



SUSTAINABILITY REPORT 2018



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■ Orica Global Presence

○ Major Offices

● Technical Centres

Major Manufacturing Sites

● Ammonium Nitrate

● Sodium Cyanide

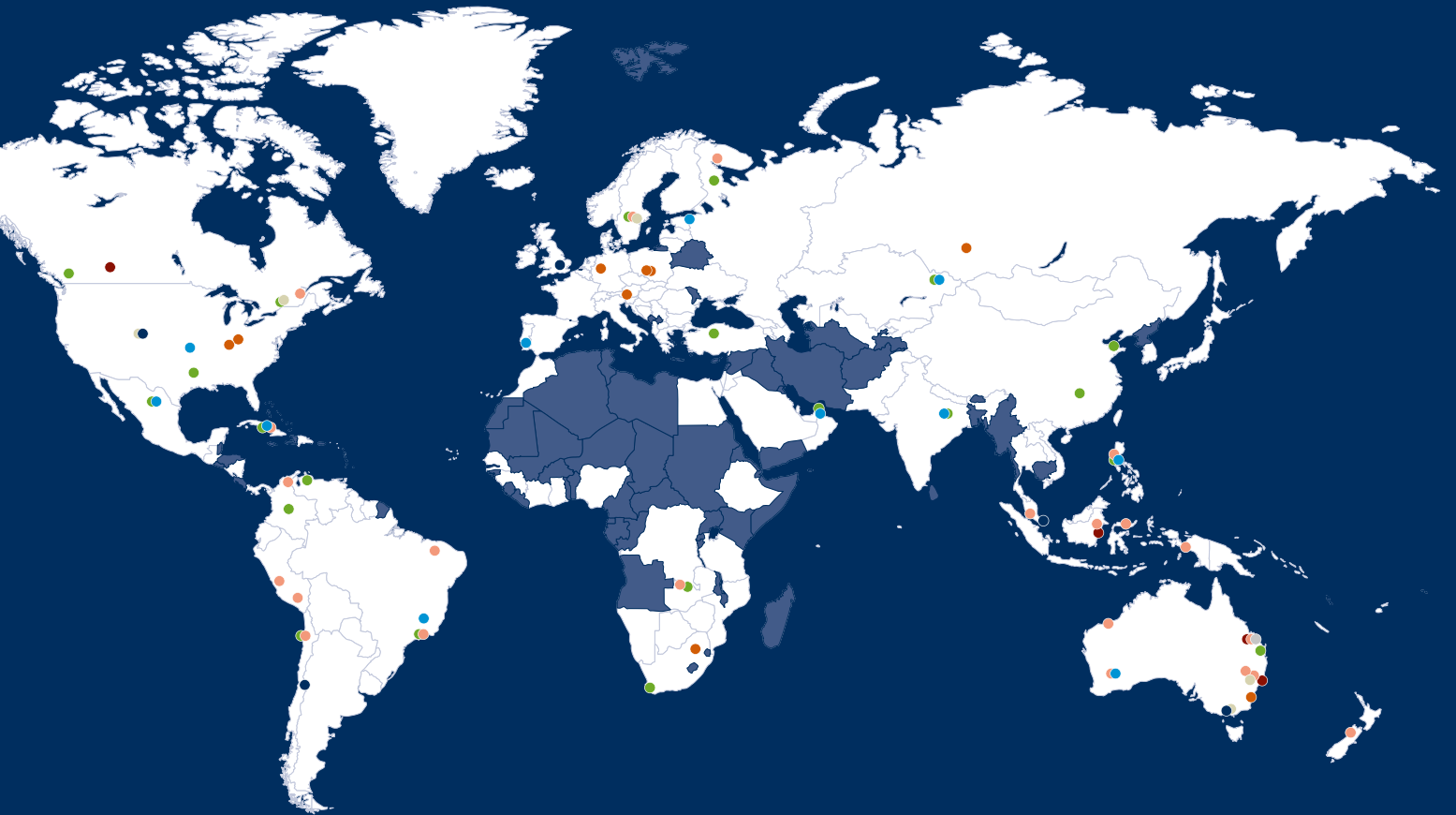
● Ammonium Nitrate Emulsion

● Minova

● Packaged Explosives

● Initiating Systems

OUR GLOBAL PRESENCE



OUR BUSINESS

Orca is the world leader in providing commercial explosives and blasting systems. We build wealth for our shareholders, deliver success for customers in more than 100 countries, and make a positive contribution to the development of our people and the communities where we operate.





ABOUT THIS REPORT

This is the 15th annual Orca Sustainability Report. It supplements the Orca 2018 Annual Report and information at www.orca.com, for the 12 months to 30 September 2018.

It reports on the sites we wholly own and operate, and those we operated in a 50% or more joint venture during the year.

The information covers sites we operate irrespective of equity share, unless stated. The joint venture projects we don't operate are excluded. The list of investments in controlled entities is in the Annual Report.

The data for energy, greenhouse gas emissions, water and waste is only reported for the operations we wholly own and operate, with the exception of the Bontang Indonesia joint venture, which is included because we control the operation and its significant carbon emissions profile.

The reporting period is referred to as FY18 throughout the report. All monetary amounts refer to Australian dollars unless stated.

The report contains standard disclosures guided by the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines. An index cross-referencing the text with GRI requirements is at the end of the report.

You can download previous sustainability and annual reports at www.orca.com

OUR CHARTER

WE ARE ORICA, THE GLOBAL LEADER IN MINING AND CIVIL BLASTING

OUR PURPOSE

Our purpose is to make our customers successful, every day, all around the world. We take pride in operating safely, responsibly and sustainably. Together, these enable us to grow and create enduring value for our shareholders.

OUR STRATEGY

We aim to be the trusted partner of choice for our customers, by creating, developing and delivering mining and civil blasting and ground control solutions that help them be more productive and manage their critical risks. We do this by bringing together the best people; high quality products and services; safe, secure and reliable supply; and unmatched technology that creates value for our customers, today and tomorrow.

OUR VALUES



SAFETY is our priority. Always

The most important thing is that we all return home, safely, every day.

- We care and take accountability for everyone's safety and wellbeing, including our own.
- We recognise the risks we face in our work and follow all safety controls.
- We speak up when we see hazards or causes of potential harm.



We RESPECT and value all

Our care for each other, our customers, communities and the environment builds trusted relationships.

- We treat everyone fairly, with dignity and we value diversity.
- We work with our local communities to contribute positively.
- We find ways to minimise our impact on the environment in all our actions.



TOGETHER we succeed

Collaboration makes us better, individually and collectively.

- We freely share information and ideas with our colleagues.
- We are a team. We take accountability and responsibility for our team's performance.
- We partner with our customers for a better understanding and result.



We act with INTEGRITY

We are open and honest, and we do what is right.

