Veolia transformed for a new growth

Press Day: February 6, 2014

VEOLIA ENVIRONNEMENT

Antoine Frérot

Chairman and Chief Executive Officer

Jeudi 6 février 2014
Thursday, February 6th, 2014

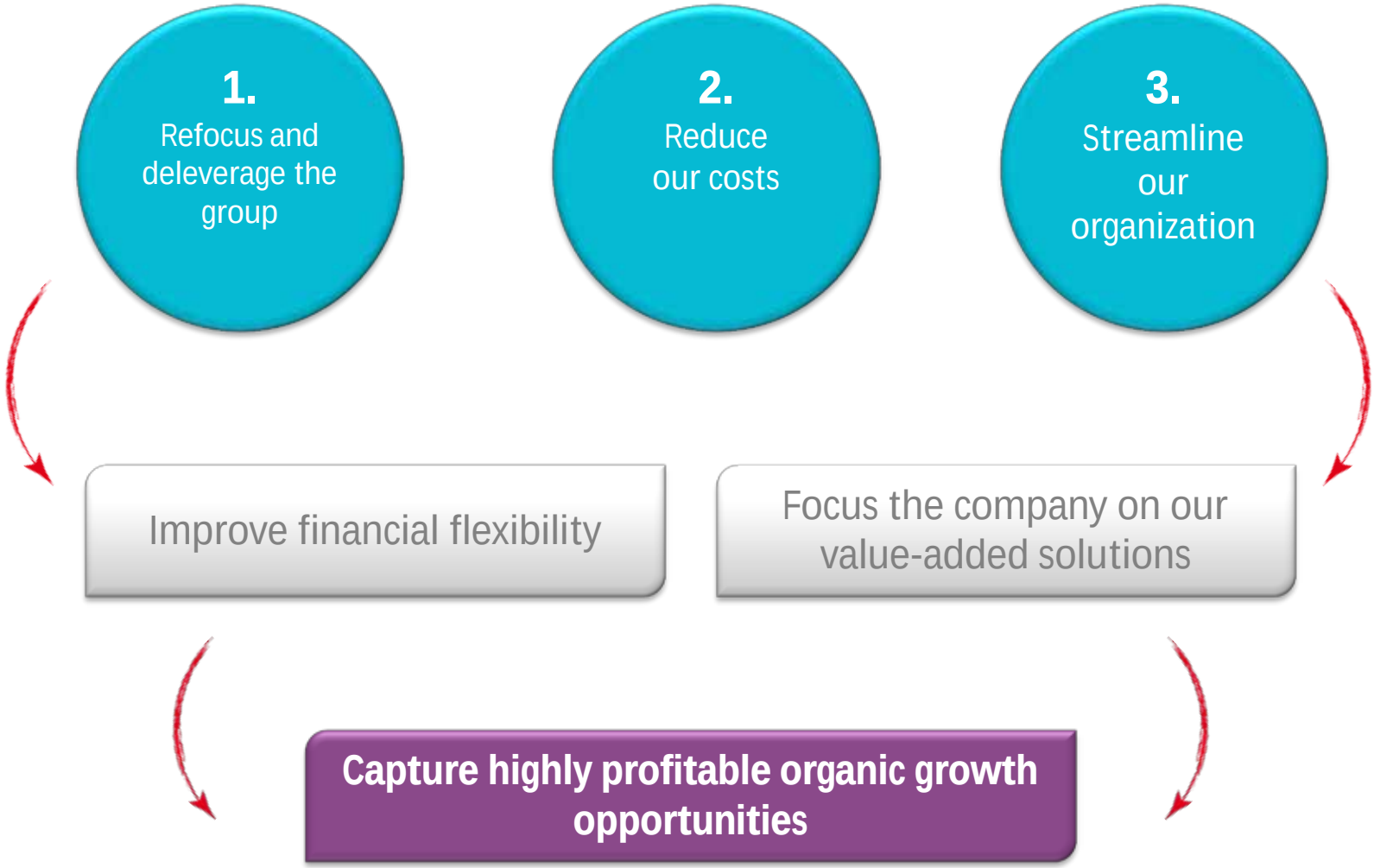
Press Day
Veolia Environnement

1. Economic & financial strategy:
   Objectives reached
2. Business strategy:
   reprofiled Veolia
3. Market strategy:
   targeting profitable growth
   - 3.1 Two axis for development
   - 3.2 A new commercial approach
4. Conclusion

