INTEGRATED REPORT 2017





02	Profile Interview with Nicolas Dmitrieff, Chairman of the Management Board				
06	Our story				
08	OUR VALUE CREATION MODEL				

Our strategy Our environment Our business model

#### 22 Key Figures

#### 24 OUR DAY-TO-DAY ACTIONS

Governance Environment & Energy Sector Innovation & Systems Sector Highlights: CNIM in 2017 Our commitments Management structures



#### Since 1856

the men and women at CNIM have been developing and implementing solutions that pave the way for a cleaner, more energy efficient, more environmentally friendly and safer world.

Clients from the private and public sectors, in France and across the globe, trust us to design, build and operate infrastructure supporting the energy transition, defense or security, knowing that our 2,500 employees will be working to push back the boundaries of technology and use their creativity to come up with reliable and lasting solutions.

The diversity of skills and expertise our Group brings to the table is fully expressed through the businesses tackling the long-term challenges our world faces today. This diversity is the hallmark of a midsize company majority-owned by a family that is firmly committed to seeing it expand and creating jobs, a firm where growth is fueled by a constantly renewed capacity for innovation.



# Choosing our battles to become a leader

#### CNIM completed two acquisitions and one disposal in 2017, which changed its business model. What was your aim?

Nicolas Dmitrieff: Our goal was not so much to change our model as to strengthen it. You are referring to the acquisitions of Exensor and Winlight by our subsidiary Bertin Technologies and to the sale of Bertin Pharma's pharmaceutical and biotech services operations.

Sweden-based Exensor is a major international supplier of automated sensors for protecting armed forces and critical infrastructure. By acquiring it, we bolstered and accelerated Bertin's strategy for expanding in the global instrumentation and surveillance market for defense and security applications. Winlight is an internationally-renowned

French firm that designs and manufactures components and systems for high-performance optics uses in the astronomy, big science, space and defense industries. Its acquisition strengthens Bertin's capacity for designing and integrating Bertin's optical systems, which, in addition to their own markets, are used in CNIM's mechanical systems for big science. The takeover allows us to position ourselves in the big science market with a comprehensive offering that is on the cutting edge of global technology.

We also sold Bertin's pharma and biotech operations to two French firms from the sector. Given their stage of development, these businesses needed to bring in new shareholders to conquer new markets.

" We are not seeking to be big but rather to count among the best in every market we serve, "

On the other hand, Bertin retained control of the units related to bioanalysis tools and biological reagents for defense and life sciences since they fit organically into our instrumentation activities.

#### Do you see more acquisitions being made to strengthen your other key businesses, waste treatment and energy?

N. D.: Our portfolio is reviewed on a regular basis. We pay particularly close attention to the market when it comes to our Environment & Energy strategy and take different approaches, knowing that acquisitions are of course not the only way to consolidate our positions in certain markets.

During the year, we joined forces with German firm Martin, our technology partner since 1960, to set up a new energy-from-waste and -biomass business called CNIM MARTIN Pvt. Ltd. in Chennai, India. The new company offers our full range of expertise in the design, construction and delivery of turnkey energyfrom-waste and -biomass plants, combustion and flue gas treatment technologies, and revamping services to improve energy and environmental performance.

The alliance will allow us to address the Indian and southeast Asian markets efficiently and competitively. We also decided to combine our environmental and energy services to unleash selling and operational synergies and offer more comprehensive services on a truly European scale.

#### So, your focus is on international development?

N.D.: International growth is indeed a priority. Our offerings target individual geographic markets taking into account local needs, entry barriers, our existing geographic footprint and our ability to deliver added value either on our own or through partnerships. We already have hubs in the Middle East (Abu Dhabi) and Asia (Singapore) and can rely on our offices and factories in China (we have been operating in Gaoming since 2005), Morocco (since 1949) for the African continent and on our subsidiaries Bertin and LAB Geodur for North America. For instance, our operations in China give us an international sourcing platform for our Environment & Energy businesses but also allow us to address the Chinese market with Bertin's range of medical waste decontamination solutions.

Abu Dhabi supports sales and marketing efforts for our environment business as well as our defense, security and instrumentation offerings, for instance in the field of gas detection on oil sites.

Lastly, Morocco is the platform for our conventional energy businesses in Africa and also for smart grid and biomass projects.

## 51.6%

of revenues generated outside France.

million euros of total revenues in 2017

#### In concrete terms, what impact did this international expansion have last year?

N. D.: In 2017, we generated 51.6% of our revenues outside France, with €268.7 million coming from Europe and €58.9 million from the rest of the world. Revenues in Europe rose 14.5% from the 2016 level.

Our expertise is recognized beyond Europe's borders, and we have identified growth potential in waste treatment and the protection of sensitive industrial sites. We are coming to be well known among the big contractors and project developers.

We team up with local firms to respond to requests for proposals. The consortium formed by CNIM, Gulf Investment Corporation (GIC) and Al Mulla Group Holding Co (AMG) was selected as the Preferred Investor for the Kabd Municipal Solid Waste waste-to-energy plant project in Kuwait.

Bee'ah and Masdar, which formed a joint venture to develop the first waste-to-energy plant in the United Arab Emirates, in Sharjah, chose CNIM to design, build and operate the facility. This is concrete proof of our ability to establish positions in new markets.



#### The Group has a diversified portfolio of businesses positioned either as leaders or challengers in their markets. Does this not raise concerns for your stakeholders, whether the market, investors, prospects or clients?

**N. D.:** You have to look back at our shipyard days to understand CNIM's current positions in the defense and security, environment and energy management sectors. These are sovereignty-related issues and priorities for States and large clients, public or private firms. We built up and expanded our traditional range of thermal and mechanical expertise through organic growth and acquisitions (optics, digital, etc.). These new activities bolster our positions as a leading player and systems manufacturer in these sovereignty-related

areas. Our clients expect us to deliver the highest-quality equipment, solutions and services, and it is our goal to rank among the best in each of our markets. We are not seeking to be big but rather to count among the best in every market we serve. This means we have to choose our battles and focus on areas where we can be on the podium. At the same time, we are working to balance our business portfolio between products, recurring services and projects to manage cycle highs and lows as efficiently as possible.

CNIM is a family-owned group with a stable shareholder base that is committed to its development. We are not subject to the whims of financial markets since I fought to regain control of our capital, of which the family holding company has held 56.56% since 2014. The actions I take, with the Management Board and Supervisory Board, are geared to the long term, and we have invaluable freedom to put our heads together with our teams to see what CNIM can become tomorrow and decide what steps it should take today. The fact that CNIM has been publicly traded since 1987 is proof of our credibility and transparency, and also gives the Group's financial partners more confidence in us.

#### How would you summarize 2017 for those financial partners?

- N. D.: Our revenues rose to €634.9 million, from €539.9 million in 2016, when order intake was quite robust.
- We delivered net income of €22.0 million, compared with €15.6 million in 2016, for continuing operations, and €34.1 million for discontinued operations. Order intake totaled €543.4 million versus €839.7 million in 2016, and the order book ended the year at

€830.3 million compared with €905.6 million at December 31, 2016.