- We are transparent in all our communications.
- We always demonstrate ethical conduct and sustainable practices.
- We are trusted because we do what we say we will.



We are committed to EXCELLENCE

We take accountability for our business and for delivering outstanding results.

- We bring our best effort every day and trust our colleagues to do the same.
- We understand our tasks and how we contribute to Orica's overall success.
- We look for ways to deliver higher performance and adapt swiftly to changing needs.

BUILDING MOMENTUM

I am pleased to report on Orica's progress toward a more resilient business.



Over the past few years we have gained greater insight into the expectations of our stakeholders, more clearly defined our sustainability risks and developed mitigation plans and performance targets to build a more resilient business.

In 2018, we made progress toward our targets and continued to improve how we integrate sustainability risk into our management frameworks and day-to-day operations. A major focus has been lifting employee understanding of our sustainability risks, their obligations, and how they contribute to achieving our goals.



**SAFETY REMAINS OUR
NUMBER ONE PRIORITY
AND WE ACHIEVED
OUR MOST IMPORTANT
TARGET OF ZERO
FATALITIES IN 2018.**



The work we have done to understand our major hazards and ensure all key controls are in place has touched every part of our organisation. There is more work to do to ensure every employee returns home safely every day, but I am confident we are making Orica a safer place to work.

We also made considerable progress in strengthening our governance framework with the enhancement of ethics and compliance controls and training, and a refreshed Code of Business Conduct that clearly communicates to employees how we work and expectations of their personal conduct. We have also developed a whole of company position on product security and further work to embed the implications of this review will occur over the coming year.

The work we completed last year to better define our approach to climate-related risk has been followed up with the conduct of carbon emission abatement trials. This work will inform our investments in carbon reduction into the next decade. We have increased our focus on water, waste and energy management.

Expectations for disclosure on non-commercial performance are increasing and we will see enhanced regulation and best practice standards emerge over the coming years. This year we have released the data we provided to the Carbon Disclosure Project. We will also continue to analyse opportunities presented by the recommendations of the Task Force on Climate-related Financial Disclosure and assess our on-going participation in sustainability surveys and indices.

Our approach to sustainability is evolving and we acknowledge the challenges ahead of us, but I am pleased with our progress. This report reflects on our achievements for the year and outlines our priorities for the coming year. I look forward to updating you next year on our journey.

We could not have achieved all this without the hard work and commitment of our people, and I thank them all for their contribution.

Alberto Calderon
Managing Director and CEO

OUR SUSTAINABILITY ISSUES

REPORTING THE THINGS THAT MATTER

Orica's first external evaluation of sustainability issues identifying priorities for disclosure to stakeholders was in 2016.

Since that assessment, analysts and non-government organisations have provided further insight into expectations for sustainability reporting.

This report is guided by sustainability issues impacting the business and the priorities of external stakeholders. It is also influenced by the Global Reporting Initiative's (GRI) G4 Sustainability Reporting Guidelines.

Our material sustainability issues are consolidated under these themes:



United Nations Sustainable Development Goals

This report includes icons at the beginning of each chapter to align Orica's efforts with the United Nations Sustainable Development Goals.

For more information about these goals visit sustainabledevelopment.un.org



FY18 SUSTAINABILITY SCORECARD

Workplace Safety		FY18 Outcomes and Performance
Fatalities	●	0 fatalities in FY18 2 fatalities in FY17
All Worker Recordable Case Rate	●	0.48 in FY18 against target of ≤ 0.38 Performance in FY17 was 0.39
Distribution Incident	● ●	1 severity 2+ incident under Orica control in FY18 against a target of ≤ 3 . Performance in FY17 was 3 9 severity 2+ incidents under contractor control in FY18 against a target of ≤ 8 . Performance in FY17 was 14 ¹
Product Stewardship and Security		
Product Security	●	Orica Policy on Product Security developed and new targets established for FY19
Licence to Operate		
Environmental Incidents	●	0 severity 3+ environmental incidents for FY18 Performance in FY17 was 0
Total Waste Generated	●	20.9kT total waste generated in FY18 Performance in FY17 was 18.6kT
Fresh Water Consumption Intensity	●	1.36 kL/t against a target of 1.6 kL/t in FY18 Performance in FY17 was 1.47 kL/t
Community Partnerships Programs	●	> 90% of community partnership programs progressed to plan
Climate Change		
Carbon Emissions Intensity	●	1.81 tCO ₂ -e per tonne sold against a target of 2.0 tCO ₂ -e
Ethical Business Practices and Good Governance		
Ethical and Compliance Risk Mitigation Plans	●	100% of mitigation plans in place for identified high risk countries
People and Human Capability		
Women in Senior Management	●	21% in FY18 Performance remains on target for >25% by end of 2020
Retention of People in Enterprise Critical Roles	●	Target achieved with >90% retention of people in enterprise critical roles
Ethnic and Cultural Diversity in Senior Leadership	●	53% of senior leadership roles are held by individuals with ethnic/cultural backgrounds outside of Australia and New Zealand

- Target Achieved
- Limited Progress Made
- Not Achieved

* Severity definitions can be found on page 40.

1. FY17 figure of 14 distribution incidents has been adjusted from 13 reported in last year's scorecard due to late reporting.
2. New metric for FY18, see page 12.

FY19 SUSTAINABILITY SCORECARD

Workplace Safety		FY19 TARGETS
Fatalities		0
Serious Injury Case Rate (SICR) ²		0.17
All Worker Recordable Case Rate		0.38
Distribution incident		
Incidents under Orica operational control		≤ 3 severity 2+
Incidents under Contractor control		≤ 8 severity 2+
Product Stewardship and Security		
Product Security Incidents		0 severity 3+
Licence to Operate		
Environmental Incidents		0 severity 3+
Total Waste Generated	K Tonne	19.8 (5% reduction on FY18)
Fresh Water Consumption Intensity	kL/tonne	1.50
Climate Change		
Carbon Emissions Intensity	tCO ₂ -e per tonne sold	≤1.95
Ethical Business Practices and Good Governance		
Ethical and Compliance Monitoring	Develop and implement a risk-weighted framework for monitoring implementation of key Ethics & Compliance controls Execute framework in 10 countries	
People and Human Capability		
Women in Senior Management		25% by end of 2020
Retention of Key Talent		>90%
Ethnic and Cultural Diversity	Senior Leadership roles held by individuals with ethnic/cultural backgrounds outside of Australia and New Zealand in line with Orica's revenue profile	

1.

WORKPLACE SAFETY



Our priority is to return home safely every day.

The safety and health of our people is paramount – it's one of our core values and Orica's Code of Conduct puts the safety and health of our people, visitors and communities first, every day.

This is demonstrated through visible leadership, rigorous systems and verifications of key controls. Our people have access to training to understand their work and our leadership team creates an environment that empowers people to take action if they see hazards or causes of potential harm. We all share the responsibility for delivering a safe workplace.



