

# **THE ESSENTIALS**

## **2018**

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# OUR MISSION: "RESOURCING THE WORLD"

Humankind must completely rethink its relationship to resources and come up with a new model of economic and social development that is more efficient, balanced and sustainable. With its 160 years of water, energy and waste expertise, Veolia places its capacity for innovation at the service of the pursuit of human progress, of performance for businesses and local authorities, and of people's well-being. In order to improve both its own and its customers' environmental footprint, Veolia designs solutions that develop access to resources, preserve them and renew them – this is how Veolia contributes to resourcing the world.



## WATER

Veolia treats and monitors **water quality** at all stages of the cycle, from extraction to discharge back into the natural environment.

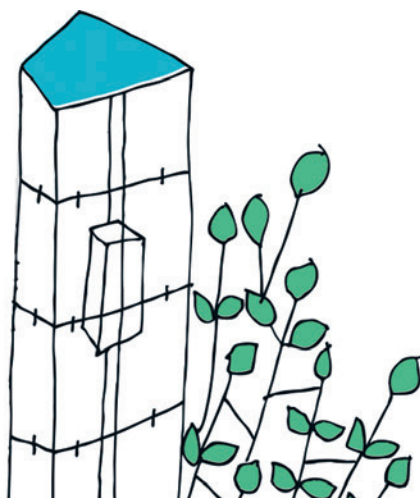
We innovate to protect resources and encourage recycling and reuse of water by cities and industry.

## WASTE

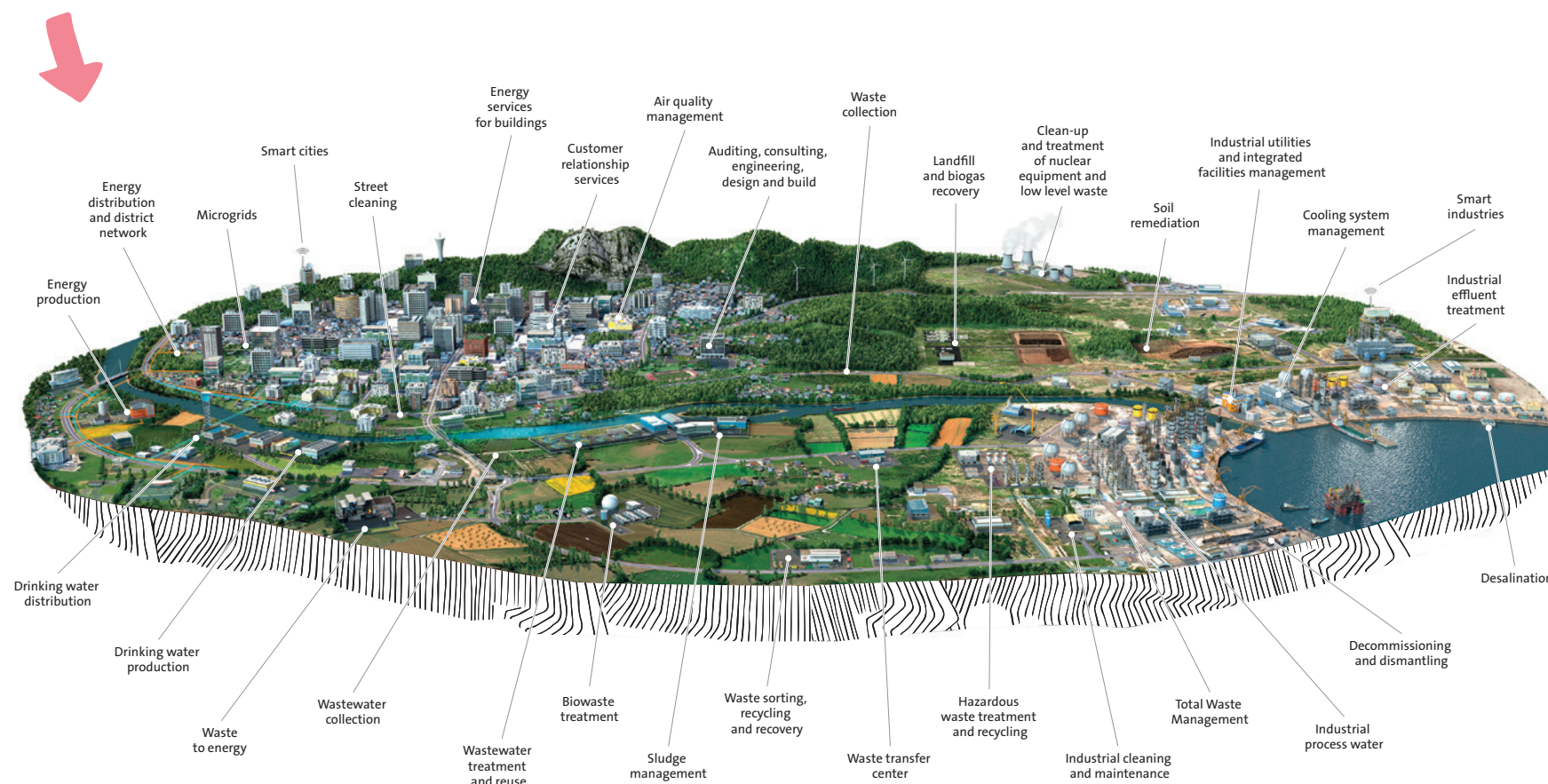
Veolia specializes in **waste management**, whether for liquid or solid, non-hazardous or hazardous waste. Our expertise covers the entire waste lifecycle, from collection to recycling and on to its final recovery as materials or energy.