Orders were booked during the year for turnkey energy-from-waste plants in Avonmouth (UK) and Belgrade (Serbia, design phase). CNIM was selected to build several new plants in Europe and the Middle East. These new projects, which were not included in the order book since work orders had not been received, will translate into significant business volumes starting in 2019. Orders booked by the Innovation & Systems Sector rose 22.7% over the year, notably thanks to the Defense operations, without any major consolidation scope effects.

#### How are the teams preparing to tackle the priorities you listed?

N. D.: I initiated a transformation program that began with the creation of a Group Directors Committee including members of the Management Board, operations managers and directors of the main business lines. This Committee's mission is to translate the Group's strategic priorities into operations and to oversee the different aspects of our transformation in which the management community is involved.

All changes and decisions relating to our growth strategy, innovation and human resource management will be shared at every level of the Group. The role assigned to the management community is vital as their active participation will be required, regardless of their business, in promoting cross-functional initiatives that benefit the whole Group and in managing their teams during this transformation process.

CNIM is an exciting, free and independent group majority-owned by a family committed

to its expansion. We offer state-of-the-art expertise and have a management team that knows it can count on the commitment and daring innovation of its 2,500 employees. Our transformation is of course not being orchestrated behind closed doors, but rather in interaction with all our stakeholders. The present integrated report seemed to us the best way to present our model for creating value in an increasingly global market environment.



INDUSTRIAL REVOLUTIONS AND WORLD WARS

HISTORY

OUR

COLD WAR AND START OF EUROPEAN CONSTRUCTION MAJOR NATIONAL PROGRAMS AND FIRST OIL SHOCKS

DEREGULATION ERA, **GLOBALIZATION BEGINS**  CONSOLIDATION OF EUROPEAN CONSTRUCTION AND END OF COLD WAR

	1856 1900	1960	1970	1980	1990	2000	2010
EXPANSION OF OUR CONSOLIDATION SCOPE	<b>1856</b> Creation of FCM (Forges et Chantiers de la Méditerranée).		<text><text><text><text><image/><section-header><text></text></section-header></text></text></text></text>	1970 Cooperation agreements with two divisions of General Electric for marine and industrial turbines.	<b>1987</b> Listing on the stock exchange.	<section-header><section-header><text><section-header><text><text><text><text></text></text></text></text></section-header></text></section-header></section-header>	<ul> <li>2002</li> <li>An artin acquires a stake in CNIM.</li> <li>Takeover of Alstom's waste treatment division.</li> <li>2008</li> <li>Acquisition of Bertin and its subsidiaries.</li> <li>2009</li> <li>Acquisition of IDPS (life sciences).</li> </ul>
EXPANSION OF OUR OFFERING	<text><text><text><text></text></text></text></text>	<section-header><section-header><text><text><text><text><text></text></text></text></text></text></section-header></section-header>	<b>1961</b> Image: Construction of first missile launch tubes for the nuclear submarines in the fuscile ar submarines in the fuscile coceanic Force).         - Marketing of LNG carriers, container ships and drilling submarines in the fuscile coceanic Force).         - Marketing of LNG carriers, container ships and drilling submarines in the fuscile science. <b>1968</b> Construction of first move into first escalator for APP, the Paris public for APP, the Paris public for APP, the Paris public for APP.	<section-header><section-header><text></text></section-header></section-header>	<text><image/><section-header><section-header><section-header><section-header><text><text><text><text></text></text></text></text></section-header></section-header></section-header></section-header></text>		<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>
EXPANSION OF OUR GEOGRAPHIC FOOTPRINT				<section-header></section-header>	<ul> <li>1980</li> <li>Creation of subsidiary in Hong Kong.</li> <li>1983</li> <li>Sale of motorized floating bridge to Switzerland, Malaysia and Italy.</li> <li>1987</li> <li>Creation of subsidiary in the United Kingdom with Martin.</li> <li>1989-1990</li> <li>Acquisition of Babcock Entreprises and Wanson (industrial boilers for Europe and Africa).</li> </ul>	<text><text><section-header><text><text></text></text></section-header></text></text>	2008Creation of CNIMSingapore.2010Singapore.

#### INCREASE IN ENVIRONMENTAL REGULATIONS, DEVELOPMENT OF RENEWABLE ENERGIES AND NEW **GEOPOLITICAL CONCERNS**

#### 2011

Acquisition of Vecsys (information technologies).

2013 Acquisition of Geodur Recycling AG (ash treatment).

#### 2014

Soluni, the Dmitrieff family holding company, increases its stake in CNIM (56.3%).

#### 2015

— Acquisition of Saphymo (instrumentation) and AMI Software (IT). — Creation of subsidiary SUNCNIM with Bpifrance (solar power plants).

#### 2012

Contract for radial plates for the ITER nuclear fusion reactor.



#### 2013

Adaptation of industrial facilities to handle largescale and high-precision projects.

#### 2015

First LAB exhaust gas scrubbers for ships.

2011 Creation of Bertin Corp. in the United States.

#### 2012

Construction and delivery of an energy-from-waste plant in Baku, Azerbaijan.



2014 Creation of LAB USA.

#### 2020

#### 2016

Disposal of Babcock Wanson.

#### 2017

 2017

 Acquisition of Exensor and Winlight (defense and big science).
 Sale of Biotech's pharma and biotech businesses.
 Creation of CNIM

 MARTIN Pvt. Ltd. for energy-from-waste and -biomass in southern and southeast Asia.



#### 2016

— Construction of Llo (France) solar thermodynamic power plant.



- Contracts for bottom ash treatment and ash metal recovery (Europe, USA).

2016 Creation of CNIM Middle East (Abu Dhabi, UAE).



## Three development priorities

CNIM's strategy reflects its understanding of sovereignty issues, its long-term business view and its ability to forge core partnerships. Strategic efforts focus on three complementary priorities that are implemented by managers at every level of the Group.

#### Develop the added value chain

CNIM has created a unique profile as an industrial engineering contractor designing equipment in its engineering offices that it then builds in its workshops in France, Germany, United Kingdom Morocco and China and subsequently commissions, also handing maintenance and operations. This proximity between the design and production teams encourages feedback. The Group's ability to set up project companies and offer financing solutions for projects involving construction and operation contracts is a major asset. It offers services to support the equipment installed by it or other firms. The services business is a source of recurring revenue for the Group. CNIM works with its clients at all levels of the value chain, as the industrial contractor or together with partners, some of which it has been working with for many years.

#### Integrate new technologies

The Group's business portfolio is regularly reviewed. Analyses of its commercial positions in high-potential markets where it intends to speed up its expansion can lead it to make targeted acquisitions while at the same time selling the businesses that do not offer optimal synergies, even if they are profitable.

CNIM thus works to build a coherent product and service offering over the long term for French and international clients that know it masters all technologies involved in the design and construction of endto-end solutions, a firm that can handle complex orders and will evolve in step with its markets.

#### Conquer new markets

CNIM adapts its products and services to the changing needs of States and corporations. After analyzing local issues, it seeks out the best partners, both industrial and financial, and takes full advantage of the resources available through its existing international platforms, be they commercial hubs (Abu Dhabi and Singapore) or industrial facilities. This strategy supports CNIM's goal of changing its status from exporter to international group.

#### ADDED VALUE

- Deliver solutions covering the entire value chain, from upstream
- to downstream.
- Work either as general contractor

GEOCRAPHIC EXPANSION

or in cooperation with partners.