Orica's approach to safety is centred on eliminating fatalities and serious injury while reducing injury rates. It is guided by our Safety, Health and Environment (SHE) Policy, Standards and Procedures. The SHE Policy empowers people to stop work if they feel it's unsafe and affirms the aspiration to be an industry leader in SHE performance. Our Standards and Procedures outline how we identify risks and apply and assure controls.

Management accountability for SHES (safety, health, environment and security) performance is led by the CEO and executive committee. These executives and senior leaders are accountable for performance against SHES targets.

The Orica Board Safety, Health, Environment and Community (SHEC) committee meets quarterly to review performance against targets, monitor implementation of SHES initiatives and programs, and to consider material SHES issues.

The SHEC committee is informed by the SHES assurance program, which provides insights into compliance with the SHES management system, which includes applicable SHES legal requirements. Technical experts and management representatives also participate in nominated SHES audits.

Our major hazard program is the core of safety management. Launched in 2016, it defines major hazards and ensures key controls are in place and effective.

PROGRESS IN 2018

In FY18 our focus was embedding the major hazard program in the business. This was designed to eliminate fatalities and serious injuries. More than 90,000 key control verifications (KCV) across 105 major hazards were performed as part of this program which has transitioned from a campaign to become standard workplace protocol at Orica.

There were no fatalities this year and sustaining this performance will remain our primary goal and focus for FY19. The 'all worker recordable case rate' did not achieve its target. The analysis on the drivers behind this will see specific actions at targeted sites. We are confident that we will see improvement in FY19.

We believe safety leadership interactions (SLIs) are the most important safety cultural activity. The SLI program is built on humility, curiosity and empathy. It enables leaders to gain insight into how they can support their people to find better ways of working safely, efficiently and productively.

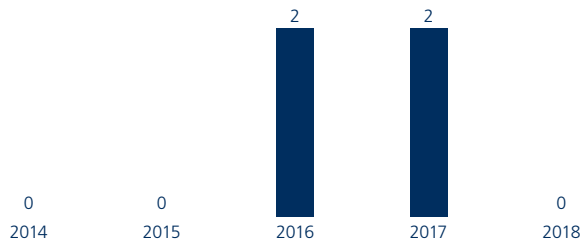
Our leaders completed more than 24,000 leadership interactions since the launch of the program. It's a practical way to live and demonstrate Our Charter values.

Transport safety is one of Orica's major risks. This is managed through regional initiatives guided by the global distribution expert panel that governs driver training, equipment specification and emergency response.

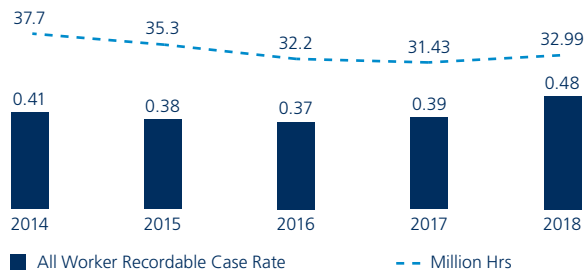
Transport and distribution incidents within the network controlled by Orica remained stable this year. There were four fatalities from road accidents in FY18 involving contractors transporting Orica product. In response, the Orica Expert Panel on Transport Safety will review and make recommendations on existing controls of our transport contractors and verifications internally and externally.

WORKPLACE SAFETY

Number of Fatalities



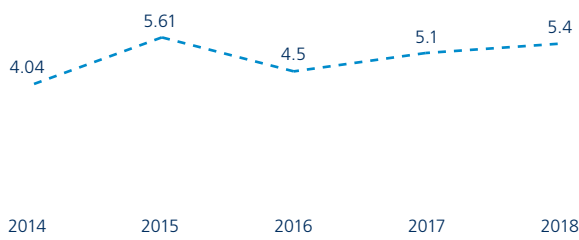
All Worker Recordable Case Rate



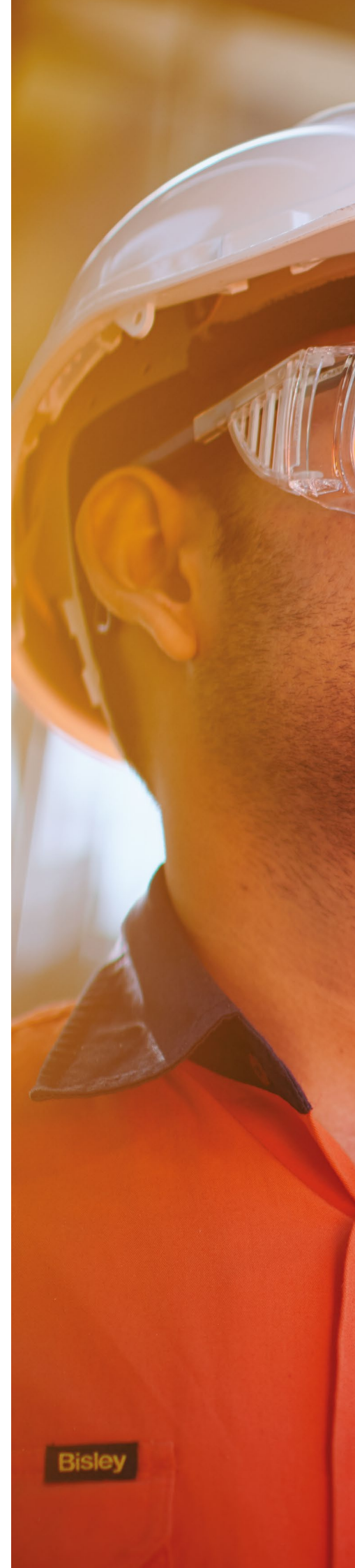
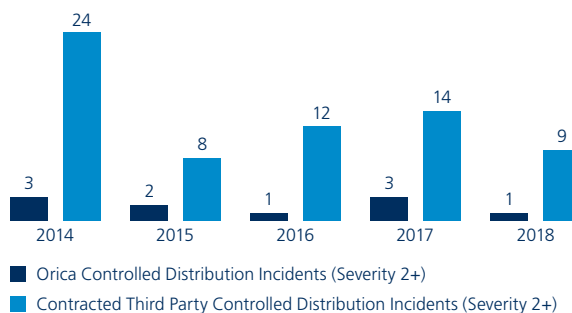
Recordable Cases by Region



Lost Workday Rate



Distribution Incidents



Bisley



**OUR MISSION IS
CLEAR. SAFETY
IS OUR PRIORITY.
ALWAYS**

PRIORITIES FOR FY19

Our focus for safety reporting is to support sustained fatality free operations. To support this, a new performance metric, serious injury case rate (SICR), has been added to the FY19 Sustainability Scorecard to monitor trends in the frequency and severity on serious injury events.