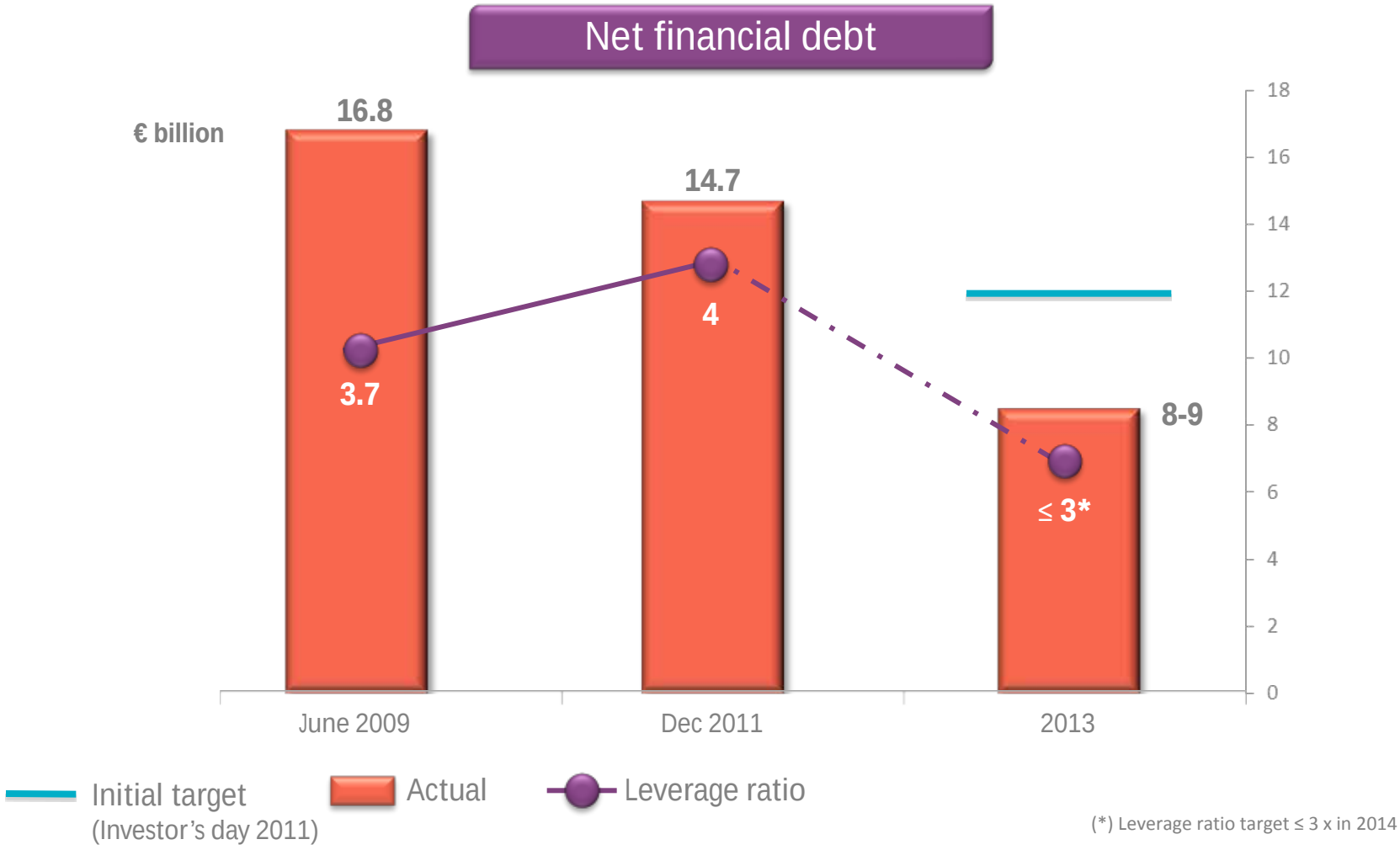
Veolia Environnement
Rétrospective
2013

Economic & financial strategy: Objectives reached

The transformation plan

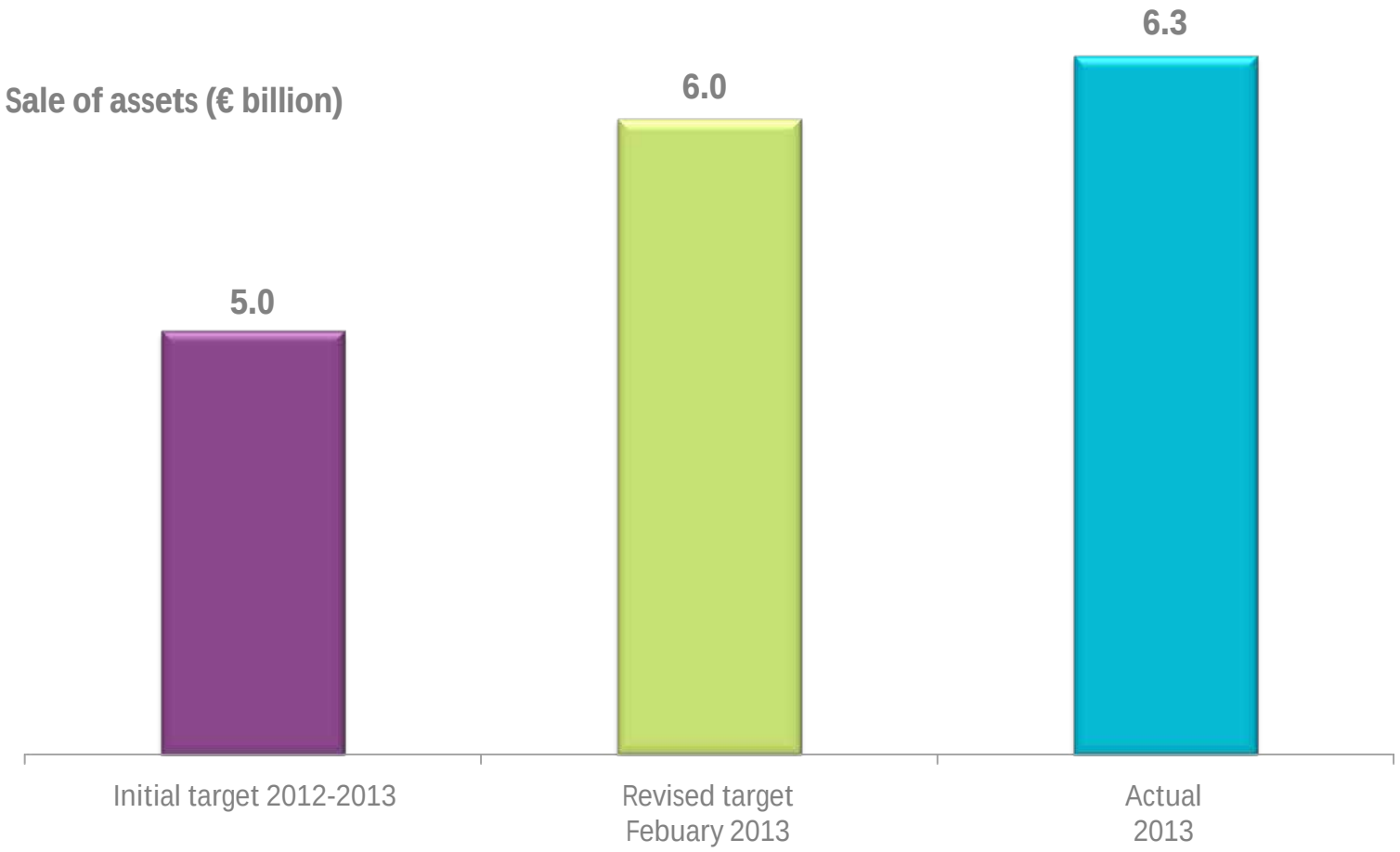


Reduce debt to increase flexibility:
target surpassed



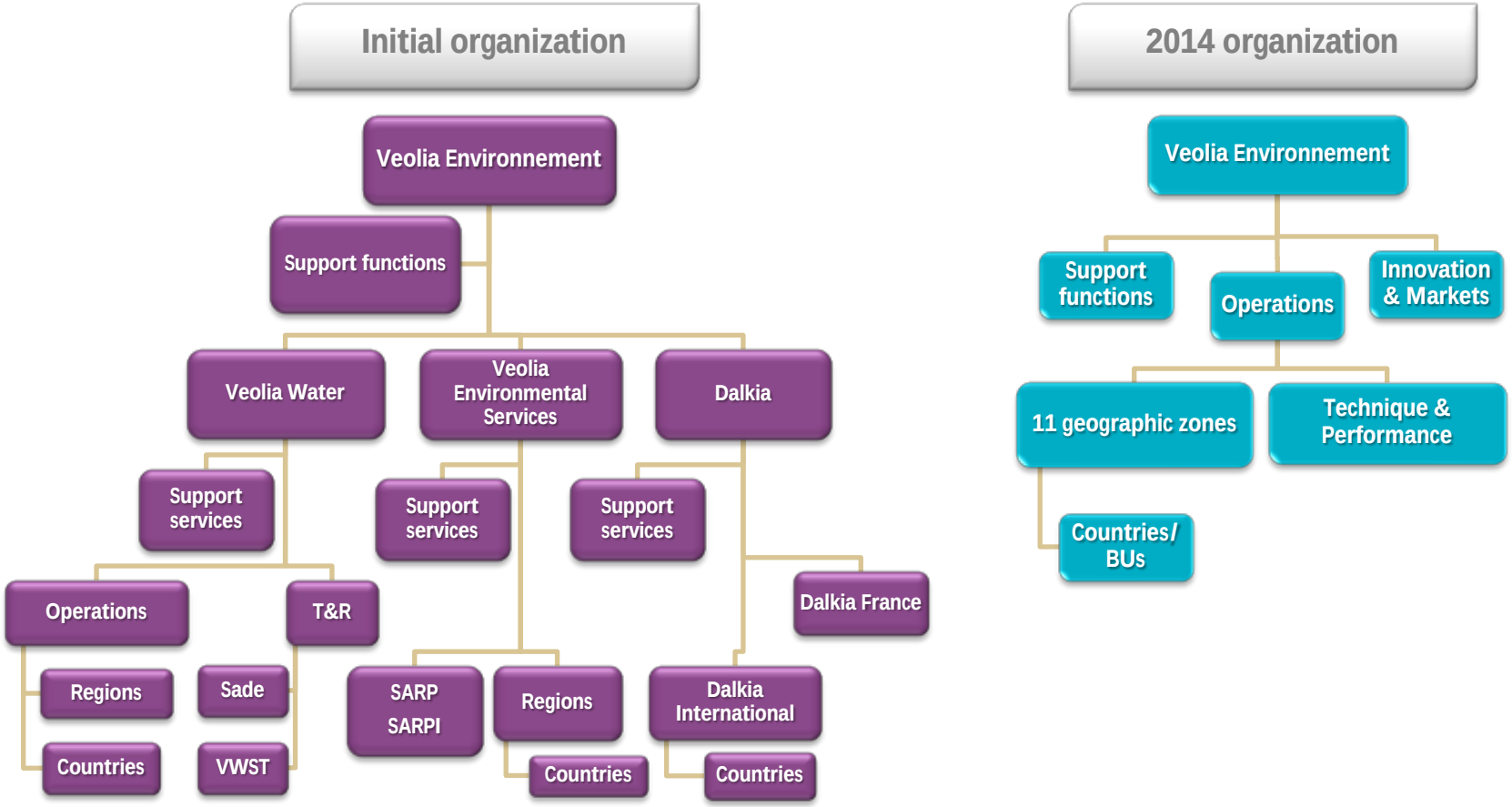
(*) Leverage ratio target ≤ 3 x in 2014

Refocus Veolia to be more flexible:
target surpassed



The transformation plan

A new organization:
an integrated group with one Veolia per country

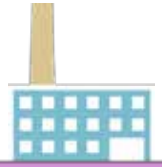


More customer-oriented | **Simpler** | **More flexible** | **More effective**

Business strategy: reprofiled Veolia

Our 4 strategic objectives

Target major environmental challenges

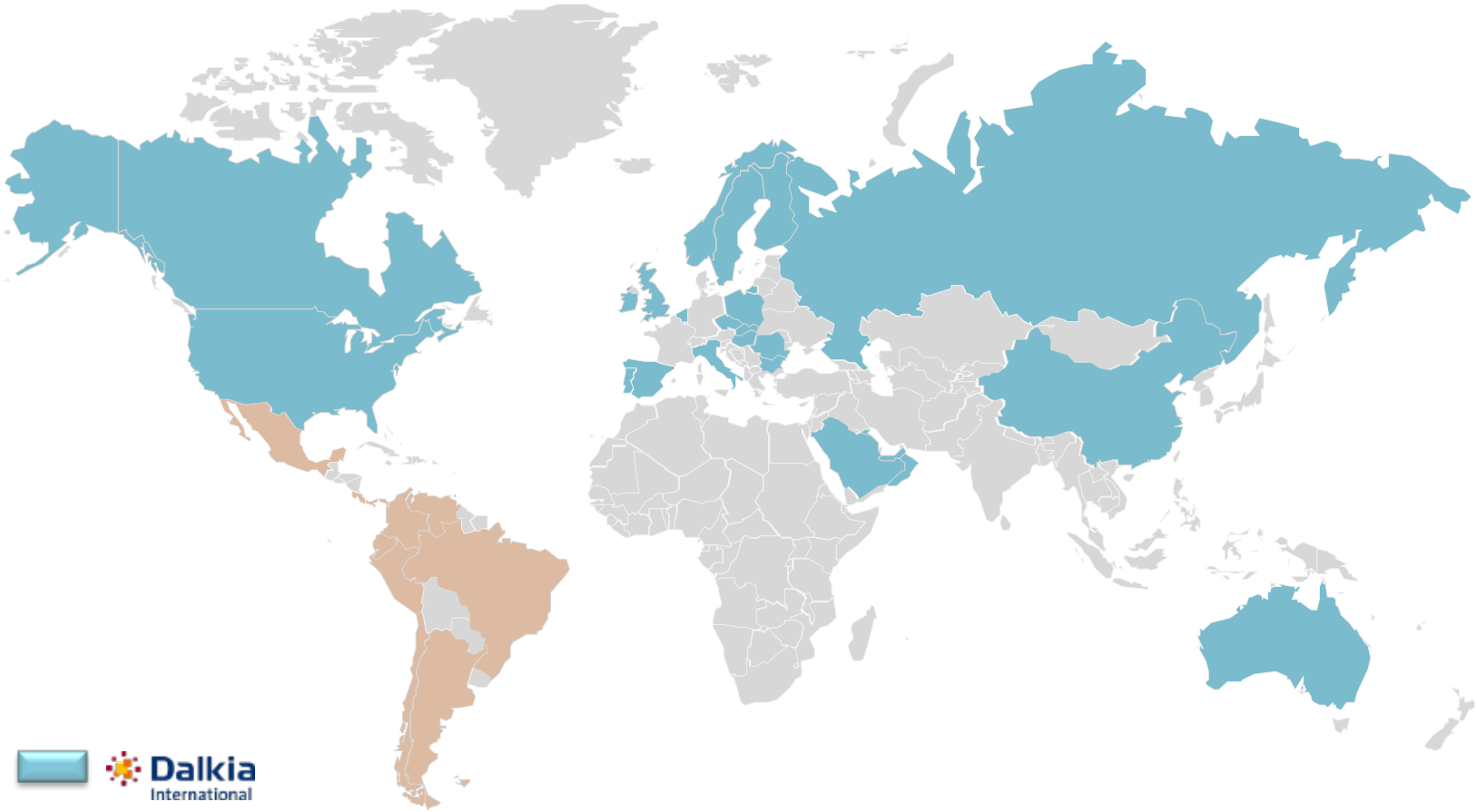


Increase our share of business with industrial clients

Focus on growth markets

Adapt our business models

A new profile:
Reinforced in growth regions



100% ownership of Proactiva
100% ownership of Dalkia International

PROACTIVA
UN ATOUT POUR VEOLIA
EN AMÉRIQUE LATINE

Proactiva
2012 facts & figures

- **11,800** employees
- Revenue: **€540** million
- Presence in **8** countries: Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela
- Partner of **120** local authorities, e.g. Mexico City, Lima, Buenos Aires, Guayaquil and Monteria
- More than **45** million people provided with waste treatment and water cycle management services