BUSINESSES, EXPERTISE

TECHNOLOGY

– Acquisitions (to buy technologies and know-how). – Organic growth (development of proprietary technologies and leveraging of intrapreneurship).

ENHANCEMENT OF SOLUTIONS

#### **GEOGRAPHIC MARKET**

- Adjusting the product and service offering to the new needs of States and corporations. – Transition from being an exporter to an international group.

## Trends

The world is changing at a fast pace and taking on a new dimension. A few key trends are observable across different countries and societies, including geopolitical shifts, technological revolutions and changes in mentality. CNIM has identified five major trends that define its space, shape its possibilities, and underpin its decisions.

#### Digitalization

The rise of digital, for mass market and professional use, is impacting us all and transforming our everyday lives: data production and collection, instantaneous exchanges, personal assistance, shared knowledge, collective decisions... From the level of the individual right up to the State, digitalization is radically changing how we know, understand, control, make decisions and act.

#### Urbanization

More than half of all people on the planet - and it will soon be three-quarters - live in urban areas. How can we house, feed, transport, connect and protect people when they are increasingly concentrated and mobile at the same time? The solution must involve reinventing our ecosystems, from the building up to the neighborhood, city and region levels, to efficiently manage flows of energy, food and individuals.

#### **Energy transition**

The road leading from fossil fuels to renewable energies has been laid out. Demand for energy is steadily increasing as more regions of the world are developed and new connected end-uses emerge. Awareness of the need to find better production solutions is driving the creation of new ways to generate energy cleanly, safely and equitably.

#### Empowerment

Companies today tailor the goods and services they produce to the needs of individuals. In addition to enjoying this personalization, individuals also understand that they can help reshape society through their actions. Participative democracy, short channels, individual energy generation and the mobility of equipment are all allowing individuals and communities to overcome the constraints associated with traditional infrastructure and existing networks in order to create new spaces for themselves.

#### Security

Geopolitical and cybersecurity risks, personal data protection and surveillance of all types of facilities: security is a key source of concern for our societies. •



#### EMPOWERMENT

#### PROTECTING SYSTEMS AND FACILITIES

 Solutions and Instruments for detecting gas and biological and chemical threats, for radioactivity monitoring and radiation protection. • Optronic surveillance instruments. • Cybersecurity solutions.

#### PROTECTING PEOPLE

Design and manufacture of systems for force projection by land and sea, of optronic surveillance instruments and of missile launch tubes for nuclear submarines.

#### TREATING AND RECYCLING WASTE

Delivery of turnkey facilities for converting municipal waste into energy, for treating bottom ash, for composting, for treating green algae and related services.

#### OPTIMIZING ENERGY

• Solutions for improving energy performance in industry: preventive boiler maintenance, integrated energy recovery systems and upgrades to large combustion plants.

• Solutions for managing energy production and storage.

12

#### IMPROVING AIR QUALITY

Control and treatment of effluents: cleaning of flue gas from waste treatment plants, thermal power plants, industry and ships.

#### RENEWABLE ENERGY SOURCES

**Operation of RES facilities:** development of solar and hybrid power plants and energy-frombiomass plants.

## Stakeholders

Private companies, public bodies, civil society, academia: CNIM's clients, partners, suppliers and employees are all part of its ecosystem and contribute to its development. This ability to work together over the long term is the basis of the balanced relationships CNIM maintains with its stakeholders. Our partnership-based approach, together with our pioneering spirit, has allowed CNIM to grow and evolve, to be nimble and confident.

This stakeholder map illustrates the interactions between the various players. Stakeholders are divided into sets based on how they interact with CNIM and vice **versa.** The map seeks to represent the depth of individual relationships: a public company may also be a longstanding key account, a client may play a role in setting industry standards, a shareholder might also be an investor as well as a employees, etc. Overall, the map depicts a web of mutually beneficial relationships with CNIM at the center. The link between all these stakeholders is the commitment CNIM has made to them individually. It sets the rules underpinning relationships based on mutual trust. CNIM intends to rely on this partnership culture to drive its growth over the long term.

One prime example is our partnership with German firm Martin. The two companies began cooperating in the 1960s, when CNIM wanted to expand into the waste recycling sector. We have been working closely together ever since, and Martin is represented on CNIM's Supervisory Board. This partnership took on a new dimension in 2017, reflecting the vastness of the Asian market, with the creation in India of a new joint venture for waste recycling and energy-from-waste and -biomass. Each company contributed proprietary technologies and the mutual knowledge they have of those technologies after half a century of joint projects and mutual trust.

## The link between all these stakeholders is the commitment CNIM has made to them individually.



100 countries in which CNIM was active in





CNIM intends to rely on this partnership culture to drive its growth over the long term.



#### Stakeholder map





Data relate to the year 2017.

#### DIGITALIZATION

IMPACT

#### FINANCIAL IMPACTS

- €634.9 million of revenues
- Stock price : +15.87% over the year
- 51.6% of revenues generated with exports

#### INDUSTRIAL IMPACTS

- 167 EFW\* plants designed and built by CNIM
- Design and construction of first Fresnel concentrating solar power plant with storage capacity
- 35 radial plates delivered for ITER (see page 35)

#### TECHNOLOGICAL IMPACTS

- Some 50 patents submitted in 5 years
- A dozen academic partnerships
- Projects in 2017: *see pages 32 to 41*

#### HUMAN IMPACTS

- 87% employee satisfaction\*\*
- 91% of employees hired with permanent contracts
- 3.6% average pay gap between men and women (EU average: 16%)

#### RELATIONAL IMPACTS

- 58-year partnership with MARTIN GmbH
- Partnership since 1974 with Sidompe (waste sorting and waste-to-energy plant in Thiverval-Grignon, France)
- Creation of CNIM MARTIN Pvt. Ltd. in India (see page 33)
- €543.4 million of orders booked
- No. 1 in the UK (40% of EFW plants\*)

#### NATURAL IMPACTS

- More than 83% of waste produced by CNIM is recycled
- 342,115 MWh of electricity and 92,941 MWh of heat produced at facilities operated by the Group
- 70% of water consumed by the Group is recycled (out of a total of 2,090,431 m<sup>3</sup>)
- 4 EFW\* plants are "zero emissions"

## Building excellence

By mastering every step in the process of engineering innovative solutions, from design to maintenance, CNIM has positioned itself as a central player in the market for high-tech equipment and services. It has created a balanced mix of products, recurring services and large projects to accompany cycles in its markets.

Defending a country, ensuring the digital security of economic actors, intelligently managing waste by turning it into energy resources, these types of actions cannot be carried out without the involvement of industrial firms capable of efficiently implementing policies while adding their own specific technical expertise and ability to adapt to the situation on the ground. CNIM has solid research and development skills together with top-quality industrial capabilities. The often bold solutions it proposes to its clients are backed by innovation and industrial strength. Its historical strong suits (thermal and mechanical engineering, expertise in industrial contracting) and mastery of new technologies make CNIM a key player in the fields of defense and civil security, energy and the environment. In addition to addressing these issues of sovereignty, CNIM plays an active role in large scientific and industrial research projects.

#### Defense and civil security

CNIM delivers responses to issues related to the physical and digital security of States, local authorities, citizens and enterprises or institutions of vital importance. The idea is to guarantee the security of populations, within the framework of a stable society, by preserving infrastructure and protecting data exchanges.