Fatalities and serious events have different causes and characteristics than less serious injuries (e.g. slips). A key step in reducing fatalities and life-altering serious events is establishing and reporting on a metric on the exposure to these incidents. We have designed our company-wide metrics to focus our attention on material events (major hazards) and provide greater transparency and visibility over performance in the management of major hazards. In FY19 we have set a performance target of 0.17 for SIRC which is aligned to our historical rate and benchmarked against industry.

We continue to promote the reporting of high potential injury events, which provide insights for the development of enhanced safety measures.

The SHE focus for FY19 is:

- Embedding and building awareness of our Global SHES Management System, including verification and assurance programs at a site, regional and group level.
- Major hazards and verification of key controls. We will build on our success with the aim of achieving sustained fatality prevention through standardisation and global alignment.
- Development of front-line leadership capabilities to drive visible and impactful leadership.
- Development of a global framework by the Transport Expert Panel to strengthen approvals, performance requirements and reporting.

Our mission is clear. Safety is our priority. Always.

SAFETY AND HEALTH STATISTICS BY REGION

Region	Total	Europe, Middle East and Africa	Australia Pacific Asia	Latin America	North America
All Worker Recordable Case Rate	0.48	0.49	0.49	0.21	0.77
# RC	79	17	34	7	21
Million hours worked	32.99	7.00	13.80	6.70	5.48

2.

PRODUCT STEWARDSHIP AND SECURITY



Orica's global manufacturing and supply chain footprint is extensive and complex and the business faces additional security responsibilities as a producer of explosives and chemicals. We have processes in place to identify and manage these challenges to maintain the safety and security of our people and the communities we operate in.



At Orica, a comprehensive understanding of the risks and opportunities resulting from our products and services starts with annual Self-Assessments & Life Cycle Risk Assessments (LCRA), as part of our responsible product stewardship practices and SHES requirements.

LCRAs help ensure our products are used as intended by responsible users safely and ethically, from order and shipment through to end-use and disposal. LCRAs are mandatory at the beginning of product development and are maintained by accountable product and services managers.

PROGRESS IN FY18

The Global Product and Services Sustaining Group and SHES systems team developed a new LCRA process in FY18 through the company's central Enablon reporting database. It helps managers and stakeholders with:

1. product risk management
2. process summaries, and
3. creating and completing self assessments.

This process provides the foundation for the identification and management of risks across Orica's supply chain.

Product security

In FY18 we reviewed the management of product security risk and identified a performance metric for inclusion in the annual Sustainability Scorecard. This work was done because we:

- recognise product stewardship and security as a material risk in annual sustainability reporting following consultation with analysts and a materiality assessment, and
- regularly engage security agencies and NGOs on civilian sourced inputs in the production of improvised explosive devices used by terrorist and criminal organisations.

A key outcome was the release of the Orica Product Security Policy. To track performance against this policy, metrics for product security were added to reporting to the Orica Board Safety, Health, Environment and Community Committee, and a sub-set of these metrics was included in this year's Sustainability Scorecard.

The product security metric for the scorecard is the number of security incidents involving Orica products of severity 3 or higher split between those incidents within Orica control and those outside of our control. The target in FY19 is set at zero incidents.

While many actions to strengthen product security at Orica remain confidential, the priority areas for critical controls are:

- customer screening and vetting
- site and transport security
- employee vetting, and
- on-going engagement and collaboration with national and international security agencies.

PRODUCT STEWARDSHIP AND SECURITY



FY19 PRIORITIES

Over the past 12 months, our focus on product stewardship was on 'downstream' issues concerning the end use and end users of our products. The implementation of the recommendations of this work will continue in FY19.

The priority for FY19 is consolidating insights on the broader 'upstream' stewardship issues facing Orica as a global manufacturer and procurer of raw materials and inputs. The analysis will have a particular interest in environmental and human rights risks in the supply chain as we source goods, human capability and resources from multiple markets



ORICA PRODUCT SECURITY POLICY

Orica researches, makes, transports, sells and uses dangerous and explosive products. It has rigorous safety, health and environment systems and mitigations in place to protect people, customers and communities and to reduce the risk of incidents and accidents.

Our commitment to safety extends to the responsible and intended use and ownership of products throughout their lifecycle. The misuse of civilian explosives and chemicals by criminals and terrorists can cause severe harm and loss of life.

As global market leader, Orica's culture and actions:

- reduce the potential for harm
- reduce legal, commercial and reputational risks for Orica and the broader industry, and
- help develop and implement responsible standards and regulation in partnership with governments, security agencies, industry peers and NGOs.

Orica's approach on product security is to:

- emphasise to governments and customers the benefits of smarter initiating system technology with enhanced user controls and the potential of harmonised track-and-trace technology created by advancements in meta-data management
- highlight to the broader mining and mining services sectors that product security is an industry-wide responsibility requiring industry-wide solutions in collaboration with regulators
- develop clear governance arrangements and rigorous product security and compliance frameworks within Orica that are updated as required, including controls across product development, manufacture, storage, transport and handling, sales, employee screening, customer and distributor accreditation, and, sanctions compliance
- cooperate with requests from security agencies to assist with product security investigations, and
- provide our stakeholders with an annual update on our actions and performance in the Orica Sustainability Report and Sustainability Scorecard.

3.

ENVIRONMENT AND COMMUNITY



Orica strives to be a responsible operator and welcomed presence in the communities we operate in. Our priority is to minimise the environmental impact of our operations and be active corporate citizens.



ENVIRONMENT

Orica's environmental standard is applied globally and mandates what sites and regions must do to manage environmental risk. Site-specific environmental management plans (EMPs) must be developed and maintained, as well as detailed environmental aspect and impact assessments.

To further strengthen the implementation of the environmental standard, we will complete detailed environmental risk assessments ('bowties') in FY19 to analyse acute and chronic risk scenarios at multiple sites with nitrate-based technologies. This requirement will also be extended to other technologies within Orica's broader manufacturing base.

PROGRESS IN FY18 AND FY19 PRIORITIES

Water

We continue to identify feasible opportunities to:

- improve operational efficiency to reduce freshwater consumption
- source water more sustainably wherever practicable, and
- be less reliant on water for operational tasks.

Water is a crucial resource for our operations. It is used as a raw material in products, within manufacturing and safety processes, and for site amenities. Water is also critical to the health and viability of the ecosystems and communities where we operate.

We track consumption of potable, surface, rain, recycled and groundwater in global operations. The constituent water types that make up each site's water use are analysed and help identify opportunities for improved efficiency.