## ENERGY

An expert in **energy services**, Veolia supports the economic growth of its municipal and industrial customers while helping reduce their ecological footprint. Whether in energy efficiency, efficient management of heating and cooling networks, or green energy production, we have a unique expertise for a more sustainable world.



### Our solutions for municipalities and industries



95

million people supplied with drinking water

63

million people connected to wastewater systems

3,603

drinking water production plants managed

2,667

wastewater treatment plants managed



43

million people provided with collection services on behalf of municipalities

49

million metric tons of treated waste

560,505

business clients

655

waste processing facilities operated



46

million MWh produced

42,053

thermal installations managed

2,389

industrial sites managed

615

heating and cooling networks managed

# OUR WORLDWIDE PRESENCE

€25,911  
million revenue  
worldwide

171,495  
employees  
worldwide



NORTH  
AMERICA

€2,394.9  
million revenue  
8,138  
employees



LATIN  
AMERICA

€892.5  
million revenue  
13,409  
employees



EUROPE  
(excluding France)

€10,086.5  
million revenue  
64,980  
employees



FRANCE

€7,942.8  
million revenue  
50,849  
employees



AFRICA  
MIDDLE EAST

€1,457.2  
million revenue  
10,968  
employees



ASIA  
OCEANIA

€3,137.2  
million revenue  
23,151  
employees







## Developing access to resources

In a world where needs are burgeoning and global reserves are dwindling, access to essential resources is becoming more complex and a source of tension. Against this backdrop, Veolia develops sustainable solutions to provide resources to answer the needs of as many people as possible, to improve the attractiveness of the territories and the companies' performance: access to drinking water and energy services for cities and their residents, services to industry to continuously supply production processes, or recovering materials in the circular economy.



Veolia is the first water, waste and energy management company to join the Toilet Board Coalition, a platform dedicated to accelerating the sanitation economy. This public-private partnership brings together multinational businesses, NGOs, intergovernmental organizations and social landlords with the goal of **"giving everyone access to a clean, safe toilet"**. According to WHO and UNICEF, 60% of the world's population does not have access to sanitation services.

### TOILET BOARD COALITION WORLD



### BRATISLAVA SLOVAKIA

Veolia now operates two of Bratislava's main cogeneration plants. The electricity produced (360 GWh per year) is sold back to the national SEPS grid manager. **The heat produced (360 GWh per year) supplies the Slovak capital's 160 km long district heating network.** This very high energy efficiency solution significantly reduces CO<sub>2</sub> emissions.