- Partnering customers' carbon-footprint and CSR initiatives (25,000 children educated during the 2013 campaign)

Dalkia
international

Dalkia International:
2012 facts & figures

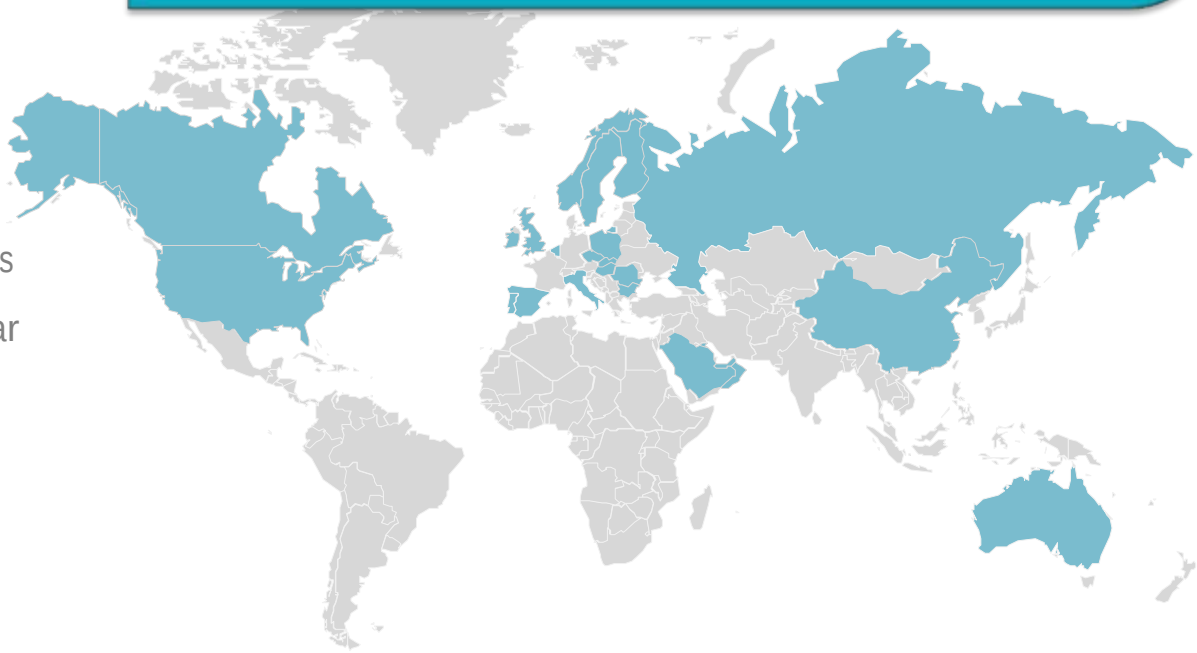
- **33,000** employees
- Revenue: **€5,128** million
- Presence in **25** countries in Europe, the Middle East, Asia and North America
- **450** heating and cooling networks
- **180** biomass plants
- **2,100** industrial customers
- **3,400** hospitals
- **90 M** sqm of offices and malls
- **9** TWh of energy savings /year
- **5** Mt of CO_2 prevented /year

THREE CORE BUSINESSES

- Heating and cooling networks, e.g. Warsaw, Ostrava, Vilnius, Harbin, Pecs and Ploesti

- Industrial utilities, e.g. Diageo, Wyeth, Findus, PSA and Dairy Crest

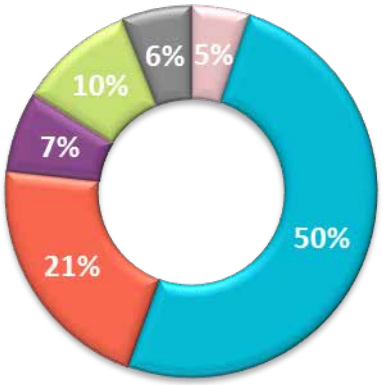
- Energy services for buildings, e.g. offices, universities, hospitals and malls



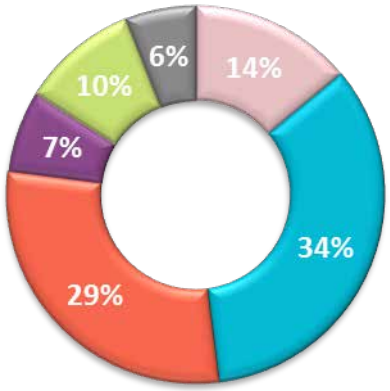
A new profile:
more balanced and well-positioned

- Estimated 2012 Revenue by region after Dalkia International - Dalkia France Transaction

2012



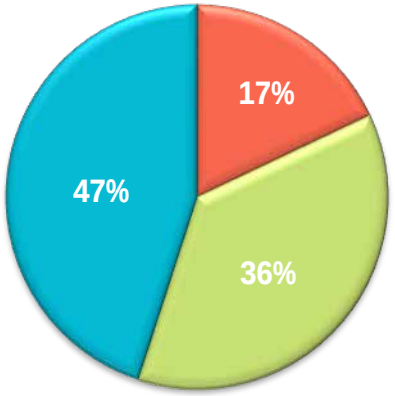
2012 post-transaction



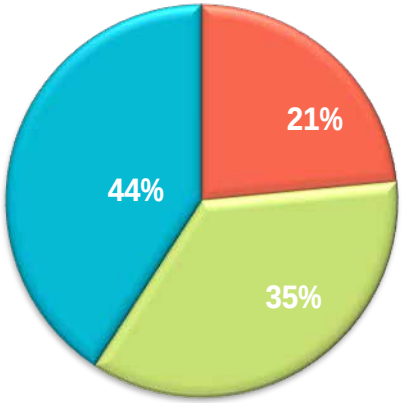
- France
- Europe excl. France and Central & Eastern Europe
- USA
- Central & Eastern Europe
- Asia Pacific
- Rest of the world