#### **Energy and environment**

CNIM makes use of waste and energy resources through long-term and environmentally-friendly solutions. Its goals are to reduce energy consumption and produce cleaner energy to support sustainable development.

#### Major projects

CNIM delivers technologies and solutions for large industrial and scientific research projects. It seeks to boost France's international profile and, more generally, global scientific research.

The men and women of CNIM are using their pioneering spirit to tackle these global challenges and, true to the Group's motto, working to imagine and develop solutions for today and tomorrow.

#### Innovation as a driver of growth

CNIM leverages all of its ingeniousness and audacity to create new equipment and services that are in many cases world firsts. It has high-level skills when it comes to design, industrialization, execution, maintenance and services, allowing it to cover the entire value chain for its clients. Each of these areas of expertise plays a part in the innovation cycle: New ideas and feedback are shared between teams active in the design and production phase or working with clients.

Mastery of its technologies allows CNIM to deliver innovative equipment and services; proprietary technologies, secured through internal development or targeted acquisitions of firms with expertise that complements that of the Group.





Innovation development is encouraged by an organizational structure that favors short decision-making processes with great emphasis placed on the spirit of initiative. Behind every idea that is turned into an exceptional technological product or service are the great enthusiasm and skills of CNIM teams served by cutting-edge research and industrial production resources. Innovation is fostered within the Group by a focus on continuous progress aimed at optimizing existing equipment and developing new products and services. CNIM places great importance on collaborative innovation, not just between the different Group entities but also through projects carried out in partnership with clients or research organizations in France and overseas. Within France, CNIM is very involved in the development of competitiveness clusters. •

patent families

## SQIM

THE MEN AND WOMEN OF CNIM

#### 2017 RESULTS





PRODUCTION





industrial **sites** on 3 continents: La-Seyne-sur-Mer, Thiron-Gardais, Pertuis (France), Frankfurt (Germany), Basingstoke (UK), Gaoming (China), Casablanca (Morocco).



24 energy-from-waste and -biomass centers delivered in <u>5 years</u>.

## 342,115

MWh of electricity generated at sites operated by CNIM along with 92,941 MWh of heat.



million people

have their waste recycled by CNIM, representing 27 million tons of residual municipal waste a year.

70% of water used by the Group is recycled.





in millions of euro 839.7 574.7 543.4

ORDER INTAKE



**BREAKDOWN OF REVENUES BY BUSINESS LINE** 











The Management Board is responsible for the executive management of the Group. It implements the strategies set out by the Supervisory Board. The Supervisory Board ensures that the oversight and auditing carried out by the Management Board guarantees the reliability of financial information. To enhance this management system and provide support during the Group's transformation, a Group Directors Committee was created in 2017. It oversees the Group's various activities, its organization, and its operating performances. This Committee also provides a forum for regular information sharing and discussions about CNIM's strategy and the broader issues affecting the Group. It ensures that decisions taken by the Management Board are applied evenly.





ш

U

• Dmitrieff-Herlicq family



The key issues CNIM's clients are working on are how to optimize resource management, manage the energy transition and reduce the environmental footprint of human activities. To help address these challenges, the Group offers innovative and customized solutions that maximize durability and security in the areas of waste treatment, emissions control, renewable energies and the energy efficiency of industrial sites.

As an international specialist in the treatment and energy recovery of waste, CNIM works with local authorities, organizations with delegated authority from central state bodies and operators. Its teams design, build and operate turnkey plants that produce energy from biomass, household waste, non-hazardous industrial or special waste (medical waste, water treatment plant sludge and green algae). CNIM works with its clients during every phase of their project, whether they are seeking recommendations on the type of facility best suited to their needs or want specific equipment. Advice can include the definition of legal, fiscal and technological needs, the search for financial and technical partners, environmental impact studies, building permit requests, coordination with public authorities or civil society, acquisition of interests in the facilities, etc. In operating energy-fromwaste and -biomass plants built by it or other equipment suppliers, CNIM brings in a range of technologies designed to reduce operating costs. This activity has recently been extended to other business units such as waste sorting and recycling, organic waste recovery and renewable energies.

ſ

SECTO

ENERGY

Q

F

ENVIRONMEN



#### OUR CLIENTS

LOCAL AUTHORITIES, **OPERATORS, DESIGNATED** PROVIDERS OF PUBLIC SERVICES, PRIVATE **INVESTORS, ENERGY** PRODUCERS AND PUBLIC **OR PRIVATE SERVICE** COMPANIES (AGRO-FOOD, CHEMICALS, PETROCHEMICALS, PAPER AND PHARMACEUTICAL INDUSTRIES).



100

million people worldwide have their waste treated in energy-from-waste plants designed and built by CNIM. CNIM also offers a wide range of services for improving the competitiveness of existing waste treatment plants through optimization, maintenance, refurbishment and compliance work. Its subsidiary LAB has a catalogue of patented processes and flue gas treatment services for waste treatment plants, thermal power plants, industry and ships. LAB can also help recover metals in bottom ash from waste incineration.

**CNIM Babcock Services is the French leader for the** modernization and standards compliance of thermal power equipment. Its operations span the globe and all types of industrial boilers, regardless of the fuel used. Its expertise covers all aspects of the business, from design and manufacturing to preventive and corrective maintenance as well as refurbishment, combustible changes, consultancy, optimization of energy and environmental aspects, spare parts and turnkey boiler houses.

SUNCNIM, a subsidiary set up in 2015 in partnership with Bpifrance, delivers and operates turnkey solar steam generators and power plants with storage. It conducts its business relying on the energy management system (EMS) developed by Bertin, the provision of performance guarantees adapted to project financing requirements, and on its experience in building turnkey power generation plants.

CNIM also provides energy producers and consumers with innovative energy storage, management and recovery solutions to optimize their performances and remain competitive: high-powered absorption chillers and integrated recovery systems using heat pumps and optimization software from Bertin Technologies.





CNIM currently operates nine energy-from-waste plants, a sorting center, a waste disposal plant, a platform for recovering non-ferrous metals from bottom ash, and two biomass-fueled power plants.



The Innovation & Systems Sector covers the entire lifecycle of high-tech equipment and systems in the fields of defense and security, nuclear and big science, industry and life sciences. It is involved in R&D, design, production, installation, commissioning and maintenance. Bertin also provides consultancy services and expertise to firms in the energy and environmental sectors.

advantage.

formance instrumentation.

Bertin IT is active in information systems security and digital intelligence.

In addition to client bases that overlap by 70%, CNIM and Bertin share the same multidisciplinary approach and have complementary businesses and expertise. They are extracting more synergies between their sales and technical teams as the Innovation & Systems Sector ramp up exports.

ECTOR

S

OUR CLIENTS

MAJOR CONTRACTORS IN FRANCE AND ABROAD.





the Egyptian Navy.

Innovation & Systems includes CNIM's Industrial Systems Division and Bertin, whose skills and resources are closely coordinated.



Group's own designs.

