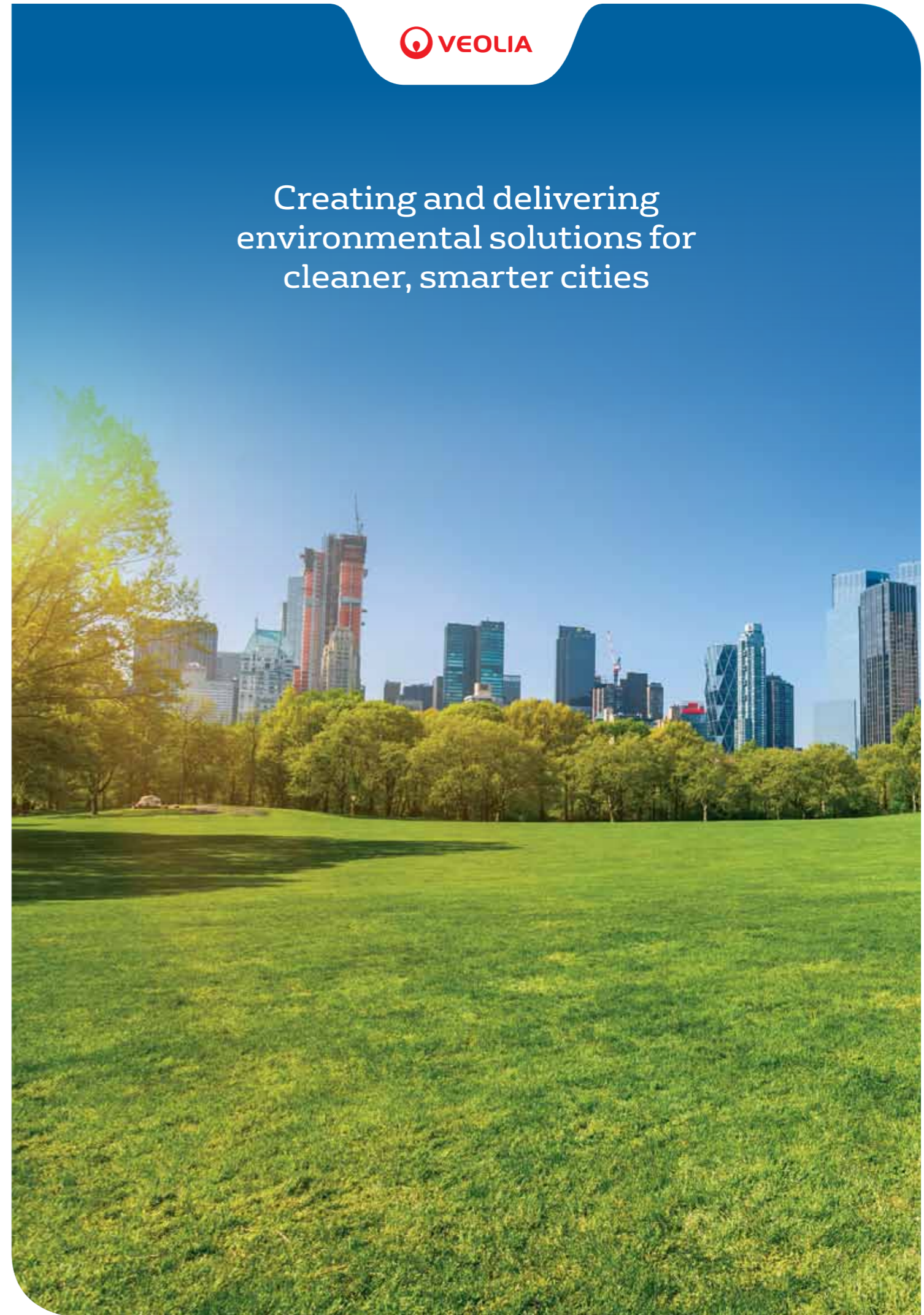


Creating and delivering  
environmental solutions for  
cleaner, smarter cities

Resourcing the world

Veolia Australia and New Zealand  
[www.veolia.com.au](http://www.veolia.com.au)



Urban growth continues to place huge pressures on a city's need for cleaner energy, water supply security and effective waste and resource management. The main challenge lies in cutting consumption and pollution while boosting efficiency.