- Better balance between Veolia's three core businesses

2012

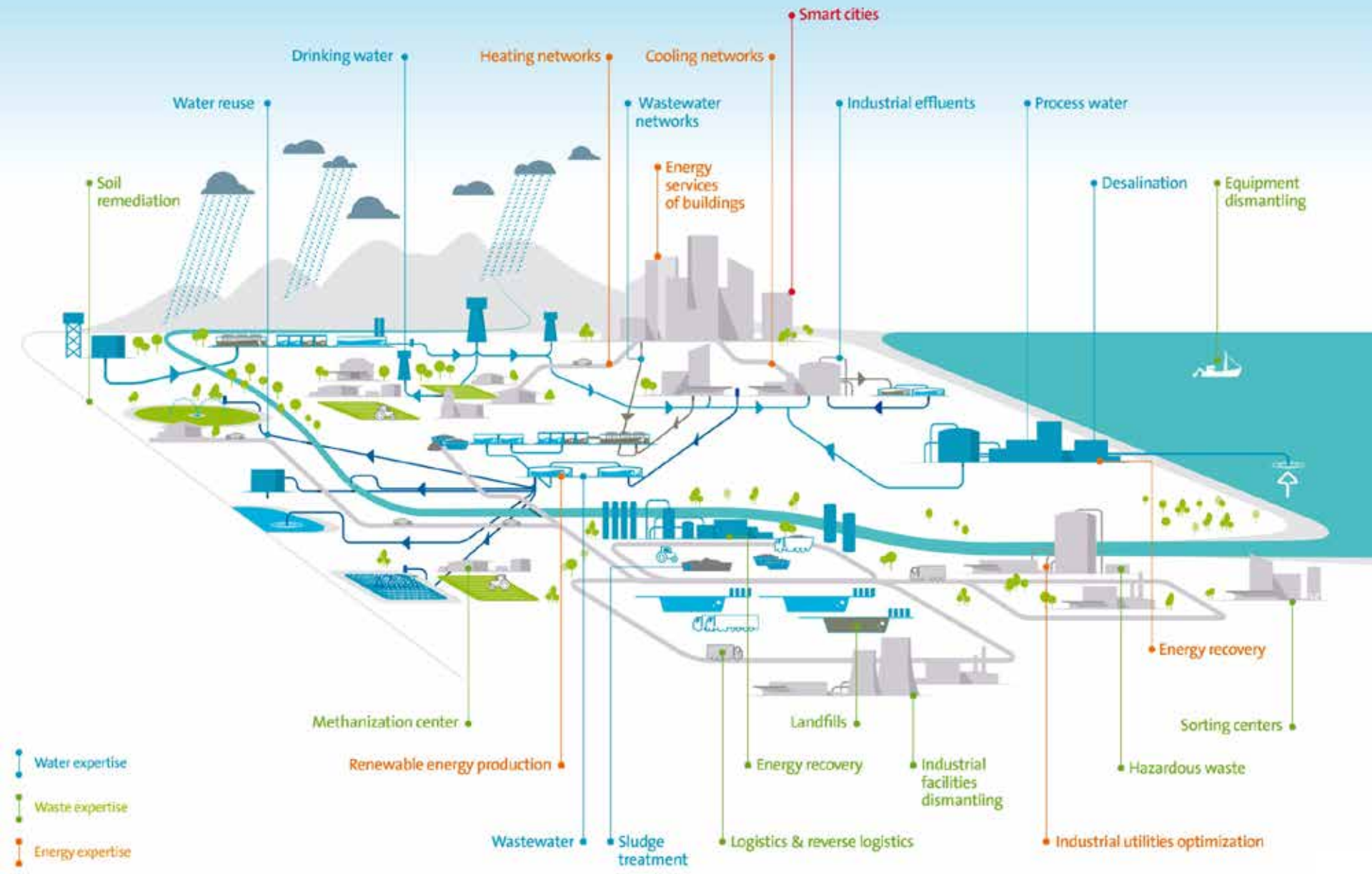


2012 post-transaction

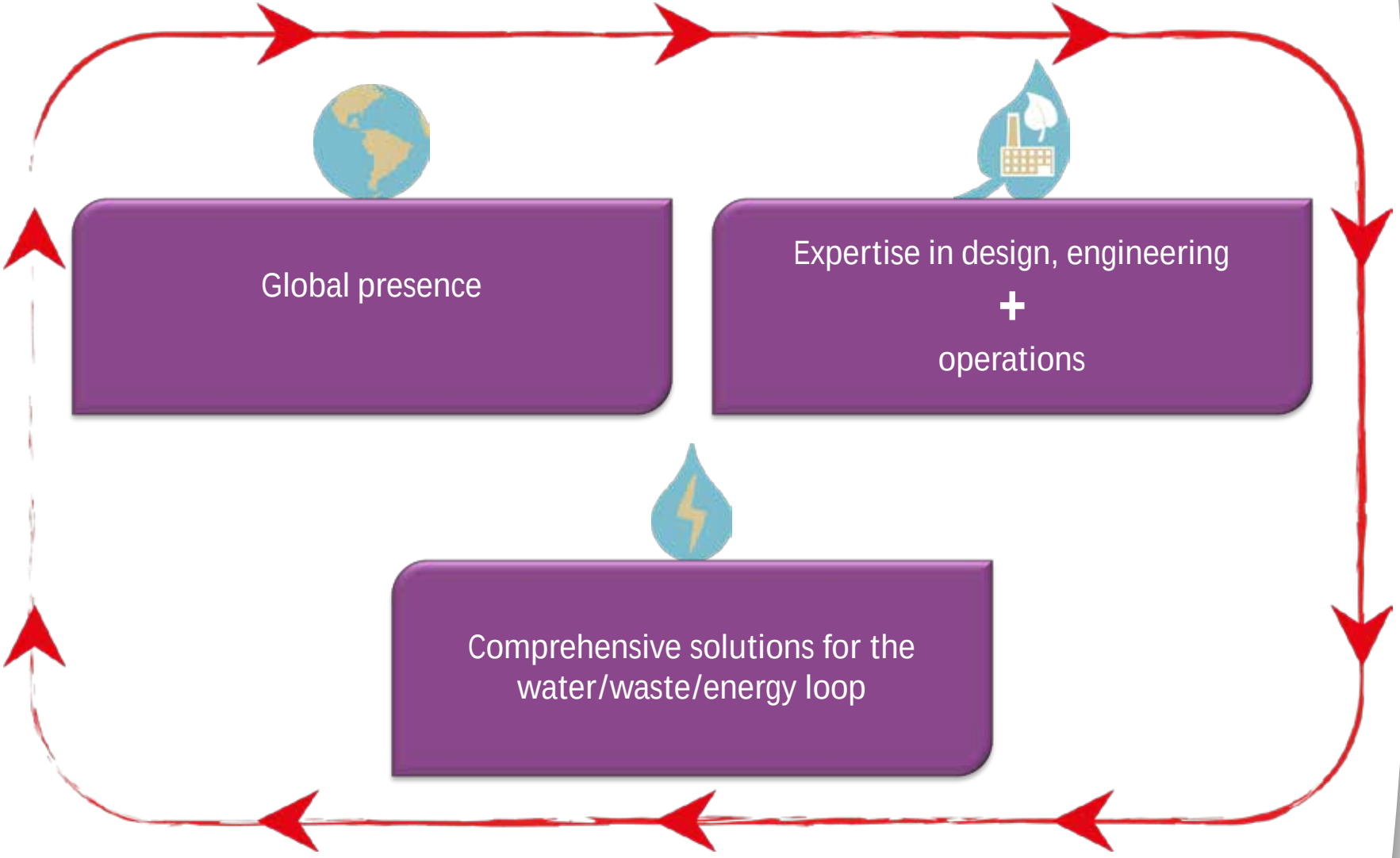


- Energy
- Waste management
- Water

Our offer: supporting the sustainable development of cities and industries



Veolia: *a unique profile for targeted growth*



Research & Innovation
leadership on cutting-edge environmental issues

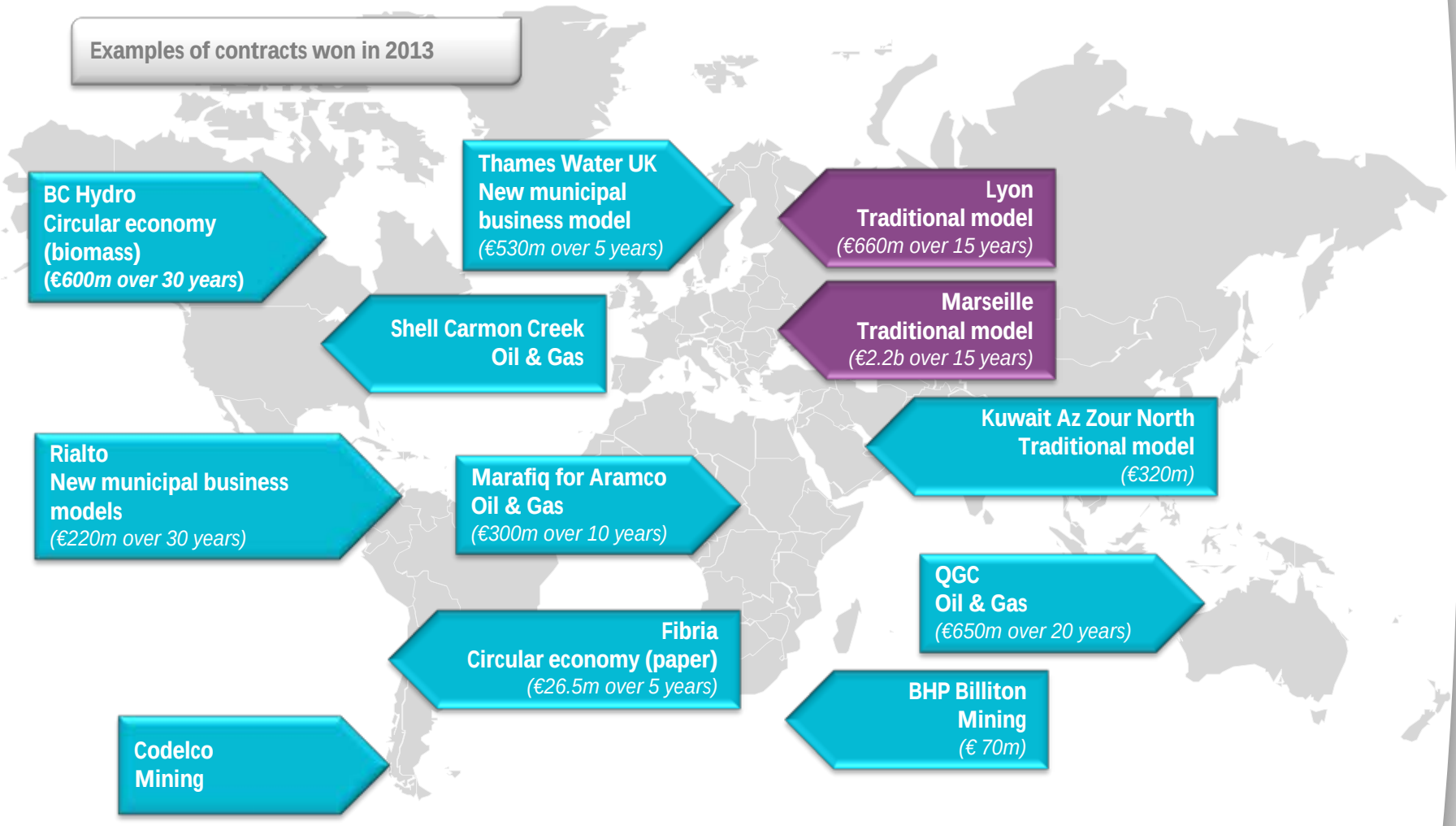
Open innovation at Veolia

- A network of 800 researchers worldwide
- Partnerships with the world's top universities
- A tight innovation loop between R&D and operations

Examples of recent innovations

- **Kapta™ 3000**: smart sensor providing real-time monitoring of water distribution systems in major cities
- **Veolia-WatchFrog**: detecting the presence of endocrine disruptors in wastewater
- **Odowatch**: a solution for the measuring and monitoring olfactory pollution linked to water treatment. Worldwide industrial licence since 2005
- **Artois Methanisation, France**: turning industrial and municipal waste into green energy and green fertilizer
- **Dalkia Energy Savings Center (DESC):** the first integrated management platform for energy efficiency
- **Osilub**: regenerating and recycling used motor oil in partnership with Total
- **Bioplastics**: Produced using wastewater sludge. Industrial production protoype at Brussels-North

A year of commercial successes



Economie
circulaire

Q&A

Market strategy: targeting profitable growth

3.1 Two axis for development

Two axis for development

1) Evolution in the Group's traditional markets

- Markets that currently represent an important share of our revenue
- Adapting our concession model to roll it-out in regions where it still creates value

2) Seven key growth markets

- Sectors corresponding to news environmental activities
- Sectors where demand already exists and is growing
- Sectors in which there is a limited number of actors with knowledge and in which Veolia already has business platforms of significant size

Philippe Guitard

Director, Central and Eastern Europe Zone

New horizons for concession contracts:
adapting our traditional models

TRENDS	IMPACT ON OUR TRADITIONAL BUSINESS ACTIVITIES	PRIORITIES
Economic slowdown in our established markets	• Pressure on prices • (Temporary) cutbacks in infrastructure investments • Reductions in water and waste volumes	• Optimize our operations • Develop new services • Highlight our expertise • Roll out this model in areas where it can still create value
Regulatory changes affecting concessions (Olivet decree, "concessions" directive, etc.)	• Shorter contracts • Need to adapt our models	
Questions over private-sector involvement in managing public services	• Some local authorities reverting to public management • Pressure when renegotiating our contracts • Our services are becoming a commodity	

Water in France: *support the growth of key public water and wastewater services*

- Managing public utilities through delegated management contracts
- Services in France's three most highly populated areas: Paris regional water authority (SEDIF), Marseille Provence Métropole and Greater Lyon
  - Strong expertise in integrated management of complex public services

- New solutions for services operated by local authorities (CODAH, Paris)
  - Transition towards a new service organization and delivering high added value services

- Scheduling call-outs for networks, customers and plants; managing products and maintenance schedules
- Network asset management
- Global management of client network: multi-channel relations, management of key accounts, creation of dedicated information systems

Water in France: *support the growth of key public water and wastewater services*

Three priority areas

- **24 "PivO" management centers**