The Industrial Systems Sector designs and manufac-

tures equipment and systems for deterrence (launching systems for missile launch tubes on French nucle-

ar submarines), force protection and projection on

land and sea, nuclear and industry. Its bridging sys-

tems (motorized floating bridges, modular assault bridges) and catamaran landing craft may be used for

logistic support to populations after natural disas-

ters. In the nuclear industry, CNIM is active in all

phases from fuel enrichment and nuclear generated electricity through to dismantlement and waste dis-

posal. The Group operates in the big science field by

being a top-tier and long-term partner of major programs like the Megajoule Laser (LMJ) and ITER experimental reactor. Its workshops produce industrial parts and systems for third parties and also for the



30

Feedback from the manufacturing phase helps the design and scaling phases move forward. This direct link between design and production gives CNIM a clear competitive

Bertin and its business units are active in all stages of the innovation cycle, from R&D through to the delivery of equipment and end-to-end solutions. Its services range from research and consulting to the supply of high value-added equipment and technology development for third parties. With the acquisition in 2017 of Exensor and Winlight, Bertin strengthened its leadership in high-per-





## Positive momentum in the Middle East...





CNIM continued to expand commercially in the Middle East in a year marked by two events.

First, a consortium that included CNIM was selected as the Preferred Investor for the Kabd Municipal Solid Waste project in Kuwait. With nominal waste treatment capacity of 3,274 tons a day, the plant will generate close to 100 MW of electric power. If appointed as Successful Investor, the consortium will acquire shares in the project company handling plant design, construction and operation.

Second, CNIM was selected by Bee'ah and Masdar to design, build and operate the Sharjah waste-to-energy plant. The first of its kind in the region, the plant will treat 300,000 tons of municipal waste.





ENERGY-FROM-WASTE

#### ... in Europe...



In France, it signed a contract with Veolia for the supply, installation and commissioning of the Process work package for the waste-to-energy plant in Troyes. This contract includes a firm component for the studies and a conditional one for the work. In the United Kingdom, where CNIM is leading the way having built 40% of existing plants, the Group won its fourth contract with Viridor for the Avonmouth plant, which will be its 26th project in the British Isles.

ENERGY-FROM-WASTE ... and Asia



#### CNIM booked new orders in France and Europe in 2017.

Lastly, CNIM signed a contract with the Suez-Itochu SPV to deliver a turnkey plant in Belgrade (Serbia). Located on the site of the Vinca landfill, where 2,700 tons of waste are dumped each day, resulting in significant pollution, the plant will convert 340,000 tons of the 510,000 tons of waste generated by the city annually into electricity and heat.

Partners for 58 years, CNIM and Martin once again combined their expertise in energy-from-waste and -biomass.

They created CNIM MARTIN Pvt. Ltd., which will serve the southern and southeastern Asian markets. This new entity, based in Chennai, India, will provide energy-from-waste and biomass plants equipped with exclusive combustion and flue gas treatment systems developed by Martin and LAB, respectively.



#### REDUCING POLLUTANT EMISSIONS

#### For cleaner sea air

#### LAB won a contract in 2017 to install scrubbers on three cruise ships.

The contract was won in partnership with STX (design and installation). LAB is in charge of scaling, technical specifications, purchasing, production control and commissioning of the equipment. It used its DeepBlueLAB™ technology, the result of 15 years of R&D, for this project.

The scrubbers will filter more than 97.1% of sulfur dioxide emissions and 90% of fine particulates over two microns in size. They will allow the owner of the three ships to comply with the Marpol directive aimed at reducing pollutant emissions from ships.

#### WASTE SORTING

#### Syctom and CNIM have broken ground on the future selective sorting center in Paris

#### Located in the new Clichy-Batignolles neighborhood, this high-capacity, fully automated center will treat the recyclable waste of more than 900,000 residents starting in 2019.

On November 10, Jacques Gautier, president of Syctom, the metropolitan municipal waste agency, and Stanislas Ancel, a member of the CNIM Management Board and Chief Executive of the Environment & Energy Sector, launched the construction of the first selective sorting center in Paris XVII, with Sébastien Lecornu, Secretary of State to the Minister for the ecological and inclusive transition, in attendance. This high-efficiency, cutting-edge sorting facility will be able to process up to 15 tons an hour thanks to its 13 optical sorters. Equipped to sort new plastics following the extension of sorting activities, it will make it possible to recycle even more household packaging and help meet the goal set by law of recycling 75% of all packaging.



#### SENSORS AND INSTRUMENTATION SYSTEMS

#### Bertin Technologies acquires Exensor and Winlight

#### Two acquisitions completed in 2017 strengthen the Group's offering in the areas of unattended sensors and high-tech instrumentation systems.

With the takeover of Sweden-based Exensor, the world's leading supplier of unattended sensors and protection networks for sensitive areas and infrastructure, Bertin Technologies speeds up its development in the global instrumentation and surveillance market for defense and security applications. The acquisition of French firm Winlight, which designs and manufactures components and systems for high-performance optics, strengthens the Group's portfolio for applications like experimental reactors, synchrotrons, telescopes and major defense and space programs.

#### NUCLEAR FUSION

## All 35 shipped!

## partners watched the last radial out to Italy.

It will be fitted into the toroidal coil confining the plasma within the ITER vacuum. CNIM has been involved in the ITER project since 2007 with its Italian partner SIMIC, and they together manufactured 35 of the 70 radial plates that will form the heart of ITER. This final shipment was the culmination of five years of teamwork, investment and innovation. CNIM reorganized its workshops extensively to keep up with the production schedule for these massive steel rings: It acquired two portal machines to make the large parts and housed them in a purpose-built, airconditioned 3,000 square meter building with direct access to the sea, which was required for shipping the radial plates to Italy. The ITER adventure is continuing for CNIM, which signed two new contracts in 2017 with ITER





On May 23, 2017, CNIM and its plate manufactured in the Group's La Seyne-sur-Mer workshops ship

Organization and Fusion for Energy (F4E), the EU organization that manages Europe's contribution to ITER. They tasked CNIM with designing and manufacturing the port plug structures. These stainless steel structures will house instrumentation enabling the ITER machine to be controlled and measurements to be taken. CNIM was also selected to develop a manufacturing process for and to produce spare precompression rings, epoxy glass composite rings that will reduce fatigue on ITER's toroidal field coils by confining the super-hot plasma (150 million degrees Celsius) from the powerful electromagnetic forces.

#### The ITER international program

Based in Cadarache (Bouches-du-Rhône department), the ITER program aims to prove that fusion is a viable source of largescale, safe and environmentallyfriendly energy.



## FusionSight® wins award at Milipol Innovation Awards 2017

#### OPTRONICS

## French Defense Ministry selects PeriSight<sup>®</sup> and FusionSight<sup>®</sup>

The 35,000-hectare combined forces shooting training center (CETIA) in Canjuers, in Southern France, is the largest shooting training center in Western Europe. The French Defense Ministry launched a call for tenders to upgrade the site, and selected Bertin Technologies' optronic equipment to secure it. Bertin based its proposal on the PeriSight<sup>®</sup> fixed 360° vision system and the FusionSight® day and night monocular. Bertin will supply and install the equipment, which will be used starting in 2018 for the

surveillance and observation of training on the center's five shooting ranges. The company will also maintain them and provide customer support for five years.

#### CBRN RISKS\*

Bertin bolsters its range of radioactivity detectors



FusionSight<sup>®</sup>, launched by Bertin Technologies in 2016, won the first edition of the Milipol Innovation Awards in the "Individual Equipment/First Responder Protection" category.