Veolia is rising to this key challenge by combining its expertise in waste, water and energy services to deliver comprehensive and integrated solutions to support the sustainable development of cleaner, smarter cities.

## Tangible solutions for the sustainable development of cities

### URBAN PLANNING

**Helping local authorities to improve their municipal strategy and implementation of sustainable development plans:** Whether modelling urban operations or managing innovation with city councils, Veolia offers an array of resources and services to help local authorities audit, develop, manage and monitor their municipal development and improvement policy across waste, water and energy.

### EMPOWERING CITIZENS

**Developing services to facilitate and guide responsible citizenship and foster a change in behaviour:** From reducing water and energy consumption to sorting waste at facilities throughout the city, the success of any drive to optimise environmental services hinges on the effective empowerment of citizens. Veolia focuses on educational initiatives for business, schools and councils as part of the campaign to change individual mindsets and practices.

### RESOURCE CONSERVATION

**Diminishing the drain on the Planet's resources:** For public authorities, taking action locally to preserve resources helps protect and enhance the region while making full use of the ability to "turn waste into a resource" such as energy. There are many avenues to explore with Veolia, from recycling and resource recovery solutions to finding synergies between different facilities to create local loops.

### ALTERNATIVE ENERGY

**Unlocking local potential to promote the use of green and renewable energy:** The campaign to reduce greenhouse gas (GHG) emissions is an absolute necessity and must be implemented at every level. To this end, the drive to make use of cleaner and alternative energy sources is a key focal point for Veolia that allows authorities to reduce their energy bills.

### QUALITY OF LIFE AND ENVIRONMENTAL HEALTH

**Improving living conditions for citizens to make our cities more sustainable and attractive:** The success of public policies is always measured against the satisfaction and well-being of the people affected. Introducing simpler, more efficient, cost-effective services while improving people's quality of life, has long been one of Veolia's main concerns.

### COMMUNITY ENGAGEMENT

**Community engagement initiatives to promote social equity:** Social cohesion is vital to balanced, sustainable city growth. Through its position as a key player in urban development, Veolia works with local authorities and business on delivering meaningful community education focused on effective environmental management.

### SMART SYSTEMS

**Developing smart systems to improve environmental and financial performance:** Information and Communications Technology (ICT) are revolutionising environmental services. The growing range of 'big data' available and increases in capacity have made it possible to create systems in which all stakeholders (producers, managers and users) can interact with in real-time to optimise network operations. Veolia's solutions are boosting the efficiency of municipal systems including district energy and building energy systems, water networks and waste management systems.



# The environment is just part of the equation

Although the environment has long been a predominant part of any vision for a sustainable city, it is not the only yardstick by which local authorities must gauge progress. Environmental issues must be considered in relation to and in keeping with living conditions and profitable, long-term growth.

## SUSTAINABLE CITY CHALLENGES

### Environment

Respect the local and global environment (resources, greenhouse gases, biodiversity)

### Society

Ensure quality of life for citizens and a balanced society (public health, employment, well-being, social equity, accessibility, citizenship)

