



CMI ENVIRONMENT



WATER

Treating **municipal**  
& **industrial water**,  
our daily **challenge!**



Drinking water treatment plant, 65 000 m<sup>3</sup>/d (Eupen, Belgium)

**Cockerill Maintenance & Ingénierie, at the service of industry for two centuries!**

Today, the CMI Group designs, installs, modernises and maintains equipment across the whole world, providing its expertise in international project management to its clients and partners.

In 2015, with a worldwide workforce of over 4,500, the CMI Group turned over 1.3 billion Euros, with an operating result of 110 million Euros.

The activities of CMI are organised into 5 Sectors: Defence, Energy, Environment, Industry and Services.

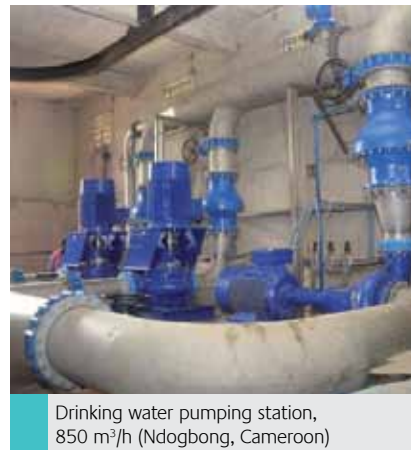
**TREATING WATER, OUR DAILY CHALLENGE!**

Our know-how and expertise in the domain of water enables us today to respond to all the demands of public bodies and industrial enterprises, while constantly ensuring that what we do conforms to local regulatory and economic constraints.

The context within which we operate is shifting all the time, changing at the same speed as new regulations. This is why our water experts from **CMi Aquaged**, **CMi Balteau** and **CMi Proserpol** make their 40 years of experience available to you, providing you with overall and innovative tailor made solutions to the benefit of environmental performance.



Drinking water treatment plant and pumping station, 800 m<sup>3</sup>/h (Jambes, Belgium)



Drinking water pumping station, 850 m<sup>3</sup>/h (Ndogbong, Cameroon)

**Our solutions**

1. Drinking water production
2. Process water treatment
3. Waste water treatment
4. Sludge reuse
5. Preventive and curative solutions

**A sustainable initiative**

CMi Environment is committed to achieve the highest quality on every project and works collaboratively with clients to deliver results that exceed their expectations.

The local context, the technical environment, the geographical situation, cultural practices, etc., are the basis to design the best solution.

During preliminary studies that are discussed with the different partners, the various configurations of each project are proposed. The choice is then made in agreement with the different decision-makers.



Drinking water treatment plant, 750 m<sup>3</sup>/h (Kpong, Ghana)



Drinking water treatment plant, 50 m<sup>3</sup>/h (Tonga, Cameroon)

CMI Environment endeavours to ensure the sustainability of the infrastructures set up. The training of technicians and the follow-up and advice for the maintenance of the equipment are generally proposed, the aim being to guarantee with a long term view, a real autonomy for the facility's manager.

Quality and safety are key principles for CMI Environment. We take great care to choose the right suppliers and subcontractors, and regularly subject them to evaluation on the basis of objective criteria.



Drinking water treatment plant  
20 m<sup>3</sup>/h (Jikejemoku, Cameroon)

As EPC contractor, CMI Environment endeavours to develop and implement global solutions and partnerships based on mutual trust.



Wastewater treatment plant,  
13 000 PE (Louvain-la-Neuve, Belgium)