### IRISH WATER IRELAND

Veolia will build and operate a drinking water and wastewater treatment plant in Vratry, Wicklow County, on behalf of Irish Water. Meeting the growing needs of people in Dublin, **it will produce 75 million litres of water a day for 200,000 people.** Veolia will use innovative technologies to secure the city's supply while also preserving the region's water resources: even during droughts, the plant will inject at least 5,000 m<sup>3</sup> of water a day into the River Vartry downstream of the plant.



### KWINANA AUSTRALIA

Australia's first waste-to-energy facility, the new Kwinana plant near Perth, will produce 40 MW of green energy – the equivalent of the consumption of 50,000 homes. This environmentally friendly solution will provide the city with a local, economical and secure source of energy. **By 2021, the plant will process 400,000 metric tons of waste per year.**



### DHAKA BANGLADESH



### BORDEAUX MÉTROPOLE FRANCE

Bordeaux Métropole has entrusted Veolia with managing 6 wastewater treatment plants and a 4,200 km network, **treating wastewater and rainwater for a population of 1.15 million.** By deploying sensors and artificial intelligence solutions, the data collected will make it possible to optimize services. Citizens will participate in the governance of agencies dedicated to consumers and business.



## Preserving resources

Given the growing tensions over resources, our collective responsibility is to save and protect them. Resources that are less consumed, better used and less degraded are as many new resources available for the future.

Veolia develops innovative and sustainable solutions to take only the strictly necessary resource from the right place at the right time using the right process, while respecting the balance of ecosystems and therefore guaranteeing the resource for the future. Its expertises optimize the use of these resources, prevent them from losses during their cycle of use and control impacts downstream in order to ensure a neutral impact on health and natural environments.



UNITED STATES

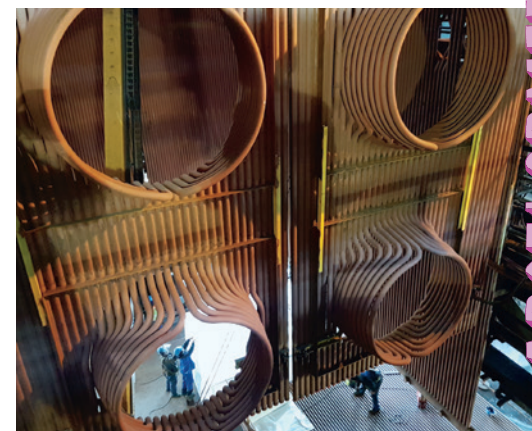
DUPONT

One of the largest chemical companies chose Veolia to modernize, operate and maintain the utilities on its Spruance site in Richmond, Virginia. **Veolia will improve the performance and reliability of utilities**, operate the cogeneration plant that supplies the site with energy and manage waste. DuPont will be able to focus on its business and at the same time reduce production costs through a “one-stop shop”.



SOHAR REGION  
SULTANATE OF OMAN

**By 2020, Veolia will treat 95,000 m<sup>3</sup> of seawater per day** by reverse-osmosis to answer the increasing demand from people in the Dhofar region (6% per year on average). By reducing its groundwater dependence, the territory will consequently optimize the use of local resources. The new plant is part of the Salalah Independent Water Project initiated by Oman Power and Water Procurement Company.



ARCELORMITTAL  
FRANCE

Veolia and ArcelorMittal Méditerranée have created a joint-venture in Fos-sur-Mer to modernize the power plant on the industrial's European largest site: electricity production capacity (700 GWh per year) represents half of the plant's total consumption – the equivalent of a city's with a population of 100,000.

**Veolia will improve the plant's environmental performance by recovering gases from steel production and reducing CO<sub>2</sub> emissions.**



NAMIBIA

WINDHOEK

Windhoek, the capital of Namibia, is celebrating its wastewater-to-drinking-water plant's 50th anniversary. A worldwide reference, **it produces 21,000 m<sup>3</sup> of drinking water per day (35% of the urban area's needs)**. It meets the demand of a population experiencing strong growth (6% per year) while also preserving water in one of the most arid regions on the planet.