- Optimizing work in the field, covering everything from changes in initially scheduled maintenance to unexpected call-outs in response to customer requests, incidents, etc.

- **Developing new services: the Greater Lyon contract**
  - Continuous water monitoring : through a combination of network modeling and water-quality sensors that provide continuous feedback
  - Data management and environmental monitoring
  - Preserving resources: creating a fixed network of 5,500 fixed sensors to detect leaks in a network comprising 1,400 km of pipes

- **Highlight our expertise: water purification plant of the future at Ovilléo in Marquette-lez-Lille**
  - A town-center site featuring a seven-hectare landscaped public park
  - A unique blend of treatment technologies (wastewater, stormwater, sludge and odor solutions)

Romania:
exemplary deployment of our traditional model

Our conventional model creates value and establishes us as a partner

TRADITIONAL MODEL	GROWTH DRIVERS	FAVORABLE CONDITIONS	ACHIEVEMENTS
VOLUME	• Gradual economic growth and wealth creation		• **Investments + Productivity** • **Performing services**
OPTIMIZATION	• Poor service productivity • Low network efficiency • High operating costs (e.g. energy)		
EXTENDED SERVICES	• Ineffective public services • Need to upgrade infrastructure (e.g. wastewater treatment and stormwater management) • Local authorities in need of funding		• **Expanding scope of work in concessions** • **Financing for new infrastructure** • **Significant improvement in services** • **Higher prices** • **Profitability**

Optimizing efficiency and operating performance (2000-2008)

OPTIMIZING OPERATIONS

APA NOVA BUCUREŞTI

Bucharest

- 50% in energy consumption

+ 15% increase in network efficiency

- Over **€200** million invested

APA NOVA Ploieşti

Ploiesti

- Removal of **18** high pressure stations

+ 20% increase in network efficiency

- Over **€20** million invested

ACTIONS

- **Transformation** of two public services with low efficiency & profitability
- Strong **improvement in service quality**
- Achieved a high level of **operating performance**

Our expertise has allowed us to continuously expand the scope of our business

- **20% increase** in **Ploiesti** network efficiency
- **50% reduction** in **Bucharest** energy use
- **15% increase** in **Bucharest** in network efficiency

Increasing scope of services

Optimization, efficiency & performance

2000

2008/2009

2013

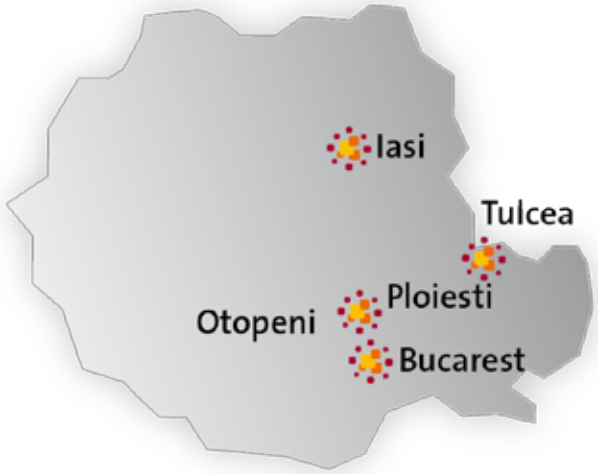
Operations

- **2009:**
  - Operation of the wastewater collection system
- **2011:**
  - Operation of the treatment plant
- **2013:**
  - Stormwater management
  - Extension to the town of Otopeni (10,000 people - 25 years)
  - Services for the international airport (10 years)

Similar opportunities in the energy sector:
the example of Iasi, Romania

Background

- Iasi : Second-largest city in Romania with **320,000 residents**
- An outdated heating network:
  - Frequent outages
  - Poor image
  - Customers disconnected



Solutions and benefits

- Initial 'assistance' contract signed in 2011
- 20-year delegated management of public services contract signed in 2012
- Benefits:
  - Rates 5% lower than with former public operator
  - Near 100% improvement in heating reliability
  - Integration of new customers (30 additional buildings in 2013)

Key figures

- **45,000** housing units connected
- 2 heating plants with installed capacity of **1,500 MWth** and **150 MWe**
- **320 km** network (transport and distribution)

Similar opportunities in the energy sector:
the example of Bratislava, Slovakia

Background

- Petržalka is Central Europe's most densely populated residential district, with the equivalent of more than **40,000** households
- Since 2000, Dalkia has been providing heating and hot water through a delegated management contract for public services