### Climate change

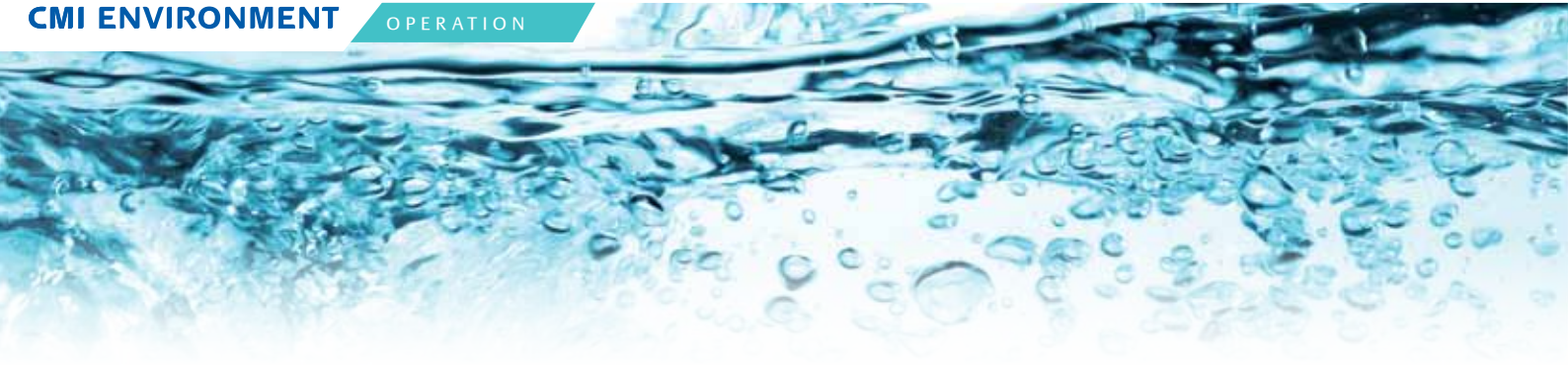
Depending on the technical needs of each project, CMI Environment is committed to choose equipment and processes with low energy consumption and environmental impact. The company aims to be environmentally friendly and to contribute to sustainable development.



Wastewater treatment plant, 93 100 PE (Namur, Belgium)



Wastewater treatment plant, 200 000 PE (Ho Chi Minh City, Vietnam)



FROM DESIGN TO START-UP

DRINKING WATER



Water intake:

- underground water
- surface water

Treatment

Pumping

WASTE WATER



Pumping station

Treatment

Sludge

Air treatment

Stormwater tank

INDUSTRY  
PROCESS WATER &  
LIQUID EFFLUENTS



Wastes:

- Leachate treatment
- Sludge digestion

Agri-food:

- Beverage
- Dairy
- Fruits
- Sugar

Energy - Fuel

Chemistry

Pharmacy

Papermaking

Metals industry

ENERGY

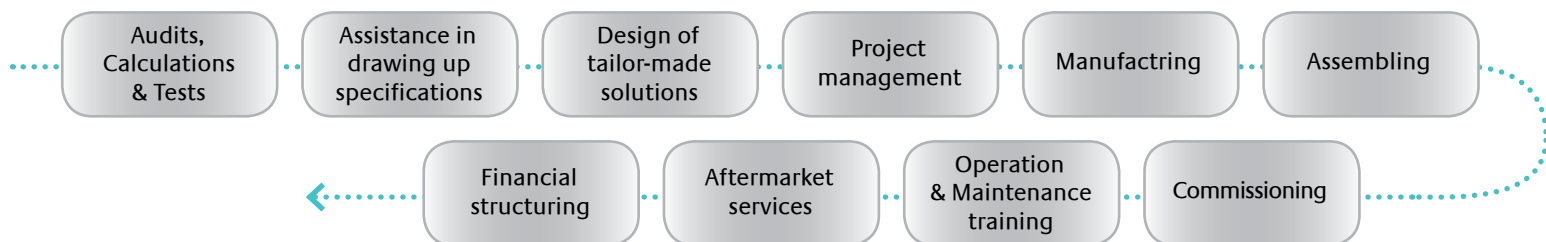


Hydropower

Anaerobic digestion

Energy Efficiency

- Assistance with energy performance: processes, utilities, production and distribution, energy management
- Training personnel recognised by the AFNOR





Dairy (Craon, France)



Tannery (Romans sur Isère, France)

## SECTORS

WATER entities's activities of CMI Environment covers different sectors: **municipal waste water, pumping, drinking water, infrastructure, industry and energy.**

Our WATER entities have developed cutting-edge know-how in each sector and can thus support their customers from the preliminary studies to the detailed design, execution and commissioning.

This large experience is bolstered by specialist engineers in each of the areas mentioned above who have developed cutting-edge technical expertise.

This is appreciated especially in refurbishment work where the versatility of our teams and familiarity with processes lay the foundations for the unique service that CMI Environment offers to its customers.