### Appeal

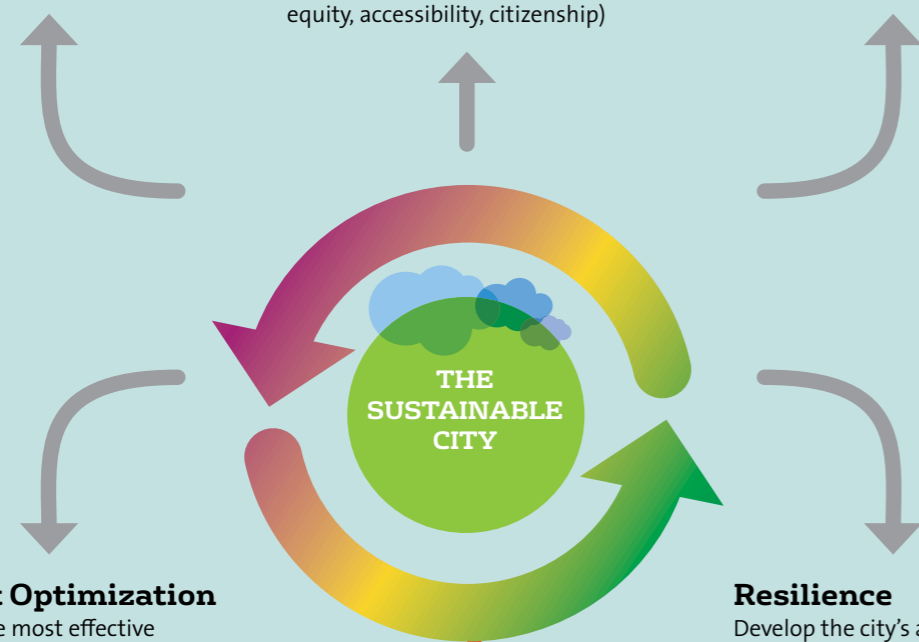
Boost the dynamism and appeal of the city (economic, academic and cultural growth)

### Budget Optimization

Choose the most effective investments (assessments, available financing, affordability, economic models, etc.)

### Resilience

Develop the city's ability to adapt and anticipate (measures to adjust to changes in the climate, society, technology and citizenship)



# Contributing to the development of cleaner, smarter cities

SOLUTION	VEOLIA BUSINESS	SUSTAINABLE CITY CHALLENGES					
		SOCIAL	ENVIRONMENT	APPEAL	RESILIENCE	BUDGET OPTIMISATION	ANZ REFERENCE
<b>URBAN PLANNING</b>							
Support municipal strategy and sustainable development planning	Veolia	X	X	X	X	X	X
Audit, design and build urban waste, water and energy systems to support sustainable development planning		X	X	X	X	X	X
<b>EMPOWERING CITIZENS</b>							
Environmental education for end users (schools, business and councils)	Waste	X	X				X
<b>RESOURCE CONSERVATION</b>							
Construction and demolition waste management	Waste		X				X
Remediation management and execution	Waste		X				X
Recycling waste for agriculture (recovery of bio-waste through anaerobic digestion and composting)	Waste		X		X	X	X
Water and wastewater treatment plants (including O&M services)	Water		X		X		X
Wastewater recycling and resource recovery (including sludge management)	Water		X		X	X	X
Waste and environmental performance reporting	Waste		X		X	X	X
<b>ALTERNATIVE ENERGY</b>							
Biomass/Biogas cogeneration	Energy	X	X	X		X	X
Recovering energy	Energy		X	X	X	X	X
Waste-to-energy solutions: Landfilling	Waste		X		X		X
Recycling wastewater to produce energy	Water		X		X	X	
<b>QUALITY OF LIFE AND ENVIRONMENTAL HEALTH</b>							
Desalination plants for drinking water supply security	Water		X		X		X
Waste collection	Waste		X	X			X
Vacuum waste collection	Waste	X	X	X			
Soil remediation	Waste		X	X			X
Hazardous waste	Waste		X				X
Maintaining sewage systems	Waste		X				X
<b>COMMUNITY ENGAGEMENT</b>							
Community engagement programs	Waste	X	X	X	X		X
Jobs & training	Veolia	X	X	X	X		X
<b>SMART SYSTEMS</b>							
Energy Performance Contracts for building upgrades (utilising EUAs where possible)	Energy		X		X	X	X
Management of district cooling networks	Energy		X			X	X
Thermal storage in cooling networks	Energy		X		X	X	
Reporting on energy usage	Energy	X	X	X	X	X	X
Energy audits including NABERS assessments	Energy		X	X	X	X	X
Drinking water traceability	Water	X		X		X	X
Water metering	Water	X	X	X		X	X
Building energy remote management and monitoring	Energy	X	X	X	X	X	X

# How Veolia is supporting the sustainable development of Sydney

## SMARTER SYSTEMS

**BARANGAROO SOUTH:** Supporting the client's carbon neutral and water positive objectives for one of Australia's largest sustainable precinct developments.