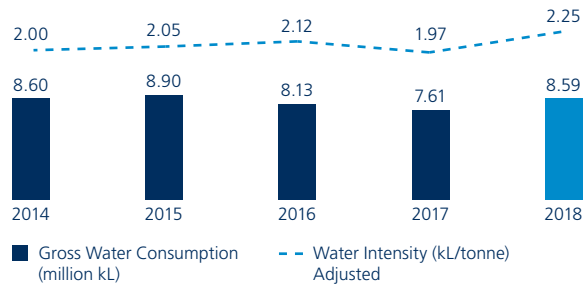
ENVIRONMENT AND COMMUNITY

We continue to reduce our reliance on potable water by using more sustainable options and sourcing recycled water where possible. We have reduced our reliance on potable water by more than 10% in FY18 from the previous year, helping conserve valuable drinking water resources. We will continue to use more sustainable water sources for site operations and collaborate with local communities to minimise our environmental impact.

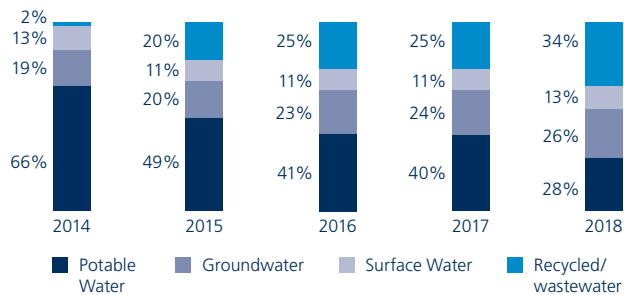
In FY18, Orica consumed 8.59 million kilolitres (kL) of gross water. While this is an increase on last year, it is consistent with historical averages. In the same 12 months, Orica increased overall use of recycled water (more than one third total water volume consumed) and groundwater (more than a quarter). Our Kooragang Island facility increased its consumption of recycled water to approximately 2.5 million kL this year.

Gross water intensity has increased from last year to 2.25 kL/tonne. This is due to increased water usage at some of our key manufacturing sites resulting from a shift in production volumes.

Gross water consumption



Water consumption by source (%)



Fresh water consumption

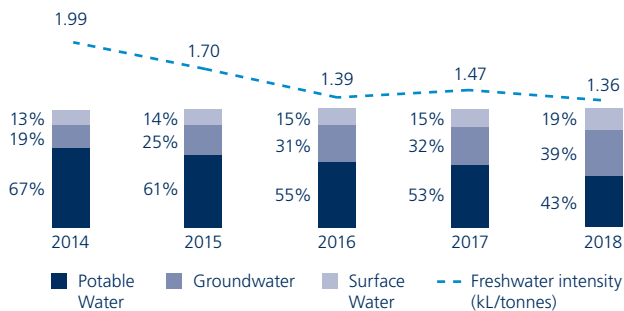
In FY18, Orica consumed 5.7 million kL of fresh water (derived from potable, surface, rain and groundwater), which represents a reduced volume on last year. The rate of fresh water usage also continued to decrease as recycled water options were optimised or introduced. Our global freshwater consumption intensity was 1.36 kL/t in FY18, which is also a reduction on last year.

Approximately 95% of the fresh water used was consumed by six of our major manufacturing plants in Canada, Brazil, Australia and India, and the Botany site (groundwater extraction). Of these plants, one is in a water stressed catchment, as defined by the World Resources Institute.

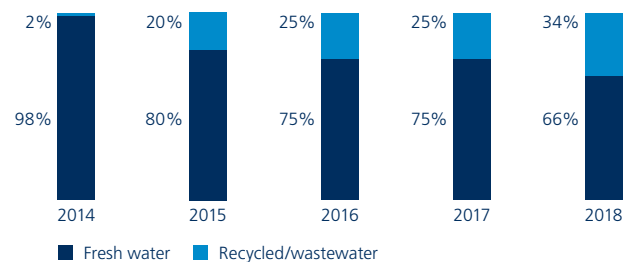
Three additional plants are also in water-stressed catchments and used less than 0.3% of Orica's overall annual water consumption. All of these sites are closely monitored to ensure water use is optimised.

Orica's global fresh water consumption intensity for operations located in water-stressed catchments was 0.48 kL/t for FY18, which is comparable to FY17 figures.

Freshwater consumption by source



Fresh vs recycled water consumption (%)



Waste

Orica minimises waste generation wherever practicable. In FY18, our focus was on ensuring improved reporting and clear data to ensure responsible and sustainable waste management practises can be implemented across the business, and to identify opportunities to reduce waste volume.

Orica generated 20.9 thousand tonnes (kT) of waste in FY18, which is an increase on 18.6kT generated in FY17. The increase was largely attributed to inclusion of additional sites in the reporting program identified through deployment of the SHES Management System, as well as many sites undergoing 'clean-ups' where previously stored wastes were appropriately managed and subsequently disposed.

Of the waste volume generated, 12.5kT (60%) was diverted from landfill by being treated or destroyed on-site or off-site, incinerated, re-used or recycled. This is Orica's best diversion rate reported to date.

Through FY19, we intend to work with regions to identify opportunities to minimise waste volumes generated and implement feasible targets. More waste will be diverted from landfill in each region wherever practicable by re-using, recycling and otherwise managing waste in more sustainable ways. This will mitigate the potential impact to the ecosystems and communities in which we operate, through responsible waste storage, handling and disposal. In FY19, we have set a target of 19.8 kT of waste which represents a 5 percent reduction on FY18 levels.

Energy

Orica's operations are energy intensive with electricity and fuels used in various manufacturing processes. This includes gas and petroleum-based products as feed stock and raw materials in the production of goods for customer use.

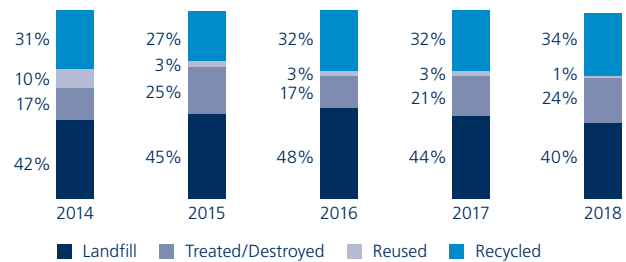
Orica also uses significant quantities of electricity, gas, petroleum fuels and other energy sources in ancillary operations at offices and operational facilities, including heating, cooling, lighting and operation of plant and vehicles.

In FY18, Orica used a net total of 20.67 million gigajoules (GJ) of energy, of which 12.3 million GJ (59%) was energy used in the production of Orica products. The increase in energy consumed from FY17 can be attributed to increased production at sites, reflected in increased energy incorporated in product and ancillary energy consumption.

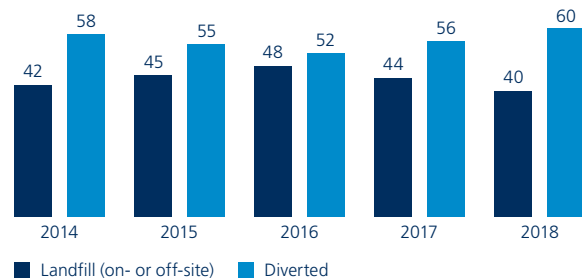
Ancillary energy consumption (95%) was attributed to liquefied natural gas (LNG, 70%), electricity (15%), and steam (10%). Other fuels and energy sources accounted for the remaining 5%.