Oil-producing seeds tranformation (Le Mériot, France)



Chestnut cream production (Donzère, France)

There are indeed numerous interconnections between the departments and each sector makes use of CMI Environment's general resources (estimates, assembly, design office, general services, etc.).





Leachate treatment (Martinique)



## MASTERED KNOW-HOW

Over 40 years' experience and the completion of numerous projects has brought to CMI Environment leading-edge skills and knowledge.

### The energy audit

All the aspects of energy performance are covered: processes, utilities, production and distribution, energy management etc.

- Audit methodology entirely in conformity with the requirements of European norm EN 16247-1, 2 and 3, based on several dozens BPX 30-120 audit references.
- Training personnel approved by the AFNOR for the energy efficiency training modules: training for qualify energy auditors, technical training on the energy efficiency of processes and utilities.



Petrochemicals (Lacq, France)



Hydropower plant (Eupen, Belgium)



Methanization (Pakistan)



Methanization (Casseneuil, France)

### The design office

The design office is involved in 4 areas:

- the selection of the treatment method and the sizing of the process;
- electromechanical studies and equipment selection;
- the drawings (civil engineering guide drawings or electromechanical drawings);
- electricity (electrical design, automation, scada system, remote control and monitoring).

CMI Environment entities teams design solutions which best integrate the different constraints of each project:

- investment cost;
- cost and ease of operation;
- environmental integration;
- reduction of noise and olfactory pollution.

Overseas, CMI Environment fosters partnerships with local design offices in order to ensure that it complies with local legislation, regulations and best practice.

### Assembly

Overseas, assembly is carried out by local companies, but CMI Environment can nevertheless ensure the management of the assembly operations through provision of experienced supervisors.

CMI Environment's technicians can also commission the facilities, at both electromechanical and process levels.

### Operational assistance

During the operation, CMI Environment can provide to its client advices on the management of the process and on the maintenance of the supplied electromechanical equipment.

CMI Environment's process engineers are fully aware of the latest remote management technologies and can also coach the technical teams that will maintain the process. Remote advice and visits on request are also possible.

Special calculation software for modelling and dynamic simulation of different processes enable us to test various scenarios and to optimise the plant's control parameters.





Sludge methanization (Marche, Belgium)



### Research & Development

CMI Environment follows the latest technological developments closely and has a special team that researches new solutions, partnerships and all general skills that might enhance the performance of each project.

In contact with research centres, universities and scientific partners, CMI Environment optimises the potential applications and uses of the existing knowledge and expertise.

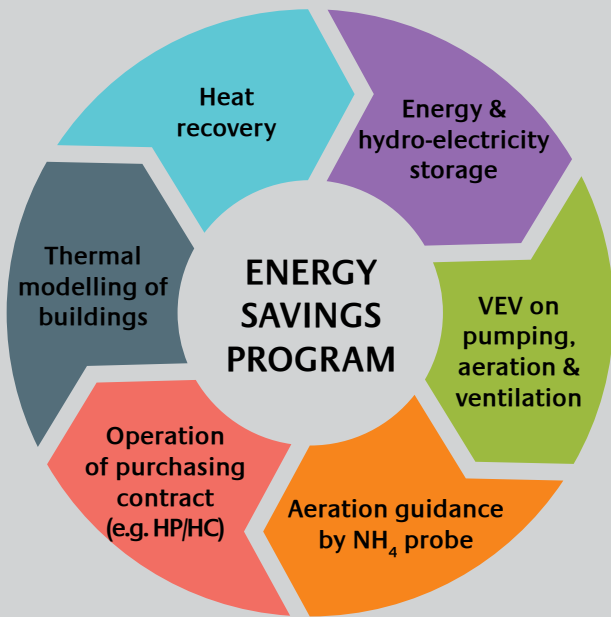
These efforts result in the application of new technologies, the acquisition of licences and/or the development of new tools.



### Training

CMI Environment is convinced that training is a particularly important asset in achieving long-lasting installations and it can, therefore, draw up programmes tailor-made to the customer's requirements. The training sessions proposed can take place in Belgium and abroad; they can be technical, operational maintenance of installations or institutional to reinforce the management of inherent structure.