BUENOS AIRES  
ARGENTINA

By being connected to the Hubgrade energy performance centre in Buenos Aires, two hospitals in the city – the Argentine Institute for Diagnosis and Treatment and the Favaloro Foundation – **have respectively reduced their energy bills by 20% and 25% at a time when their activities have increased by 30%.**

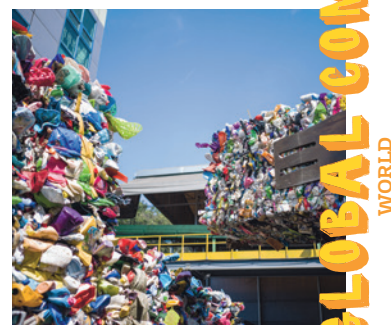
As sector leaders in terms of energy efficiency, both institutions have now joined the global network of green hospitals with low-carbon footprint. In 2018, 23 companies in the health, banking and retail sectors joined the Hubgrade Centre in Buenos Aires.





## Renewing resources

By reinventing its activities, Veolia helps create new “secondary” resources that gradually offset the scarcity of primary natural resources. Thanks to innovations in material recycling and waste recovery, Veolia deploys solutions that significantly increase the lifespan and use value of collected resources. Closing the circular economy loop, Veolia develops its eco-design expertise by supporting producers from the elaboration of production processes to the production of new materials from treated waste. Finally, in each of its activities, and even more so at their interfaces, Veolia produces entirely new resources: the heat generated by an industrial facility become heating for homes, wastewater effluents becomes fertilizers or bioplastics, and the gases from waste treatment become electricity or biofuel.



At the 5<sup>th</sup> Our Ocean conference in Bali, **Veolia signed the “Global Commitment” to address plastic waste and pollution at its source.** Initiated by the Ellen MacArthur Foundation in collaboration with the UN Environment, it has three goals: eliminate single-use plastic packaging and replace it with reusable one; innovate to recycle or compost 100% of plastic packaging by 2050; and increase the plastic lifecycle by promoting recycling to make new packaging or products. The signatory companies represent 20% of the plastic packaging on the market worldwide. 40 academic institutions, 15 financial institutions and 5 venture capital funds also signed the pledge.

GLOBAL COMMITMENT  
WORLD



Veolia and Unilever have formed **a global partnership to develop a circular plastic waste economy in various countries – starting with India and Indonesia.** The goal is to work together across the value chain by strengthening collection infrastructure, increasing recycling capacity and developing new business models. Unilever is committed to ensuring its packaging is reusable, recyclable or compostable, and to use at least 25% recycled plastic by 2025.



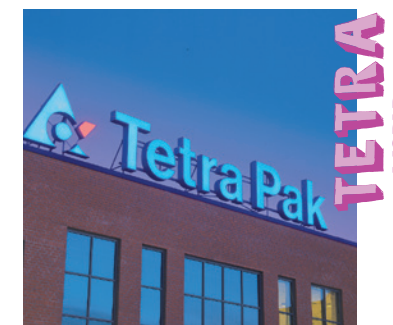
The Korean paper manufacturer Kleannara has entrusted Veolia with **the management of water treatment (59,000 m<sup>3</sup> of water per day) and wastewater (28,000 m<sup>3</sup> per day) facilities on its Cheongju site. The Group also operates two boilers, producing 42.5 metric tons of steam per hour;** the solid fuel used comes from the plant's production process. This circular economy loop significantly reduces the plant's environmental footprint.

KLEANNARA  
SOUTH KOREA



**Veolia will deconstruct 5 ballistic missile submarines for the French leader in the naval defence industry, recovering 87% of the recyclable materials:** 6,100 metric tons from each vessel will be treated before being sold, including 1,500 metric tons of hull, 2,000 metric tons of scrap iron, 800 metric tons of lead and 1,000 metric tons of non-ferrous metals (stainless steel, copper, etc.). After *Le Tonnant*, 4 more submarines – *Le Terrible*, *Le Foudroyant*, *L'Indomptable* and *L'Inflexible* – will in turn be deconstructed.