Challenges

- Continue to modernize the district heating network
- Ensure service quality and improve network energy efficiency
- Optimize the energy bill for network customers

Solutions

- 20-year contract extension
- Innovation with the construction of **18** combined heat and power (CHP) plants
- Related opportunities via energy-performance contracts:
  - Bratislava in 2003: 25% savings for energy efficiency in schools
  - Kosice in 2012: 19% saving for energy use in 74 high schools

Q&A

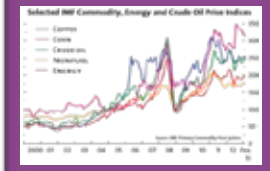
Laurent Auguste

Director, Innovation and Markets

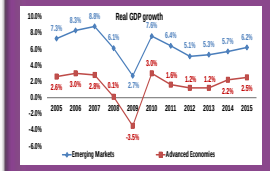
Challenges for the Planet

LONG-TERM TRENDS

- Areas of water stress
- Demand for water is growing twice as fast as the population



- Growing demand for energy and raw materials
- Dwindling resources

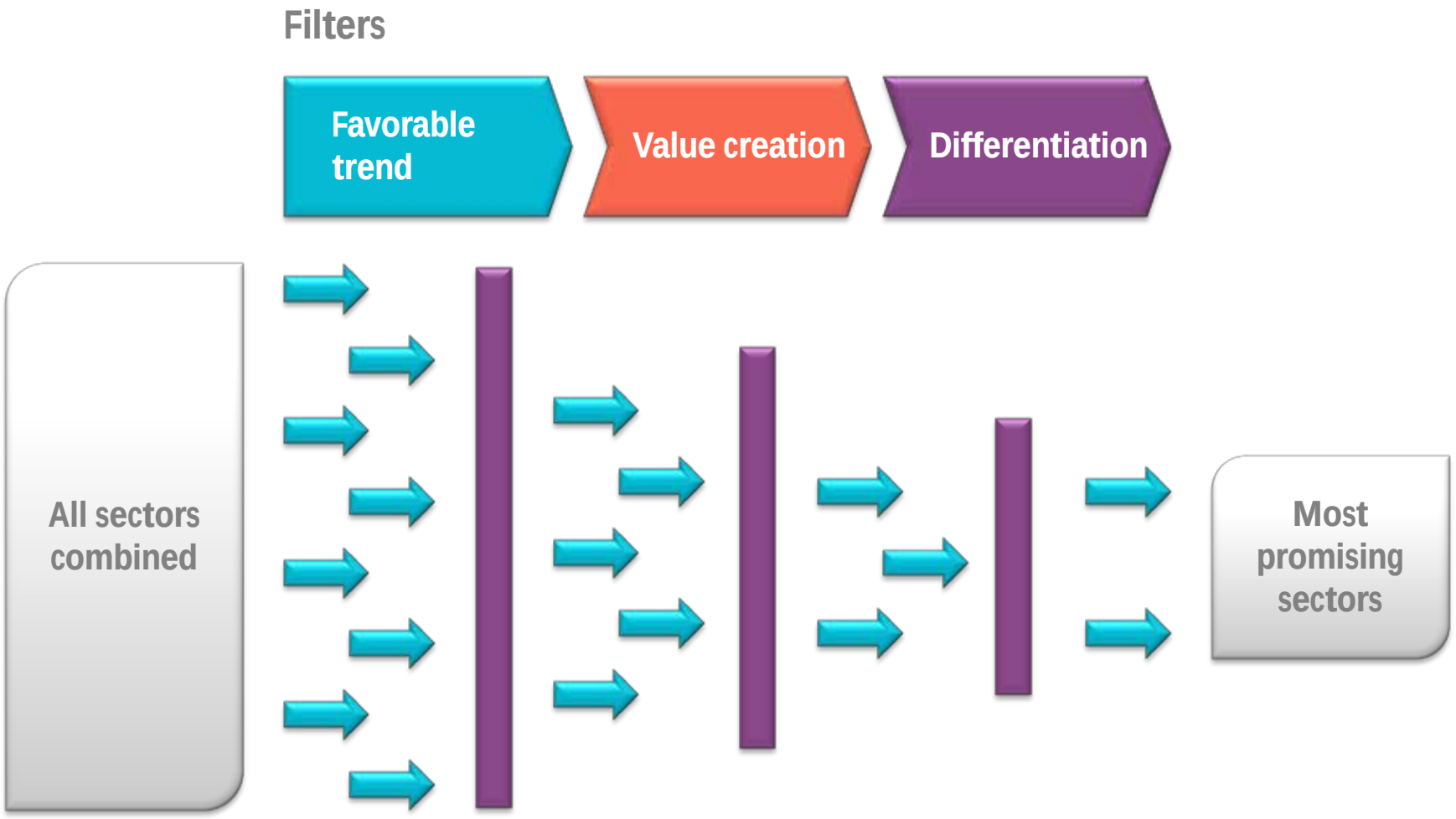


- Centers of economic growth moving to emerging countries
- Growth in megacities

IMPACT ON OUR CUSTOMERS

- **Municipal**
  - Growing demand in new regions
  - Growing demand for more sophisticated solutions for cities in mature economies
  - Energy efficiency
  - Circular economy
  - People increasingly aware of resource consumption
- **Industrial**
  - Water becoming a strategic issue for growth in some industries and regions (oil & gas; mining; etc.)
  - Need to boost energy efficiency
  - Circular economy
  - CSR agenda

Identifying promising sectors for Veolia



7 key growth markets
in which Veolia can stand out

		VEOLIA: TARGETED VALUE PROPOSITIONS	MARKET IN 2020 *Estimated value (€bn per year)*
	Circular economy	Advanced solutions to extend the life of resources	>€10bn
	Creative solutions for cities	New approaches to promote sustainable urban services	>€10bn
	Hazardous pollution	Exclusive technology to treat even the most complex types of pollution and protect resources	High margin
	Decommissioning	Comprehensive solutions compliant with the highest standards for complex operations; optimizing and recovering materials	>€5bn
	Food & Beverage	Improving efficiency and reducing impact; tailored solutions to provide alternative resources (water, energy)	>€10bn
	Mining	Bespoke solutions to optimize and recycle resources Reducing environmental and social impacts	>€20bn
	Oil & Gas	Improving access to resources Improving production yield Reducing environmental and social impacts	>€20bn

Bernard Harambillet

Director, France Waste Management

Circular economy: *issues and examples*

Sector dynamics

- Exponential growth in demand for resources (+65% in 25 years)
- Historically high, volatile prices of raw materials and energy
- International regulations favorable to recovery and recycling
- Changes in consumer practices
- Economic & political challenges

Veolia's value proposition

- Provider of alternative resources
- Offering integration into a circular economy able to generate resources and economic growth
- Optimizing operating costs and improving efficiency
- Developing local closed-loop procurement
- Reinforcing the campaign to promote sustainable development among municipal and industrial partners

Water/Waste/Energy examples

Triade, France - waste

'Producing high-quality recycled materials'

- Sorting and separating plastics with 99% purity
- Closed-loop recycling for rigid plastics (ABS)

Gera, Germany - wastewater

'Creating a renewable energy loop'

- Producing green energy from wastewater treatment (Water2Energy initiative)
- Energy self-sufficiency at the treatment plant

Fort St James, Canada - energy

'Creating a biomass plant to use waste from the local forestry industry'

- Building a power plant
- Streamlining and managing the supply chain for forestry waste
- Capacity to produce 40 MW of electricity

Advanced WEEE recycling: *TRIADE*

Background & requirements

- Compliance with standards on the recovery of waste electrical and electronic equipment (WEEE)
- Investment in eco-design and improved recovery

Benefits

- Production of recycled materials with a purity rate of 99%
- Technology that will be expanded for use with rare and precious metals
- Quantity and quality comparable to virgin raw materials, at a lower cost

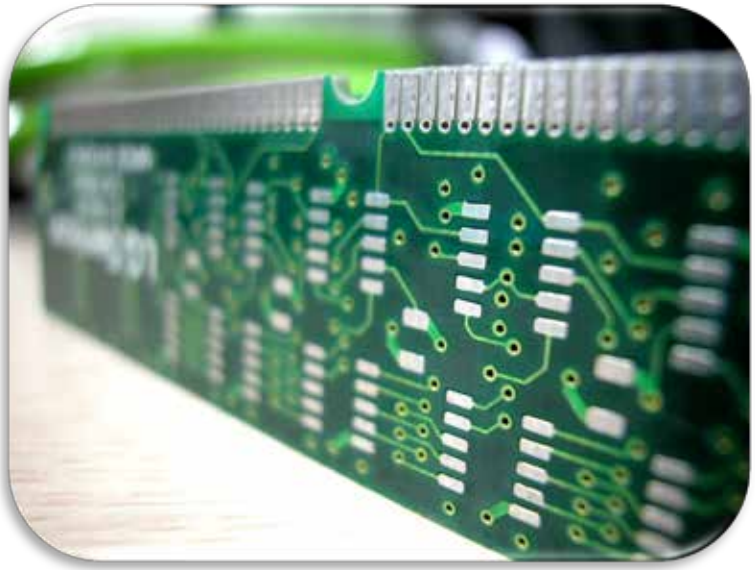
Veolia solutions

Development of an innovative system to identify and recycle WEEE

- Identification and separation of plastics using:
  - Sequential Adaptive Loop Technology (SALTO)
  - Use of instrumental analytical technology for polymers
  - Compilation and use of a dedicated database
- Industrial solutions to transform fractions of recycled plastics
- High-quality recycling
- Automated decommissioning of flat screens