**Example:**

« Société des Eaux de Marseille », France

- Overall savings identified: 15%
  - Waste water sites: 8%
  - Drinking water sites: 7%

## Training & Assistance for 25 future energy auditors

**DAY 1**

Objective of this approach, normalized diagnostic method and energy performance measuring

01

**DAY 2**

Three-phase current principle and measuring, motor and VEV

02

**DAY 3**

Basin pumping and aeration

03

**DAY 4**

Heat recuperation, hydro-electricity and methanization

04

**DAY 5**

Virtual diagnostics and contribution of Cdc diagnostic tool

05

- France
- 3<sup>rd</sup> largest European operator
- Wastewater treatment plant
- 237 sites (1 200 000 PE)

### OUR CERTIFICATIONS

CMI Aquaged, CMI Balteau et CMI Proserpol have been granted the following certifications:

**CMI Aquaged**



**CMI Balteau**



**CMI Proserpol**



Pumping station of wastewater (Ampsin, Belgium)



CMI building - « L'Orangerie », Seraing (Belgium) ©L.Desmoulin

**TWO CENTURIES OF ENGINEERING AT INDUSTRY SERVICE...**

CMI designs, installs, upgrades and services equipment for energy, defence, steelmaking and other general-industry markets. Its aim is to improve the economic, technical and environmental performance of industrial equipment throughout its life-cycle.

This technology driven group places numerous beneficial assets at the disposal of its client industries: a unique combination of engineering and maintenance expertise, a large geographic and technological scope, and an ability to innovate in accordance with the operational needs of its customers.

Since 2002, CMI has never stopped enlarging its geographical reach and its portfolio of technologies. The Group today boasts operational units in Africa, Brazil, China, Europe, India, New Caledonia, Russia

and the United States. In all, some 4,500 members of staff within the Group constitute a pool of talent commensurate with CMI ambitions.

With the benefit of this organisation, CMI today serves an ever more diversified client base. Whatever their specific needs, in CMI they find a partner of choice, whether as an EPCM services provider across all technologies, for solutions involving reducing the ecological footprint of industrial processes, for specialised services or for the Group's dynamism in terms of innovation.

**CMI, ever more reliable, efficient & sustainable equipment!**





The very vocation of CMI involves improving the efficiency of equipment which it is mandated to design, modernise or maintain. Improving energy efficiency, limiting and recycling polluting emissions, recovering waste heat, re-using waste: CMI uses every approach to minimise the ecological footprint of industries.

## A MORE AND MORE SUSTAINABLE GROUP!

Proud of its past, CMI is also resolutely turned towards the future. It aims to generate industrial progress, to the benefit of its clients, its employees, its shareholders, the communities within which it is established, and the planet.

To achieve this goal, its approach is today organised around major guidelines:

- Offering quality jobs;
- Strengthening governance and promoting responsible behavior;
- Encouraging the development and the production of “green” technologies;
- Reducing ecological footprint, both of CMI and its clients;
- Involving in the prosperity of the local communities where CMI is established in;
- Guaranteeing the long term evolution of the Group.



CMI considers the improvement of the ecological footprint as a major criterion for evaluating its technological innovations.

To help develop the regions in which it operates, CMI Group ensures that its representatives are present in community discussions where they are invited. It listens carefully to and supports the demands of “residents”: education, cultural activities, local sports clubs...



FROM OUR INSTALLATIONS  
IN EUROPE, WE ARE AT YOUR  
SIDE THROUGHOUT THE WORLD.



CMI Environment



**WATER**

CMI Aquaged

Tél. +33 (0)3 24 71 08 08  
aquaged@cmigroupe.com

CMI Balteau

Tél. +32 (0)4 253 22 24  
balteau@cmigroupe.com

CMI Proserpol

Tél. +33 (0)1 30 45 90 20  
proserpol@cmigroupe.com



**ENERGY EFFICIENCY**

CMI Energy Efficiency

Tél. +33 (0)1 30 45 90 70  
energy.efficiency@cmigroupe.com



**AIR & GAS**

CMI Europe Environnement

Tél. +33 (0)3 89 37 41 41  
europe.environnement@cmigroupe.com



**SOLID & WASTES**

The Nesa Solution®

Tél. +32 (0)4 330 20 73  
nesa.solution@cmigroupe.com