NAVAL GROUP  
FRANCE

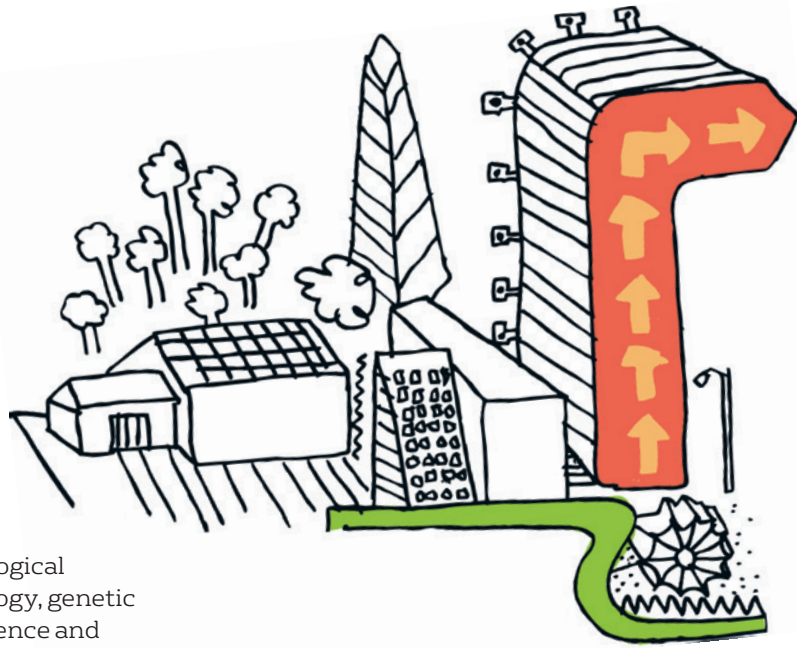


Veolia has signed a partnership agreement with the leading global beverage carton producer **to recycle all the components in the used beverage cartons collected in the European Union by 2025 and use innovative technologies to turn them into new resources.** The cardboard in these cartons will be recycled into pulp, and the polymer and aluminium mixture (PolyAl) will be converted into raw materials to make crates and plastic pallets. The value of used beverage cartons will double, thereby ensuring the future of this circular economy sector.

TETRA PAK  
WORLD



## Devising new solutions



As the advent of new technological cycles such as digital technology, genetic engineering, artificial intelligence and renewable energies are all opportunities for Veolia to update its expertise, it is getting now vital to innovate. New pollutions call for inventing new treatments, and new scarcities mean inventing new resources to protect the environment. The Group holds more than 2,100 patents. It mobilizes the expertise of 200 researchers in its research centres, combined with the innovative capacity of its business units. The Group is also backed by its partnerships with major universities, as well as the “Veolia Innovation Accelerator” program which detects start-ups and innovative SMEs within its ecosystem, in an open innovation approach.



With the eco-organization PV Cycle and the Syndicat des Énergies Renouvelables, **the first unit in Europe entirely dedicated to recycling photovoltaic panels** has opened in Rousset, in the south of France. It currently processes 1,800 metric tons of material per year, a quantity that will eventually increase to 4,000 metric tons per year. 95% of the materials are recovered: the glass is recycled to make clean cullet, the frame to aluminium, the plastic is used as fuel in cement works, the silicon goes into precious metals sectors, and the cables and connectors become copper shot. By 2050, the quantity of photovoltaic panels needing to be recycled should reach several tens of millions of metric tons globally. In France alone, 84,000 metric tons of solar panels were sold in 2017.



Aquavista™ is a digital services platform that enables municipalities and industry to manage their water treatment facilities in real time. Safely stored in a cloud, via a private portal, **Aquavista™ provides dashboards covering facility management, and cost and process optimization** (reduced intervention times to resolve faults). This innovative Veolia solution is operational in Europe and the United States. And it will soon be rolled out in Asia.



Veolia has signed a partnership agreement with EDF – the world’s leading electricity group – to dismantle end-of-life nuclear power plants and treat low and medium radioactive waste. Using robots in optimal conditions of security and safety, **Veolia will break up and extract the components of 6 Uranium Naturel Graphite Gaz reactors while protecting the environment.** 26,000 metric tons of radioactive waste have already been treated using its innovative vitrification technology.