Net energy intensity has increased from last year, to 5.41 million GJ/tonne. Orica manages energy efficiency through operational improvements at the operating plant. In FY19, we will be working with our material energy consumption sites to identify opportunities to gain efficiencies where plausible.

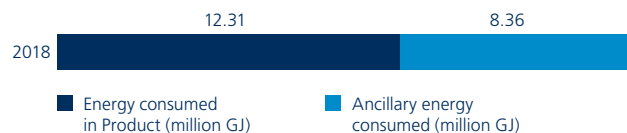
Waste disposal by destination (%)



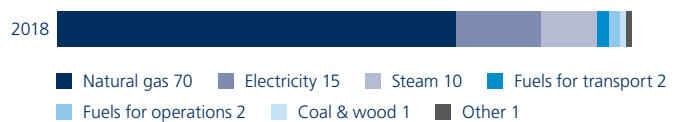
Waste diverted from landfill (%)



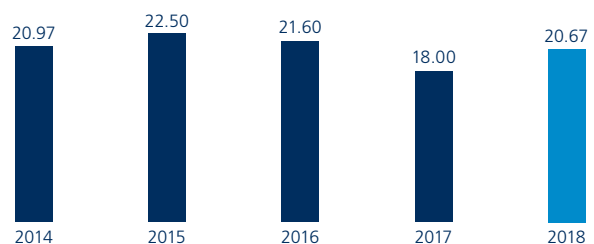
2018 net energy allocation (%)



2018 ancillary energy use source (%)



Net energy consumption (Million GJ)



ENVIRONMENT AND COMMUNITY

Remediation

Orica manages environmental issues across the globe associated with current and historical operations. To lead this work, we have a centrally-based team of technical specialists with expertise in environmental management and remediation, including nutrients, chlorinated solvents, per- and polyfluoroalkyl substances (PFAS), trinitrotoluene (TNT), nitroglycerin and hydrocarbons. They engage with technical resources globally to ensure sites have robust support to manage issues resulting from historical or current products and processes that may have impacted the land or groundwater.

Orica's program for the safe destruction of the hexachlorobenzene (HCB) stockpile in New South Wales has progressed with the successful destruction of the 1,500 tonnes shipped last year to be completed by the end of 2018. Applications for the destruction of a further 2,440 tonnes are being progressed.

Compliance

Orica manages its environmental licences and permits through the Enablon Regulatory Compliance Management application. In FY18, it was applied globally and translated for use in non-English speaking countries.

In FY18 there were no reported breaches of our environmental permits and licences that resulted in significant environmental impact.

CASE STUDY

At the Deer Park site in Melbourne, we are remediating contamination caused by the manufacture of ammunition up until the late 1970s. Ammunition production used chlorinated solvents, primarily trichloroethene (TCE), for degreasing cartridges. Unfortunately some of the TCE was released to ground and impacted the underlying groundwater.

Many remediation technologies are energy intensive and have poor sustainability credentials. However at Deer Park, we enlisted the help of the natural environment to treat the TCE contamination. It has been shown that there are bacteria capable of biologically destroying chlorinated solvents in situ, provided the appropriate conditions for their population growth exist. This method is referred to as bioremediation.

Following a successful field test, the method was applied to the main zone of impact over an area 50mx150m at 15 metres below ground. A 25 tonne combination of fine grain iron particles and mulched or liquified plant material was injected into the aquifer. This created the optimal groundwater conditions for bioremediation and provided food for bacterial proliferation. A bacterial culture harvested from an Orica Botany TCE plume was also introduced to enable complete bioremediation to safe end products. The bacteria were left to multiply.

Ongoing monitoring shows that after four years, contaminant concentrations within the treated area have been reduced by two orders of magnitude. The project cost to achieve this is in the vicinity of \$2.5 million.



COMMUNITY

Orica's community relationships are guided by group standards setting out how we identify and manage community concerns and opportunities, and form long-term community partnerships.

Community Partnerships Program

The Orica Community Partnerships Program (OCP) was first introduced across global operations in 2014 and in FY18, 18 new projects were endorsed worth more than \$1.8 million. These initiatives include:

- a three-year science, technology, engineering and maths (STEM) program in African high schools delivered by US-based NFP Funzeleo, which was piloted around Chambishi in Zambia in September, with local Orica managerial support.
- equipment for a hospital in the Ekibastuz region of Kazakhstan.
- an Aboriginal youth entrepreneur program with First Nations groups in the North Eastern Ontario region of Canada.
- enhancements to a reserve in Sydney in conjunction with the local council, continuation of the long-term engagement process at the Botany site, where remediation of legacy contamination continues successfully.

Details of our top community partnerships are at www.orica.com



CASE STUDY

Education – a continued partnerships focus

With Orica's support, leading Australian children's education charity The Smith Family, brought its signature *Learning for Life* program to Gladstone in Queensland, Australia this year.

As a founding partner, we helped provide 100 scholarships in 2018 for disadvantaged children and young people. A further 200 Gladstone students will be brought on to the program by 2020. This achievement developed from an Orica-funded feasibility study conducted in 2016 and builds on a partnership founded in the Pilbara in 2014.

In FY18, 26 educators near the Orica Limay facility in the Philippines participated in pilots of digitised teaching materials for The Smith Family's *Let's Count* early numeracy program.

The Smith Family's national lead facilitator trained a group of educators to become *Let's Count* trainers in Limay in February and March 2018, to ensure sustainability of the program. The first round of locally led training started in September 2018. This partnership was extended to India in August 2018, with 15 educators from the Pitts Modern School and Gomia playgroup near the Gomia plant starting *Let's Count* training.

The *Let's Count* program partnership between Orica and The Smith Family facilitates deeper connections between these locations, local education departments and schools, and complements existing engagement activities.

ENVIRONMENT AND COMMUNITY

FY19 PRIORITIES

Measuring community sentiment

Several of Orica's key strategic sites confront urban encroachment and demographic change in surrounding communities. Expectations and legal obligations of manufacturers continue to intensify as public health and environmental protection issues advance as key priorities for local communities.

Our aim is to respond responsibly to these heightened expectations. To better understand our performance, in FY18 we developed a process for measuring community sentiment towards operations at key sites. This analysis requires consideration across several metrics that collectively shape reputation and community goodwill.