**Challenge:** Barangaroo South is one of the largest urban renewal projects in Sydney, New South Wales. Lend Lease, the owner and constructor of Barangaroo South, required a leading provider of environmental solutions to operate the precincts energy and water management systems.

**Solution:** In 2014, Lend Lease awarded Veolia a long term contract to operate and maintain one of Australia's largest district energy schemes at Barangaroo South. The contract involves the operations and maintenance of a 62 megawatt district cooling network, high voltage embedded electrical network and a recycled water treatment plant. The contract is set to achieve a new global industry benchmark in terms of performance and reliability and will help Veolia deliver its key aim of supporting the client's environmental objectives.

## RESOURCE CONSERVATION

**WOODLAWN BIOENERGY FACILITY:** Turning a large portion of Sydney's waste into a resource.

**Challenge:** Reducing landfill waste will continue to be a major challenge for Sydney and other municipalities within New South Wales. Diverting domestic waste from landfill through sustainable waste management practices and resource recovery solutions are critical in meeting this challenge.

**Solution:** Veolia's Woodlawn site plays an integral part in providing a long term sustainable solution for managing NSW's waste. The Woodlawn Bioreactor currently accepts around 20% of Sydney's putrescible waste and is recognised as an example of best practice landfill technology. It supports existing source separated initiatives such as kerbside recycling, by recovering energy from the residual waste stream. Since opening in 2004, over 3.8 million tonnes of waste has been used to generate green electricity, and the facility now exports enough power to supply over 5,000 households.

## QUALITY OF LIFE

**SYDNEY DESALINATION PLANT:** Ensuring water supply security for Sydney by turning seawater into high quality drinking water.

**Challenge:** The city of Sydney is solely reliant on surrounding dams and rain for its drinking water. With Sydney's growing population and uncertain rainfall predictions due to climate change, the New South Wales Government recognised the need for a new, non-rainfall dependent source of water to secure the city's water supplies for the future.

**Solution:** Located in Kurnell NSW, the Sydney Desalination Plant is one of the world's largest operating desalination facilities, with capacity to provide services to more than 15% of Sydney. Veolia worked with John Holland in a joint venture (Blue Water) to design and build Sydney's Desalination Plant on behalf of Sydney Water. Veolia is now operating and maintaining the plant and intake/outlet structures under a 20 year contract. Through leading technology, the plant can desalinate 250,000 megalitres of seawater each day, providing a drought proof water supply for approximately 1.5million Sydney residents.

# Sustainability

## COMMITTED TO THE COMMUNITY AND SUSTAINABLE DEVELOPMENT

Since 1999, Veolia has also made a commitment to the principles of sustainable development. As such, we are focused on delivering economic, environmental and social benefits across Australasia as we face immediate and long-term challenges.

We know that our customers and the community expect us to be responsible and transparent and as such, Veolia has been publishing an annual Sustainable Development Report since 2003.

## DELIVERING OCCUPATIONAL, HEALTH AND SAFETY EXCELLENCE

Veolia's operating divisions are focused on excellence across occupational health and safety. Veolia's 4000 employees are trained in risk identification and mitigation to reduce safety incidents and ensure that Veolia demonstrates an exemplary health and safety record. In 2014 alone, Veolia's lost time injury frequency rate was reduced by 60%.

Veolia's divisions also hold certification across Safety AS/NZ 4801, Environment ISO 14001 and Quality ISO 9001.