A first for both France and Europe, the smart Max-AI® robot-sorter is in operation in Amiens. **This robotic solution uses artificial intelligence to simplify the sorting operators’ work: it improves both the waste sorting performance (3,000 movements per hour) and the quantity of recycled materials.** Max-AI® combines an optical camera, an articulated arm and a learning algorithm that enriches its database and enables it to better dissociate each type of waste during sorting. Two more Max-AI® robots will be operational in the Nantes Métropole sorting centre by 2020.





Veolia's approach to social, environmental and societal responsibility is integrated into its strategy, business model and durability. Its frame of reference is the United Nations Sustainable Development Goals and it is guided by its nine sustainable development commitments. These commitments apply to all the Group's activities in all countries and to all its employees. The aim is to achieve the ambitious goals that have been set for 2020.

## Environmental performance Resourcing the planet



1. Sustainably manage natural resources by encouraging the circular economy  
2020 target: generate more than €3.8 billion in revenue in the circular economy
2. Contribute to combating climate change  
2020 target: achieve 100 million metric tons of CO<sub>2</sub> equivalent of reduced emissions and 50 million metric tons of CO<sub>2</sub> equivalent of avoided emissions, over the 2015-2020 period  
2020 target: capture over 60% of methane from managed landfills
3. Conserve and restore biodiversity  
2020 target: carry out a diagnosis and deploy an action plan in 100% of sites with significant biodiversity issues

## Societal performance Resourcing the regions



4. Build new models for relations and value creation with our stakeholders  
2020 target: have established a major partnership based on creating shared value in every business zone and growth segment
5. Contribute to local development  
2020 target: maintain expenditure reinvested in the regions above 80%
6. Supply and maintain services crucial to health and human development  
2020 target: contribute to the United Nations Sustainable Development Goals in the same way as we contributed to the Millennium Development Goals

## Social performance Veolia's people



7. Guarantee a safe and healthy work environment  
2020 target: achieve an injury frequency rate of less than or equal to 6.5
8. Encourage each employee's professional development and commitment  
2020 target: deliver training to over 75% of employees annually  
2020 target: maintain the manager commitment rate at over 80%
9. Guarantee that diversity and fundamental human and social rights are respected within the company  
2020 target: ensure over 95% of employees have access to a social dialogue mechanism



# #weare RESOURCERS

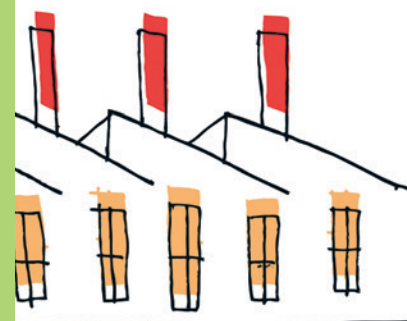
Whatever their area of expertise, sector of activity or the country where they work, Veolia's 171,495 members of staff help "Resource the world" every day. They share the same mindset: they are optimistic, they never give up and always move forward together! They see the world as it should be, not only as it is: they see waste as a valuable material, wastewater as a new water source, and waste energy as a new source of heat. They form the "Resourcers" community.

## Meeting the challenge of fighting waste



### UK

Of the billions of paper cups used every year, only a small percentage is recovered – even though they can be recycled. A Veolia team has developed a recycling platform that organizes their collection from designated points. Andy Lockett and Jamie Welsh designed and launched this innovative service.



"In 2016, the national television program 'War on Waste' highlighted the issue of recycling paper cups. As it became a priority for our customers, the way Andy built the relationship with them convinced me to change my own approach. He was a real mentor. Once our idea was accepted, we conducted experiments to test the logistics. We now collect from between 2,000 and 2,500 sites and have collected more than 15 million cups to date. We have recycled over 100 metric tons."

**JAMIE WELSH**

National Account Manager,  
with Veolia UK for 5 years



"For Starbucks and Costa, the biggest challenge on the waste side was coffee cups.

We had a week to come up with an idea and present it. Jamie and I had to figure out the options to meet their different needs.

I was amazed by Jamie's responsiveness, the amount of work he gets through and the ideas he brings. We were able to deliver a solution in just twelve months. This service now has between 60 and 70 customers – including Costa, Starbucks, McDonald's and Selfridges."