To quantify these insights into risk measurement and mitigation, a method using key indicators will be applied in FY19 and reviewed annually. Data will include:

- environmental and safety performance
- outstanding legal and regulatory issues
- legacy issues
- extent and trend of socio economic footprint
- industrial relations
- local media sentiment and landscape
- status of relationships with local stakeholders
- level of urban encroachment, changing demographics and trends towards alternate land use
- physical proximity of site to community
- predisposition to industry/manufacturing, and
- current community investment projects and sponsorships.

In FY19, key sites will be responsible for site-specific analysis using the recommended framework as part of annual stakeholder planning. This will measure the status of the relationship between our operations and the surrounding communities and help identify opportunities for targeted engagement and action.





4. CLIMATE CHANGE



Orica's manufacturing processes result in the release of greenhouse gases. As the global economy decarbonises and adopts new technologies and sources of energy, the business will also face long-term shifts in commodity demand and customer mix.

We are identifying and minimising risk in anticipation of these long-term trends and we are committed to meeting evolving disclosure requirements on climate-related issues. Our approach to these challenges is guided by the Orica Climate Change Policy.



The Orica Board, through the Safety, Health, Environment and Community Committee oversees the implementation of the Orica Climate Change Policy. Advice to the committee is considered and endorsed by the Orica Executive Committee. The accountability for Orica's response to climate change rests with the Group Executive, Corporate Services and Company Secretary.

Transition and scenario planning

There is significant variance in analyst opinion on the pace and scope of transition towards a low carbon future and the role fossil fuels will play. In this environment, we will continue to develop our own position regarding future commodity demand.

Climate change is one of the six defined strategic risks for Orica and climate-related issues are formally considered in the Orica Board's annual risk management and planning processes. This work identifies material risk, causes and impacts, signposts for monitoring, and the long-term strategic response.

To inform the board's consideration of the scope of risk associated with changing commodity demand and emergence of carbon markets, Orica considers three climate-related scenarios.

1. Base Case

Base Case combines the modelling of Wood Mackenzie and the International Energy Agency (IEA) 'New Policies Scenario'. It takes into account the broad policy commitments and plans governments have made to tackle climate change, and assumes that thermal coal will gradually lose market share to gas and renewables as a source for power generation in developed economies. Our base case for forecasting, using a range of external sources, indicates that these competing forces deliver flat, seaborne, thermal coal demand for the coming decade, as the decline in its share of the energy mix is offset by increasing overall energy demand in developing Asia. The demand for higher quality, Australian-sourced coal will continue to remain strong with the shift to ultra super-critical, coal fired power generation. At some point this balance will tip, and absolute thermal coal demand will decline at a rate that is dependent on the costs and integration of variable renewable energy power systems and energy storage.

2. Scenario 1

Scenario 1 is based on Bloomberg New Energy Finance data sets. Key assumptions include:

- >50% of global electricity from renewables by 2040, primarily solar PV and wind supported by batteries and other storage technologies
- coal remaining a dominant fuel through to 2030, but coal plant retirements will outpace coal additions, with coal increasingly replaced by renewables and, in the case of the US, gas, and
- higher capacity factors and utilisation rates for renewables compared to the base case scenario.

3. Scenario 2

Scenario 2 is based on the IEA's 'Sustainable Development Scenario (SDS)' and aligned with the Paris Agreement's goal to limit global temperature rises to well below 2°C and ~450ppm of CO₂ in the atmosphere.

In this scenario:

- An integrated approach to achieving globally agreed objectives on climate change, air quality and access to energy.
- Global energy demand is relatively flat through until 2040 as energy consumption patterns changes, driven by energy efficiency and increased direct use of renewable energy.
- A replacement of fossil fuels by renewable energy sources to meet global emission reduction targets, with scalable carbon capture and storage and significant cost reductions in renewables and energy storage.

CLIMATE CHANGE

As a subset of this climate-related scenario planning, we undertake modelling of our potential direct exposure to the costs of carbon emissions. Assumptions include carbon pricing ranging between \$25 and \$50 per tCO₂-e over the decade beginning 2020. The business continues to confront significant policy uncertainty in the two key jurisdictions of Australia and Canada. However, we anticipate modest direct carbon costs for the near future.

Orica's scenario analysis continues to indicate the transition risk over the coming decade remains low, given forecast commodity and energy demand, immaterial direct carbon costs, and minimal impact on physical assets.

Over the longer term, the pace of transition towards a 2°C future will enable Orica to maintain a profitable balance in its customer and portfolio mix. We will continue to consider and capture growth and diversification opportunities, as we have done in recent years through:

- the acquisition of GroundProbe and our joint venture with Yara to build a technical ammonium nitrate plant on the Burrup peninsula of Western Australia next to iron ore customers
- our expansion into civil infrastructure and tunnelling, and
- re-entry into the Australian agriculture market.



ORICA CLIMATE CHANGE POLICY

Through our Charter, we are committed to working safely and with integrity and respect for each other, our customers, communities and the environment.

Our production processes and operational activity result in the emission of greenhouse gases and we remain committed to finding ways to reduce our impact. In doing so, we will also prepare the business for emerging carbon markets, reduce exposure to direct carbon costs and drive operational efficiencies.

Our efforts to reduce emissions will prioritise abatement at major production facilities where we can make the most difference by lowering direct nitrous oxide emissions. We will also continue to assess opportunities to reduce direct and indirect carbon dioxide emissions across all our sites and value chain.

We are also preparing the business for the longer-term transition to a net zero emissions future by:

- assessing physical asset risk and putting in place any appropriate mitigations
- incorporating scenario analysis in our planning, including the impact of a 2°C increase in average global temperatures on our business, and
- putting in place clear governance arrangements and accountabilities to identify, analyse and respond to climate change risks and opportunities.

The global transition to a lower carbon future will also impact our customers, however we believe demand for our core products and services will remain strong while emerging areas of the business continue to grow.

The impact of climate change may also change the physical environment impacting local, national and global socio-economics. We will continue to monitor the leading indicators of change to assess the impacts that may ensue.

We will disclose our planning and actions on climate change through:

- annual sustainability reporting
- climate change targets linked to our material risks and the release of greenhouse gas emissions data provided to the Carbon Disclosure Project, and
- updates on our Climate Change Policy as our planning and activities evolve.

Orica will be an active participant in policy development at the regional and national level. We will advocate for climate change policies based on the following principles:

- open and transparent international carbon markets
- managed transition for the energy sector towards low emissions generation
- consideration of trade exposed businesses and the priority of maintaining relative competitiveness between trading nations.

CLIMATE CHANGE

PROGRESS IN FY18

Over the last 12 months Orica achieved the inaugural annual carbon intensity target of less than 2 tCO₂-e per tonne of product sold.