Designed in partnership with Photonis, FusionSight® is the world's first vision device combining color low-light and thermal sensors usable in smart fusion. It offers invaluable vision support for police and homeland security, even under limited visibility and low light conditions. The Milipol Innovation Awards recognize the most innovative products, materials, services, solutions or business models related to the homeland security sector.

#### OUR DAY-TO-DAY ACTIONS





SaphyGATE G, Bertin's new range of radiation portal monitors, automatically detects the potential radioactivity of vehicles, such as trucks and trains, and their loads. The devices offer excellent measuring performances and meet the requirements of the IEC62022 international standard, one of the most demanding in the field. On behalf of EDF, Bertin also developed SaphyRAD-E, a next-generation multi-probe contamination monitor. It will be used at the 19 nuclear power plants currently in operation in France, notably to detect and prevent surface contamination on personnel leaving work areas, thus supporting EDF drive to optimize radiological cleanliness at its nuclear sites.

\* CBRN: chemical, biological, radiological and nuclear.

#### FLUE GAS TREATMENT

#### LAB making further inroads in Northern Europe

LAB, a CNIM subsidiary, is particularly active in Scandinavia, where it has a number of project underway. The new contract it won in Denmark in 2017 strengthened its leadership in flue gas treatment in this part of Europe. Situated on the Baltic Sea, the city of Elsinore (Helsingør in Danish) will soon have a biomass CHP\* plant with flue gas treatment and condensation units provided by LAB. Work got underway during the year to convert the Amagervaerket CHP plant in the Copenhagen region. LAB will supply the flue gas treatment and condensation units for this facility, which will be the

largest flue gas condensation unit in Europe. In Lithuania, LAB won a contract to supply a flue gas treatment and condensation unit for the new energy-fromwaste plant in Kaunas. LAB's contract includes the design, engineering, supply, erection and commissioning of the equipment.

\* Combined heat and power: This biomass plant will produce both heat and electricity.



SPACE

#### The stratosphere is the limit!

As long as a football stadium and as tall as an 11-story building, part drone and part satellite, the Stratobus™ is a solar-powered geostationary and stratospheric balloon.

CNIM is one of the six industrial partners brought together by Thales Alenia Space to work on this multi-mission project: observation, security, telecommunication, navigation.. Stratobus<sup>™</sup> is stationary but to maintain its position, it will have to constantly battle against winds blowing at speeds of 0 to 90 km/h. This poses a serious technological challenge for CNIM, which is responsible for the design and production of the most important mechanical components: the support structures of the four propulsion engines and the two nacelles. A first prototype should be ready within five years.

#### INSTITUTIONAL PARTNERSHIPS

## Putting our expertise to work for the environment



CNIM is a member of numerous professional and environmental associations and unions, and its experts participate actively in those organizations' research and publications. In 2017, CNIM notably coordinated work related to the INERIS study on behalf of CEWEP, ESWET and FEAD about the performance limitations of air emissions measurement devices and the evaluation of compatible minimal value limits, as well as the C14 study for FNADE, measuring the proportion of carbon 14 in waste combustion gas to calculate the portion of renewable energy recovered.

#### ENERGY-FROM-WASTE

#### Sterilwave® receives Innovation of the Year Award 2017

Sterilwave was awarded the title of IHEEM Innovation of the Year 2017 in the UK Healthcare Estates Sector. This title was obtained by Eurotec Environmental's Sterilwave Waste Treatment Plant at Barts Health NHS Whipps Cross Hospital.

This prize rewards the installation of the first UK site for onsite treatment of clinical waste in the last 20 years - an economical and ecological alternative to traditional collection and off-site elimination. Sterilwave is the only technology that has been approved by the UK Environment Agency in the last 20 years for the onsite treatment of Clinical Waste. Thanks to the Sterilwave

technology, between 2 and 2.5 tons of waste is treated daily at Barts Health NHS Whipps Cross Hospital. The site is composed of two Sterilwave 440 and works at least 16 hours a day, 5 and a half days a week.





In addition, CNIM managed and coordinated for SVDU and FEDENE a study on the continuous measurement of mercury emissions and abatement techniques. Lastly, CNIM managed and coordinated work done by SVDU and SNIDE, FNADE and ESWET for the BREFs on large combustion plants, waste treatment, and waste incineration and on the reference document for metrology and measurement. It put into place a strategy of alliances with other associations involved in the BREFs for these projects.



RENEWABLE ENERGIES

# Oceanwings® spreads its wings

Oceanwings<sup>®</sup>, the smart wingsail for ship propulsion designed by French naval architecture firm VPLP Design, will be manufactured at CNIM's facilities in La Seynesur-Mer.

TRICAT

Given its industrial capacity, experience in the manufacture of extremely large parts and its perfect mastery of composite technologies, CNIM will mass produce this wingsail targeting the super-yachting, maritime transport and nautical sports markets. Consisting of two wingsail elements that are entirely automated, furlable\* and reefable\*\*, Oceanwings<sup>®</sup> can be used in hybrid mode, together with a propeller propulsion system, enabling considerable fuel savings and reduced greenhouse gas emissions. The project is backed by Ademe.

- ---

VPLP

\* Furlable means that the area of the sail can be totally reduced. \*\* Reefable means that it can be partially reduced.



CABLEGRAMS

Club ADEME International celebrates its 20th anniversary. CNIM was honored for the occasion, with a trophy awarded to its subsidiary LAB, a longstanding member of the Club. The EEAS chooses Bertin IT. The European External Action Service (EEAS) chose Bertin IT's Enterprise Intelligence solution for its project to industrialize the capture and processing of key information from thousands of sources and thereby contribute to defining the Community's international actions. Three nuclear fuel handling and transfer machines for the Onkalo encapsulation unit. In Finland, Posiva Oy entrusted to CNIM the development of three fuel handling and transfer machines for the future encapsulation unit.

#### SPACE

#### Feet on the ground and head in the clouds

CNIM won a contract from ArianeGroup to build the P120C development nozzle structures (motor for the Ariane 6\* boosters).

The first booster casing was delivered in July 2017. This contract is proof of how CNIM teams can meet demanding technological challenges and of the quality of its industrial facilities in La Seyne-sur-Mer. Since 2004, CNIM has been producing all of the nozzle structures for the side-boosters of the Ariane 5 launcher.

Positioned at the base of the propulsion units, these nozzles are tasked with evacuating and guiding the propulsion gases during the first flight phase of the launcher. In 2016, CNIM workshops in La Seyne-sur-Mer produced the 150th booster casing for Ariane 5. Production will continue until 2020, gradually giving way to the Ariane 6 launcher, which will be equipped with either two or four nozzles depending on the configuration.

\* Ariane 6 is a medium to high power launcher being developed by the European Space Agency to replace the heavy Ariane 5 rocket toward 2021.

#### FORCE PROJECTION

## The nextgeneration motorized floating bridge



Wireless control by a single operator, short ramp enabling air transportability, new vehicles with armored cabs... these are the new functionalities of the motorized floating bridge the CNIM teams tested and delivered in 2017 to their client, the French Defense Procurement Agency (DGA), for a year of operational tests. The contract notified by the DGA in 2015 calls for the upgrade of 200 meters of bridge. The motorized floating bridge developed by CNIM is a solution designed for wet gap crossing. With two configurations available, a fixed bridge or ferry, it can be easily deployed in a short time with minimum manpower required. It is currently being used by armed forces in many countries across the world.