**ANDY LOCKETT**

Strategic Account Manager,  
with Veolia UK for 8 years



## A new paradigm optimizing infrastructure

### Japan

In Japan, Veolia and its partners were selected by the city of Hamamatsu to manage its wastewater, using a new and bold approach. Together, Yannick Ratte and Kazuhiro Uchino gained local authorities' trust.



"I was impressed by Kazuhiro's ability to quickly acquire a comprehensive understanding of the various stakeholders. When we presented the project to the client, we included elements that were important to the city – such as energy efficiency, governance, and transparency – with tools to get access to this information in real time. We demonstrated our will to improve the service over the long term. In Japan, actions speak louder than words and the results will be tangible for the population."

**YANNICK  
RATTE**

Executive Vice President  
for municipal water,  
with Veolia Japan for 16 years



"Without Yannick's experience, I don't think it would have been possible to produce a winning proposal. I appreciated the freedom he gave me to use my own judgment. In global and long-term contracts, we can be more creative in the services we offer. In Japan, changing the way we operate our infrastructure is a necessity. I think this approach is exactly what the country needs."

**KAZUHIRO  
UCHINO**

Vice President,  
with Veolia Japan for 1 year

## Reusing a car factory's waste heat

### Poland

In Poznań (Poland), Veolia and its client Volkswagen set up a system to capture the heat generated by the plant's foundry. The recovered energy feeds into the district heating network managed by the Group, thus reducing considerably CO<sub>2</sub> emissions.



"We have improved the heating network for the city's inhabitants. When we were sure the concept was of interest, a positive and collaborative climate was established. I admire Agnieszka, who was able to establish a relationship of trust with the clients."

**MICHAŁ  
DZIENNIK**

Engineering Department  
and Distribution Economics  
Manager – Energy, with Veolia  
Poland for 28 years



"For me, the first challenge was to convince the customer that recovering waste heat could benefit the environment.

Michał supported me: he never gives up. He uses all his expertise and technical knowledge in our projects. Thanks to the trust we have created, discussions with Volkswagen are already scheduled with a view to other projects."

**AGNIESZKA  
BATOR**

Development Engineer – Energy,  
with Veolia Poland for 19 years





## Deploying FluksAqua dashboards

### France, Réunion

The teams in the island of Réunion set up a new digital portal for the territory, giving water and sanitation operators a clearer vision of their performance. Both Albert Lebon and François Lio contributed to this innovative tool's success.



"François and I worked together as successive links in the chain to deploy the FluksAqua dashboards. 10,000 km from metropolitan France, we have always been united. We share our knowledge to ensure success. At 62 years old, what François brought me in terms of knowledge regarding new techniques and technologies was particularly enriching. When he doesn't agree, he says so. We discuss, we share and we move forward. There are no problems, only solutions."

**ALBERT  
LEBON**

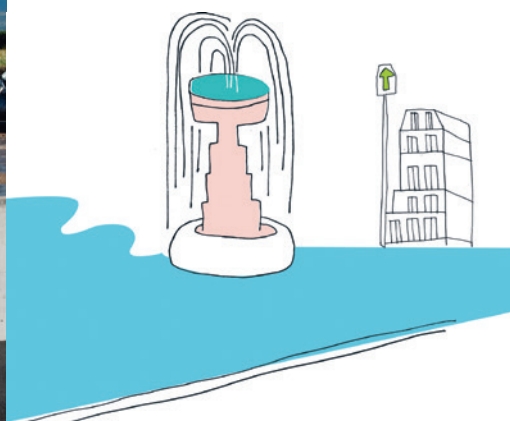
Former Head of Commercial Development, retired since April 2018 after 41 years with Veolia



"The teams welcomed this new tool, which gives us some new results. The local authorities were behind us. It is now a matter of proving its added value on a daily basis. Albert never gives up. It is true that there can sometimes be difficulties, but he always ends up with a solution. I try to do the same when facing difficulties. Numerous of projects are in progress. It's no easy feat, but together we can achieve great success."

**FRANÇOIS  
LIO**

Commercial Development Manager for the island of Réunion, with Veolia for 11 years



Veolia Communications Department – April 2019

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Resourcing the world

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