***Saint Sylvain d'Anjou**:*

15,000 metric tons of rigid plastic treated each year, with a rate of 99% purity



Laurent Auguste

Director, Innovation and Markets

Creative solutions for cities: *issues and examples*

Sector dynamics

- Ageing infrastructure: technical and financial requirements to maintain the required level of service
- Increasing the efficiency of public services
- Restoring economic balance in services
- Municipalities are seeking (and are in need of) cutting-edge expertise on environmental issues and operations

Veolia's value proposition

- New services backed by technical expertise and advanced technology
- Optimal management: data management centers; digital/smart city solutions
- Optimizing investment programs
- Assisting local authorities in implementing targets

Water/Waste/Energy examples

Washington, USA - water

'A service record and comprehensive improvement of performance plan'

- Conducting a complete assessment of aqueduct operations
- Recommendations to optimize and secure wholesale water supply services to different customers
- Overall annual savings of between $8 million and $12 million

Hörby, Sweden - energy

'An outstanding energy performance contract'

- Energy performance contract for 34 municipal buildings
- Commitment to an overall reduction in energy consumption of 10%
- Awareness-raising campaign for the general public

Jenets , Japan - water

'Tailored CRM services'

- Contracts to supply services to the cities of Tokyo, Osaka and Kyoto: meter management; multi-channel customer management
- Services to 20 million Japanese people, representing 15% of the population

New municipal business models: *Washington DC*

Background & requirements

- Delivering cost-effective water that meets the highest quality standards
- Keeping services under public management

Benefits

- Annual savings of between $8 million and $12 million (operations and investments)
- The highest standards of services performance and efficiency
- Optimized investment programs

Veolia solutions

- Assessment of aqueduct operations (treatment, maintenance and investments)
- Introduction of KPI
- Benchmark against other comparable public services
- 25 suggested improvement measures
- Support from Veolia experts during the implementation phase

'Our goal is to optimize aqueduct operations and ensure that it offers DC Water the best possible service while enabling stable, affordable prices,'
George Hawkins, General Manager, DC Water

Estelle Brachlianoff

Director, Northern Europe Zone

Hazardous pollution: *issues and examples*

Sector dynamics

- Growing awareness of risks related to poor management of hazardous pollution
- More stringent regulations
- Limited number of operators able to handle complex environmental problems

Veolia's value proposition

- Global network and solutions: readily available experts and resources
- Comprehensive range of services to treat hazardous waste
- Solutions and expertise at the cutting edge of innovation

Water/Waste/Energy examples

UK government - waste

'Destroying Syria's chemical weapons'

- Assisting the British government with the destruction of Syria's chemical weapons
- Eliminating hazardous chemicals ("B precursors")
- Incineration at the Ellesmere Port facility in Cheshire (150 metric tons)
- The highest standards in environmental protection and safety

Nantes Métropole - water

'A high-performance drinking water plant'

- Design and construction of the new La Roche water production plant (serving 600,000 people)
- Production capacity of 160,000 cubic meters per day
- State-of-the-art technology featuring a dual-process solution
- Elimination of micropollutants

Partnership with the FAO - waste

'Managing obsolete pesticides'

- Obsolete pesticides are stored at various locations around Europe and Africa
- Inventory collected and stored in suitable facilities for processing and treatment in specialist centers
- Management of risks related to logistics and processing

Destroying Syria's chemical weapons

Background & requirements

Contribution to the destruction of Syria's chemical stockpile in the UK: 'B precursors'

- Industrial chemicals frequently used in the pharmaceuticals industry
- Chemicals that could be used to make neurotoxins when mixed with other products ('A precursors')
- Need for separate treatment

Veolia solutions

- 150 metric tons of industrial chemicals ('B precursors') currently being transported from Gioia Tauro in Italy to Veolia's Ellesmere Port incinerator in the UK
- Delivery and start of treatment scheduled to take place three to four weeks from now

Benefits

- **Destruction of 'B precursors' by incineration,** in compliance with the most stringent regulatory standards and in complete safety
- Rapid implementation through the use of tried-and-tested facilities

Decommissioning: *issues and examples*

Sector dynamics

- Many industrial facilities will reach the end of their service life in the next ten years:
  - Oil rigs in the North Sea and the Gulf of Mexico (2,000)
  - Nuclear reactors (100-160)
  - Petrochemical plants in Europe
  - Various forms of transportation (airplanes, ships, trains, etc.)

Veolia's value proposition

- Decommissioning schedule: inventory and assessment of equipment/facilities to be dismantled
- Strategy to reduce the amount of waste to be treated
- Recovery and/or disposal of waste
- Decontamination of water, waste, soil and sludge (asbestos, radioactivity, chemical contamination, etc.)

Water/Waste/Energy examples

Greenhead, UK - waste

'A comprehensive treatment chain to decommission rigs onshore'

- Preparation at sea: securing and cleaning platform and pipelines, disconnecting equipment and modules; handling utilities during decommissioning (water, energy, air)
- Managing outlets for the treatment of hazardous waste along with recycling channels

RATP, France - waste

'A national benchmark for the comprehensive treatment of rolling stock'

- Comprehensive management of the value chain: logistics, deconstruction, asbestos removal, materials recovery and treatment of residual waste
- 97% of materials recycled and sold by Veolia

Astéralis - waste

'A strategic agreement with the French Alternative Energies and Atomic Energy Commission (CEA) to decommission and clean nuclear facilities'

- Determining initial status; drawing up decommissioning plans; sorting and identifying waste; processing and repackaging; dispatching to dedicated channels
- Final inspection

Decommissioning oil rigs

Context & requirements

- **2,000 rigs** to be decommissioned **in the next ten years** in the **North Sea**, in the **Gulf of Mexico** and potentially in **Southeast Asia**
- **High decommissioning costs**: over **€100 million** per platform
- Challenge: **reduce the cost** of decommissioning while **preventing any** environmental or health **risks**

Veolia solutions

- Organizing pre-decommissioning operations offshore to reduce waste production and optimize recovery
- **Securing and cleaning the platform** and pipelines; disconnecting equipment
- **Handling utilities** during decommissioning (water, energy, air)
- **Managing outlets** for the treatment of hazardous waste along with recycling channels

Benefits

- **Reducing the cost of onshore decommissioning** by organizing demolition operations to optimize recycling (98% materials recovery) and reduce the amount of residual waste
- **Reducing environmental and safety risks** by ensuring the treatment of waste involving potential risks (asbestos, hazardous waste, waste with low levels of radioactivity)

Q&A

Patrick Labat

Director, Benelux

Food & Beverage industry: *issues and examples*

Sector dynamics

- The world's leading industry (13% of global industrial revenue)
- Population explosion and need for food in areas suffering water stress
- High expectations of consumers in terms of environmental and social responsibility

Veolia's value proposition

- Reducing environmental impact by managing the water cycle, energy and by-products
- Cost control and economic performance
- Protecting reputation through a proactive commitment to social responsibility
- Successful management of quality, safety and hygiene

Water/Waste/Energy examples

Diageo, Scotland - multiservices

'A biorefinery to treat waste, recycle wastewater and produce energy'

- 15-year DBO contract to recover by-products from whisky distillation and recycle wastewater. 135,800 metric tons of steam produced per year; 300,000 cubic meters of water recycled; 22,000 metric tons of CO_2 avoided

Mars, Netherlands - water

'Producing green energy from wastewater'

- Building a wastewater treatment plant producing green energy from biogas; reducing the Veghel plant's energy bill by 10%

Danone, France - waste

'Optimizing materials recovery'

- Increase in overall waste recovery rate from 70% to 98%
- Reducing the cost of treatment along with the site's footprint

Local green energy production for *Diageo*

Background & requirements

- Strong global demand for pure malt and single malt whisky
- Construction of a new Diageo distillery in Speyside, Scotland
- Significant energy demand

Benefits

- Securing and optimizing the energy supply
- Reducing carbon emissions (22,000 metric tons of CO_2 per year) and cutting the energy bill
- Recycling water and keeping any impact on the aquifer to a minimum
- Significantly reducing logistical problems and carbon emissions resulting from the transport of by-products traditionally turned into animal feed

Veolia solutions

15-year DBO contract for a bioenergy plant:

- Producing 135,800 metric tons of steam per year and recycling 300,000 cubic meters of water
- Recovering available by-products:
  - around 35,000 T of spent grain
  - around 340,000 T of residue from the initial distillation (Pot Ale)

Klaus Andersen

Deputy Chief Executive Officer
of Veolia Water Solutions & Technologies

Mining industry: *issues and examples*

Sector dynamics

- Second industrial sector that uses the most water*,
- 70% of the "Big 6" mining projects are situated in areas suffering water problems
- Heavy environmental footprint: energy needs; waste production; conflicts of use; pollution
- Running out of most easily accessible minerals