# Respect the environment



CNIM is working to limit the environmental impact of its activities and to reduce its clients' footprints as well. It supports their efforts to work toward the energy and environmental transition by adapting their energy production facilities and municipal waste treatment policies.

#### Employee training and education on environmental protection

Ten Group companies are ISO 14001 and/or ISO 50001 certified, meaning that 19 sites factor environmental issues into their management systems. More than 1,000 staff are regularly trained to support all continuous improvement initiatives to better anticipate and control environmental risks.

#### **CNIM's EPC division** is OHSAS 18001 certified

CNIM EPC was recommended by LRQA for OHSAS 18001 certification following an audit of its waste-to-energy plant design, production, installation and commissioning activities. This certification recognized the excellent preventive practices relating to health and safety at work that have been rolled out over several years on projects led by CNIM EPC teams. OHSAS 18001 certification supplements those CNIM EPC has already earned for quality management (ISO 9001) and environmental protection (ISO 14001).

#### CNIM WEMS and CNIM Ouest Armor divisions ISO 50001 certified

CNIM Waste and Energy Management Solutions (WEMS) earned ISO 50001 certification for the plants operated through

A total of

sites incorporate environmental issues into their management systems

the Group's subsidiaries. This certification supplements the ISO 14001 and OHSAS 18001 certifications already held. In addition to demonstrating that these plants are operated in a way that optimizes energy use, the certification makes CNIM's French clients eligible for a reduction in the TGAP (French tax on polluting activities). Also in 2017, the Pluzunet plant operated by the CNIM Ouest Armor subsidiary earned ISO 50001 certification. It is the first CNIM plant to enjoy triple certification.

#### Flue gas condensation heat recovery: A LAB specialty

LAB provided the flue gas condenser unit for the biomass-fired plant in Herning, Denmark, operated by Ørsted, the leading Danish producer of electricity and heat. The contract covers the design, engineering, supply, installation and commissioning of a heat recovery unit that will boost the plant's efficiency by allowing it to produce an additional 41 MWth. The nominal thermal input of the existing boiler plant is 263 MWth (130 MW wood chips and 133 MW wood pellets). Prior to 2003, when the plant was converted to biomass, the boiler was coal-fired.

#### CPCU conducting in-depth technical analysis for conversion of two coal boilers to 100% biomass

In 2017, CNIM Babcock Services conducted an in-depth analysis of a full conversion of the two CPCU coal boilers in Saint-Ouen to biomass. Production tests were conducted as part of the analysis. The shift



to wood considerably reduced NOx, sulfur and dust emissions. As the plant is in a residential area, CNIM Babcock Services also conducted a study with Bertin Technologies into reducing noise and visual impacts (elimination of the plume).

#### Bertin working with SITCOM to reduce its greenhouse gas emissions

In December of 2017, the intercommunal organization for the collection and treatment of household and similar waste (SIT-COM) for the southern coast of the Landes department signed a CO<sub>2</sub> Objective charter in partnership with France's Ministry for the Environment and Agency for the Environment and Energy Management (Ademe). Through this partnership, SITCOM committed to reducing fuel consumption by its collection vehicles and the related greenhouse gas emissions.

The organization has more than 80 heavy trucks in its fleet and aims to reduce its fuel consumption by 8% by 2018. Bertin Energy Environment conducted a techno-economic study to explore alternatives to diesel fuel. Organizational efforts were subsequently proposed (reduction at the source) along with a multiyear investment plan that



would see the fleet gradually replaced by operational technologies with carbon emissions being reduced. The plan proposed targets 46 vehicles and will prevent 180 tons of CO<sub>2</sub> emissions a year.

#### ATF Gaïa gives a second life to CNIM IT equipment

Since 2014, ATF Gaïa, more than 80% of whose employees have disabilities, has been reconditioning IT equipment that it then resells through private sales. 64% of the 6.5 tons of IT equipment removed from CNIM sites have been recycled, preventing 78 tons of  $CO^2$  equivalent - i.e. a trip 1.3 times around the world or 229,500 liters of water, the equivalent of 0.10 Olympic swimming pools.

## Our human resources policy

The Group has taken numerous initiatives with its human resources policy over the past four years in order to attract and retain talent and support the changes underway with its product and service offerings, technologies, geographic markets and business models.

#### Esprit CNIM: A training module to help staff get acquainted

In 2015, the Group Human Resources Department launched a Management training program that was very popular among participants. Heartened by positive

feedback, one of the modules, "Esprit CNIM", was extended in 2017 to include a larger number of participants.

It addresses CNIM's universe, its history and its strategy to give staff from CNIM's different sites and businesses a chance to talk to each other with a common frame of reference and to encourage teambuilding.

#### 15% of training conducted by in-house trainers

The Group has more than 160 in-house trainers who work to develop new modules for specialist as well as cross-functional training. Developing in-house training modules with the help of staff and helping staff learn are a point of honor for CNIM. These trainers all master a skill and/or area of know-how they are willing to pass on to others in the Group.

#### Creating the conditions for successful internal mobility

The Mobility Committee created three years ago brings together the HR teams from various CNIM entities to discuss job openings and candidates for mobility. To be successful, mobility requires the commitment of and cooperation between employees, who are actors in their own career paths, managers, who encourage skill development and career planning within their teams, and HR managers. The latter work with employees as they plan



their professional futures and explore opportunities to move within the Group. 63 employees have benefited from intra-Group mobility since the program kicked off, including 17 in 2017.

#### Strategic Workforce Planning: A frame of reference co-created by HR managers and operational teams

In 2016, the Group launched its Strategic Workforce Planning (GPEC) program in the aim of developing an integrated tool for managing the assessment, training and development of employees' skills while also anticipating future changes in skills and staffing needs and supporting career mobility. A first step in the project was to define a shared reference catalogue of skills. Several one-day workshops were organized, systematically targeting specialist operating staff and HR managers. These enabled key professional skills and practices to be defined for standard roles in nine specialist fields (projects, design, maintenance, scheduling, finance,

HR, etc.). The reference catalogue for all specialist fields will be completed in 2019.

#### Internal opinion barometer: Staff regularly asked for feedback

Every other year since 2014, CNIM has conducted an internal opinion survey. The same questions are asked each time, but all employees in France are now invited to respond, and the goal is to eventually include all Group companies. The results of the 2016 survey were published early in 2017. It showed that 97% of staff members believe they have the right skills to perform their job, 87% say they are satisfied and motivated in terms of interest in their work and their degree of independence, and 86% say they can count on their coworkers in the event of a problem. An action plan was put into place based on the results of this survey to address the







employee satisfaction and committment to their work.

expectations expressed by staff. It continues to be implemented in 2018 with a focus on improving internal communications, the development of management skills and career visibility.

#### All CONNECTed at **CNIM Babcock Services!**

The CONNECT plan was introduced to improve management communication policy at CNIM Babcock Services and adapt communication methods and channels to each type of audience, notably those on worksites, who, due to their mobility, previously did not have access to the CNIM information system. Two hundred communication and interaction points were identified and studied in the areas of operational oversight, internal information and procedures. Once this analysis was complete, some channels were repositioned to optimize targeting. In the interest of supporting the mobility of staff on worksites, the decision was made to use a tablet to provide access to messaging, a videoconferencing system and intranets and to allow photos to be taken of work underway. •

## CNIM in the city

In France, at its historic La Seyne-sur-Mer location in the Var department, and in the countries around the world where the Group is expanding, CNIM supports civil society initiatives promoting education and health.



