
CMI BRAZIL SERVICOS DE MANUT. EQUIP. INDUST. LTDA	Brazil	100					●		
CMI CONGO SARL	Republic of Congo	100					●		
CMI Côte d'Ivoire	Ivory Coast	67					●		
CMI CZ s.r.o.	Czech republic	100					●		
CMI DEFENCE LLC	Saudi Arabia	100	●						
CMI DEFENCE SA	Belgium	100	●						
CMI DEFENCE SAS	France	100	●						
CMI Energy de México SA de CV	Mexico	56	●				●		
CMI Energy France SAS	France	100	●				●		
CMI ENERGY LLC	United States	100	●						
CMI ENERGY SERVICES BV	Netherlands	100					●		
CMI ENGINEERING (Beijing) CO LTD	China	60		●					
CMI ENVIRONMENT AMERICA INC.	United States	100			●				
CMI ENVIRONMENT HUNGARY kft	Hungary	100			●				
CMI EST SCI	France	100					●		
CMI EUROPE ENVIRONNEMENT SA	France	100			●				
CMI FPE LTD	India	75		●					
CMI France SAS	France	100							●
CMI GREENLINE EUROPE SAS	France	100		●					
CMI Industry Americas INC.	United States	100		●					
CMI INDUSTRY O.O.O	Russia	100		●					
CMI KLEIN SARL	New Caledonia	100					●		
CMI Luxembourg HOLDING SARL	Luxembourg	100							●
CMI Luxembourg SERVICES SA	Luxembourg	100							●
CMI M&W Engineering GMBH	Germany	100		●					
CMI MAINTENANCE EST SAS	France	100					●		

Company	Country	% ownership	Energy	Defence	Industry	Environment	Services	Real Estate	Corporate
CMI MAINTENANCE HAINAUT SA	Belgium	100					●		
CMI MAINTENANCE NORD SAS	France	100					●		
CMI MAROC SARL	Morocco	100					●		
CMI MCF SAS	France	100					●		
CMI MUON SAS	France	100					●		
CMI PROSERPOL SAS	France	100				●			
CMI SA	Belgium	100	●		●	●	●		●
CMI SLETI SAS	France	100			●				
CMI Beugin SAS (*)	France	100			●				
CMI SUD SCI	France	100					●		
CMI TECH3I SAS	France	100					●		
CMI Tech5i Luxembourg SARL	Luxembourg	100					●		
CMI TECH5I PASTOR SAS	France	100					●		
CMI TRACTION SA	Belgium	100					●		
CMI UVK GmbH	Germany	100			●				
CMS HYDRO	France	75					●		
COCKERILL MAINTENANCE ET INGENIERIE	Mexico	99.80	●						
CMI DE MEXICO S.A. de CV									
COCKERILL MECHANICAL INDUSTRIES INTL LTD (*)	Ireland	100							●
DUPUY SAS	France	100				●			
EFR	France	53.88			●				
ENGINEERING & MECHANICAL SERVICES (EMS) SA (*)	Belgium	100					●		
G2wind	Spain	51					●		
GIMCO EMBOURG SA	Belgium	100							●
GIMCO France SCI	France	100							●
GIMCO Luxembourg SA	Luxembourg	100							●
GIMCO SA	Belgium	100							●
GIMCO WILLEBROEK SA	Belgium	100							●
JV CORBELIN SCI	France	100				●			
MITRY MORYCE SCI	France	100				●			
MR11000 SAS (*)	France	100			●				
NEYRTEC ENVIRO INC	Canada	100				●			
NICOU ENVIRONNEMENT SAS (*)	France	100				●			
PRAYTECH MAROC SARL	Morocco	50					●		
SCI M.G.M	France	100					●		
SOLUSTEP SAS	France	100				●			
STARDEUX	France	70					●		
TCP Rail Inc Panama	Panama	28.72					●		
TRANSURB	Belgium	82					●		
WUHAN COCKERILL ENGINEERING AND TECHNOLOGY CO LTD	China	49		●					
YANGZHOU METALLURGICAL SCIEN. TECHNOLOGY CO LTD	China	20		●					

\* Liquidation or merger in 2017 (cfr. management report 3 'Comments on the consolidated financial statements' and 'Scope of consolidation').



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

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

CMI 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 [group.finance@cmigroupe.com](mailto:group.finance@cmigroupe.com)

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Following in the footsteps of its founder, John Cockerill, the CMI Group is developing innovative and pragmatic solutions to tackle the challenges of its age. This has led it to design, integrate, modernize and maintain equipment for energy, defence, steel-making, the environment, transport and industry in general.

Present on all five continents, CMI numbers more than 5 500 experienced employees who combine expertise in engineering, maintenance and the management of technical international projects.