** Yearly equivalent in domestic consumption in USA*

Veolia solutions

- Secure supply of water and energy
- Improving productivity by developing by-products
- Reducing the ecological footprint
- Reinforcement of legitimacy: commitment to a proactive approach to social responsibility and sustainable development

Water/Waste/Energy examples

Codelco, Chile - water

'Recovery of unique materials for the mining industry'

- Partnership between Veolia and Vapor Procesos for the supply of a common solution for the recovery of copper in weak concentrations
- Recovery of 1,680 metric tons of copper in Codelco's decantation reservoirs in Chile

K+S Potash, Canada - water

'Increasing production of materials'

- Design engineering for a new production procedure for potash in western Canada
- Implementation of Veolia evaporation-crystallization technologies, which will enable three million tons of potash to be produced per year as of 2023

OKD, Czech Republic - energy

'The complete management of heating, energy and compressed air assets'

- Management of production and distribution of heating, electricity and compressed air assets needed by the mining process
- Installation of a tri-generation plant (heating, electricity and compressed air)

Reducing the ecological footprint & increasing copper production: *Codelco*

Background & requirements

- Chile: the world's largest copper producer (35% of global production and 29% of copper reserves).
- Over $100 billion invested in expanding mines and launching new projects in Chile by 2020
- The world's largest underground mine, operated by Codelco
- Water treatment is a major challenge for mine operators

Benefits

- Improved copper production, representing 1,680 metric tons over the five years of the contract
- Ensuring a steady supply of water to the mine
- Effluent treatment

Veolia solutions

Recovering copper from mining effluent

- Partnership between Veolia and Vapor Procesos
- Construction and operation of a facility with the introduction of a number of solvent-based extraction and filtration processes

Oil & Gas: *issues and examples*

Sector dynamics

- Unconventional extraction of oil and gas in full growth
- Extraction techniques needing 10 to 20 times more water
- Operating challenges and production costs
- Public opinion pressure concerning risk control (health, safety and environment)

Veolia's value proposition

- Decrease in pressure on water resources through treatment and recycling
- Increase in oil-field production and development of by-products
- Reduction in environmental impacts

Water/Waste/Energy examples

Shell Carmon Creek, Canada – water

'Zero liquid discharge'

- Veolia is developing a solution nearing 'zero liquid discharge' for Shell in Canada
- 33,800 cubic meters of water will be recycled each day to produce vapor used in the hydrocarbon production process

PXP, USA – water

'Recycling process water to increase the production of oil wells'

- Implementing and managing (for ten years) an infrastructure integrating Veolia technology to treat and reuse water produced by the oil wells
- This solution will enable PXP to increase its oil production eightfold while contributing to the water supply of rivers in this arid region

Refinery – waste

'Global management of waste on the site of a refinery'

- Collection and treatment/production of non-hazardous and dangerous industrial waste
- Industrial cleaning, automated cleaning of crude reservoirs (robots)
  - Minimization of time in industrial stoppages
  - 20% savings on operational service costs

Water-neutral operations:
Shell Carmon Creek

Background & requirements

- Shell's operates bituminous sand deposits in Carmon Creek, which will produce up to 80,000 barrels of oil per day
- Water-cycle management: a major challenge

Benefits

- **Secure ongoing operations**
- **Minimal impact on the environment:** water-neutral operations
- **Close to zero liquid discharge into the natural environment**

Veolia solutions

Treating and recycling industrial water

- Implementing a comprehensive solution to reclaim wastewater:
  - State-of-the-art technologies to separate hydrocarbons, along with water pretreatment and HPD process for evaporation/crystallization
  - Waste treatment
- Steam production

Q&A

Market strategy: targeting profitable growth

3.2 A new commercial approach

Laurent Auguste

Director, Innovation and Markets

New market approach: *targeting growth*

- Global partnerships that highlight the value we offer our customers

- Introduction of a network of global account managers, who coordinate country initiatives and develop best practices
- Implementing the best possible solutions for local authorities and industry

- Developing innovative business models
- Developing combined water-waste-energy solutions

Global partnerships that bring value to our customers *in the oil industry*

Challenges	Solutions	Impact on customer EBIT
Roll-out of new operating methods	• Submerged reverse osmosis (Deepstar) • Shale gas and oil: recycling through osmosis • Chemical EOR: optimized system to treat water containing polymers; solutions to modify the ion balance of water	
Improve the efficiency of facilities	• Chemical EOR: treating injected water • EOR: membranes and resins able to withstand high temperatures • Refineries: recovery of caustic potash (KOH) and other by-products	
Secure ongoing operations	• Closed-loop system ensuring Zero Liquid Discharge (ZLD) • Veolia EOR technology provided in areas of high water stress	
Reduce and control operating costs	• Reducing costs through comprehensive management of water resources while reducing and improving treatment of waste	
Obtain & retain operating permits	• Advanced water-recycling technologies to ensure compliance with regulations • Waste treatment • Enhancing the image of the oil industry	

Potential annual increase in operating income for the customer: €1.5 billion

Global partnerships that bring value to our *municipal customers*

Challenges	Solutions	VEOLIA ENVIRONNEMENT	Impact on the municipal budget
Cost control	• Optimizing treatment processes • Optimizing procurement • Optimizing HR management • Reducing leaks		
Improving revenues	• Campaign to upgrade meters • Billing • CRM • Power generation		
Extending the service life of facilities	• Optimizing maintenance programs/computer-assisted management • Modeling for necessary replacements		
Managing & improving the performance of facilities	• Automated management of water and wastewater plants • Modeling and monitoring for the quality of water in pipes • Reducing the energy footprint of facilities • Stormwater management		

State-of-the-art expertise; tangible impact on the municipal budget; measurable performance

A new organization:
a network of Global Account Managers

Rolling out benchmark solutions through our network of BUs

	BENCHMARK SOLUTIONS	KEY REGION
1	Treatment of oily sludge	USA
2	Peer Performance Solutions for cities	USA
3	Anaerobic digestion for the food & beverage industry	VWS - Sede
4	Decommissioning oil rigs	UK
5	On-site offshore services for oil rigs	Australia
6	Industrial cooling systems	Asia
7	Automated industrial cleaning	USA

Oily sludge:
a major opportunity for refineries worldwide

Background & requirements

- Refineries produce large amounts of oily sludge (heavy, sometimes solid hydrocarbon waste)
- Disposing of this by-product is a very costly process
- Need for additional investment capacity for extraction operations

Benefits

More profitable assets

- Reduction in crude purchases (~-0.5%)
- Reduction in refinery fuel costs (additional capacity for coker units)
- Reduction in the amount of hazardous waste treated along with related disposal costs (for example €250 to €500 per metric ton in the USA)

Veolia solutions

- Three-phase centrifuge process to recover hydrocarbons contained in sludge
- Subsequent use of other by-products in the refinery coker as a source of fuel

Implementation

- **The model has proven a success in North America** (35 refineries: 70% market share among the largest refineries)
- **A plan to roll out similar solutions is underway**
- Initial trials now taking place in Brazil (Petrobas)

We have begun transforming our commercial approach

OUR TRADITIONAL BUSINESS MODEL...

- Financing
- ...based on technical expertise

... IS BEING ENHANCED

- Monetizing our knowledge and expertise
- Tactical financing either directly or through external sources, drawing on innovative approaches

Innovative business models:
Rialto, California

Challenges faced by the city of Rialto

- 100,000 people, close to Los Angeles
- Ageing infrastructure
- Need to improve the level of service
- Need for cash to make the city more competitive (economic development)

Concession agreement with financial partner

- Concession holder (AssetCo): RWS[1]
  - Private equity + financial services company[2]
- Operator (OpCo): Veolia
  - 30-year O&M contract, total cumulated revenues of ~ $300 million (operating water and wastewater systems)
- Injection of capital from financial partners:
  - Infrastructure creation, replacement and improvements

Customer benefits

- Availability of financing for investment and economic development
- Continued ownership and control of infrastructure
- Stable prices
- New infrastructure
- Contribution to economic development (creating 450 jobs)

[1] Rialto Water Services
[2] Table Rock Capital (private equity) is a subsidiary of Ullico (financial services)

Innovative business models: *'PPS 2.0' in the USA*

Water

Municipal PPS
Veolia is a pioneer and leader in the US

+

Energy

Consulting Services
Source One expertise in consulting & energy optimization

+

VWS

Proprietary technologies
D&B and Smart Network Solutions (Endetec)
Product recovery (Anox), etc.

New combined solution

'PPS 2.0' Water and Energy Optimization for major cities

Key to success:
Source One platform with integrated input from Veolia Water experts

Q&A

Conclusion

Antoine Frérot

Chairman and Chief Executive Officer

Conclusion: *A New Veolia for a new growth*

- Roll-out of the strategy as announced: Veolia is transformed
- Targets reached and even surpassed for some

- A reprofiled Veolia to seize the most attractive growth opportunities
- Veolia is in strong position on promising markets
- Veolia is a pioneer of the revolution underway in environmental services

- A strategy of selective, profitable, and sustainable growth which is already proving successful

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