#### "Ma caméra chez les pros"

CNIM took part for the fifth year in the "Ma caméra chez les pros" (my camera meets the pros) program and presented to ninth graders at the Marie France vocational school in Toulon the world of automation through the energy-from-waste plants it operates around the world. A simulation between two plants created by the CNIM teams illustrated for the students engineering and process technician jobs in automation. Students also got a glimpse of how film production works: preparation of a script, shooting and editing. They were given a prize for the best investigation. Created by the SFR Foundation and French Education Ministry in 2010, the "Ma caméra chez les Pros" program aims to help 15-year-olds in vocational training consider their career paths in light of the business sectors and professions with potential in their region and give them the opportunity to work with a local company.

#### "Professeurs en Entreprise"

CNIM's engineering team in La Seynesur-Mer welcomed 13 professors from the National Education Ministry in November 2017 as part of its "Professeurs en Entreprise" (professors in companies) event. The program includes exploring the different phases of projects followed by a visit to a design office and the workshops.

The "Professeurs en Entreprise" event, organized by the C GENIAL Foundation, aims to promote technical jobs. The State-approved C GENIAL Foundation was created in 2006 by companies with support from the French Research Ministry.

#### "Industry Week": **CNIM** renews its partnership with UIMM

Ahead of the seventh annual "Industry Week" event, CNIM renewed its partnership with UIMM (French Union of Industries in Metallurgy) for the fourth year in a row and welcomed students from local middle and high schools and universities to its La Seyne-sur-Mer plant. This national event, organized under the aegis of the Ministry of the Economy and Finance, via the Directorate General for Enterprise, aims to showcase the activities of industrial firms and change young people's perception of that sector. At a more regional level, UIMM wanted to show that industrial activity is thriving and competitive and to highlight the dynamism of firms in the metallurgy sector.

#### Health: Advice and prevention in companies

Aware of the fundamental role human capital plays in the success of CNIM Babcock Morocco and the importance of medical prevention in companies, CNIM Babcock Morocco's Human Resources Department organized a series of medico-social events in close cooperation with healthcare professionals focused on treating diabetes and screening for breast cancer.



#### Music group supports the Telethon

The "Meltin' Potes" group, formed within the CNIM music section at the La Seynesur-Mer plant, mobilized to raise money for the 2017 Telethon of AFM, an association created in 1958 to help fight neurodegenerative diseases. It worked through the partnership formed with the city of Six-Fours when CNIM's music section was first created in 2010. That section has grown from around 10 musicians originally to close to 30 today. CNIM provides them with space specially equipped for their activities.

#### Ipswich plant earns a Civic Trust Award

In 2017, the Ipswich energy-from-waste plant in Suffolk County (United Kingdom), built by CNIM in partnership with Lagan and delivered to SITA UK in 2014, earned a Civic Trust Award, which recognizes outstanding architecture, planning and design in the built environment.





years of partnership between CNIM and UIMM for "Industry Week".

#### Management structures

as at May 24, 2018

#### **ENVIRONMENT & ENERGY**

Stanislas Ancel **Chief Executive** 

**Claude Boutin** François Darpas Klaus-Guenther Zink **Deputy Chief Executives** 

DIRECTORS

Marketing, Sales & Development Stanislas Ancel **Claude Boutin** Directors

EPC **Claude Boutin** Director

**CNIM MARTIN Pvt. Ltd.** Denis Bauer **Michel Banderly** Directors

**Operation & Maintenance** Bernard Joly Director

Services François Darpas Director

LAB Stanislas Ancel Chairman of the Board of Directors **Richard Budin** Director

LAB Geodur Björn Warmerdam Director

SUNCNIM **Stanislas Ancel** Chairman

Sylvain Legrand Director

#### **INNOVATION & SYSTEMS**

Philippe Demigné **Chief Executive** 

INDUSTRIAL SYSTEMS DIVISION

(CNIM Industrial Systems Business Unit and China and Singapore subsidiaries) Philippe Lazare **Chief Executive** Site Manager, La Seyne-sur-Mer (France)

**CNIM Industrial** Systems Business Unit

Defense, Space & Maritime **Business Line** Matthias Bayart Director

Nuclear & Big Science & Thermal Systems Business Line François-Xavier Catelan Director

Advanced Manufacturing & **Diversification Business Line** Jean-Luc Chauveau Director

BERTIN DIVISION

Bertin Technologies Philippe Demigné Chair Systems & Instrumentation

**Business Unit** Bruno Vallayer

Jean Roch Deputy Chief Executives

Consulting & Engineering

Business Unit Energy Environment Germain Gouranton Director

> Modelling & Scientific Computing François Laborde Director

**Ergonomics & Human Factor** Dominique Soler Director

Information Technologies **Business Unit Yves Rochereau** 

**Chief Executive** 

# Design and production: BABEL Photo credits: Cover: IStock - Imants Urtans; P.2-5: Thomas Laisné; P.6: CNIM, GOUSSE Herve - MasterFilms, IStock - Anders Tukler, Wai Ming Lung, Trattamento Rifuiti Metropolitani, Christophe Chabert, Jeyhun Abdulla/OXUSphoto.com-Azerphoto.com, Mars-Rover-Laser/NASA/JPL-Caltech/LANL/J-L. Lacour/CEA; P.8-9: Voushka-Kivera; P.14-15: Getty Images - Tegra Stone Nuess, Cyril Abad, P.21: Julien Goldstein, Gilles Perbal; P.24-25: Julien Goldstein; P.26-2: Joëlle Dollé, Thomas Laisné, Damien Grenon/TOMA/ Saur, P.28: Clugston - Greg Pemberton, Julien Goldstein; P.27: S1: S1: CEA, ADJ Jean-Raphaël DRAHI, Cyril Abad, P.32: IStock - Mariemlulu; P.33: CNIM, IStock - LewisTsePuiLung; P.34: IStock - cinoby, Ateliers Monique Labbé; P.35: S1: Bertin - TLeaud, Gilles Perbal; P.36: Alexandre Dalivoust; P.37: Bertin - T.Leaud; P.38: IStock - Bertin + TLeaud; P.18: Stock - Cinoby, Ateliers Monique Labbé; P.35: UPLP - Th. Martinez; P.41: CNIM, GOUSSE Herve - MasterFilms; P.42: Veolia -Commission Air Ltd; P.43: IStock - Ekton; P.44: Cyril Abad; P.45: Julien Goldstein; P.46: Stephen Waller; P.47: CNIM. This activity report has been printed by Stipa. It's printed on FSC-certified Olin Regular Extra White paper made entirely of fibers obtained from sustainably managed forests.

48



MIXTE Papier issu de sources responsab FSC<sup>e</sup> C016870



Constructions Industrielles de la Méditerranée

Head Office and General Management 35, rue de Bassano 75008 Paris, France

Tel.: +33(0)1 44 31 11 00 - E-mail: contact@cnim.com www.cnim.com

Société Anonyme with a Management Board and a Supervisory Board, with share capital of €6,056,220 Paris Trade and Companies Register B662 043 595 SIRET 662 043 595 00138