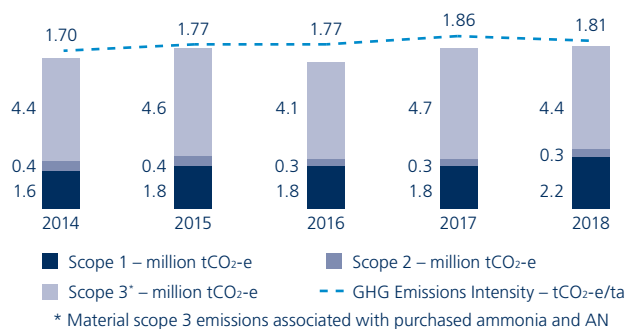
Orica continued to incorporate assumed scope 3 emissions in calculations of total carbon emissions as a more accurate reflection of Orica's carbon footprint, regardless of whether we made or bought the inputs from other producers.

In FY18 Orica achieved a greenhouse gas emission intensity of 1.81 tCO₂-e per tonne of AN product sold against a target of less than 2.0 tCO₂-e. This remains similar to the previous year's intensity with a small improvement compared to FY17. This was attributed to realising improved performance of the Kooragang Island Ammonia plant post maintenance turnaround for a full year and an update of scope 2 accounting through the use of updated global emission factors.

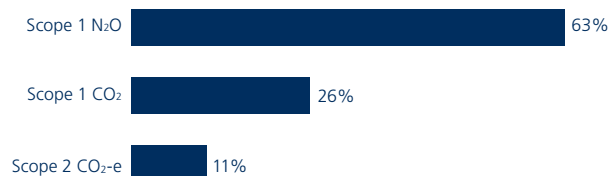
In FY19, the intensity target has been reduced to 1.95 tCO₂-e. This target has been set above actual FY18 intensity levels due to on-going concerns with degrading abatement at some sites. We are currently undertaking technical trials to address this challenge (see below) and this work will inform the business on the best approach to achieve sustained reductions in future intensity target levels and our annual emissions footprint.

Over the longer term, Orica's focus is on abating nitrous oxide emissions, given the global warming potential of N₂O is 298 times that of CO₂.

Net Greenhouse Gas Emissions



Scope 1 and 2 GHG Emissions by Scope and Gas



Abatement trials

Operational trials and scoping studies for potential N₂O abatement technology applicable for Orica were conducted throughout FY18, consistent with the commitments made in the Orica Climate Change Policy.

The initial pilot trial at Kooragang Island proved successful and the abatement is now operating in the two relevant nitric acid plants on-site. Kooragang Island will look to further improve abatement performance with additional trials using a different N₂O abatement catalyst in 2019 to achieve further emission reductions. A scoping study for longer-term abatement investment has also been completed for six of Orica's nine nitric acid plants, which will help Orica respond quickly to global climate change-related risks.

Physical asset risk

An assessment of climate-related physical asset risk was undertaken across 14 of our key sites in FY18 spanning Australia, Asia, North America, Latin America and the Middle East.

The potential impact of climate change on Orica operations include:

- increased temperature extremes affecting performance, reliability or integrity of equipment
- rising sea levels causing increased frequency of storm surge or tidal flooding events
- increased frequency or severity of windstorm and flooding events
- increased frequency of droughts and impacts on availability of water
- increased severity and frequency of wildfires.

The current climate-related physical asset risk to our operations is low. In the short-to-medium term, with existing controls and practices, it's not expected that the risk will increase with the effects of climate change.

Some sites are expected to experience the impact of climate change over the longer term and the impact will likely increase progressively through increased frequency and intensity of events combined with changes in seasonal patterns.

The impact of climate change on long-term rainfall patterns and water scarcity is an issue of particular importance for Orica and is a key driver behind our efforts to more effectively use our water supply across our global operations. More information on our use of potable and fresh water can be found on page 20.

FY19 PRIORITIES

Disclosure

Over the coming year, we will assess anticipated changes in market disclosure on climate-related risk. The focus will be on recent recommendations from the Taskforce on Climate-related Financial Disclosure, the ASX Good Practice Guidelines and initiatives from NGOs aimed at informing stakeholders. We want to enhance disclosure as market expectations increase and as the business builds momentum.

Consistent with this approach, we have released our report to the 2018 Carbon Disclosure Project, which you can read at www.orica.com.

On-going advocacy in the energy debate in Australia

Orica actively participates in energy and climate change policy development. FY18 saw significant public debate in Australia about how to reduce emissions from electricity generation and achieve sustainable natural gas pricing for domestic consumers.

We engage in these debates based on the following foundation principles:

- open and transparent international carbon markets
- managed transition for the energy sector towards low emissions generation, and
- consideration of trade exposed businesses and the priority of maintaining relative competitiveness between trading nations.

Our advocacy activities in our two priority markets of Australia and Canada are:

- Australian Industry Group
- Business Council of Australia
- Carbon Market Institute (Australia)
- Chemistry Australia
- Fertilizer Canada.

EMISSIONS

(T/year)	NOX	SOX	VOC's
	1260	19	207

5. ETHICAL BUSINESS PRACTICES AND GOOD GOVERNANCE



How we do business is as important as what we do. Integrity and discipline around compliance in our work is a reflection of our commitment to excellence and risk mitigation. It minimises the potential for business disruption and secures our reputation as a trusted partner of choice for customers and other stakeholders. We act ethically and in compliance with national and international law.



Orica's approach to governance is detailed in the Board and Board Committee Terms of Reference and in various corporate governance documents, which outline governance policies, processes and systems. These documents are reviewed and updated regularly and can be read at www.orica.com.

Under Orica's operating model, parameters for company performance are set at group level. The four regional management teams have accountability for end-to-end customer service delivery and on-the-ground operational and financial performance. Supporting the four regions is a small number of group functions designed to retain functional excellence.

Each function's role is articulated in a Group Function Mandate. The functions are responsible for the group strategy and group documents – the policies, standards and procedures that govern Orica. These documents ensure the group operates as one organisation throughout the world, with common processes and systems underpinning operations. The operating model is designed to provide balance between empowering teams with the freedom to deliver on their accountabilities, while providing the framework to drive consistency and simplicity.

Orica established new group standards over FY16 and FY17 and will complete new group procedures by the end of 2018. Considerable effort is put into the deployment and self-assessment against the group standards and, after a transition period, they become mandatory. Compliance is assessed through a formal self-assurance process and included in the internal audit framework.



AS THE WORLD'S LARGEST PROVIDER OF COMMERCIAL EXPLOSIVES AND INNOVATIVE BLASTING SYSTEMS, WE OPERATE IN A COMPLEX GLOBAL ENVIRONMENT.

THE WAY WE ACT INFLUENCES WHAT OUR CUSTOMERS, COMMUNITIES, SUPPLIERS, GOVERNMENTS, SHAREHOLDERS AND OUR COLLEAGUES THINK OF US.

WE NEED TO MAKE SURE WE DO WHAT WE SAY WE WILL, AND THAT WE DO THE RIGHT THING, BY ACTING SAFELY AND BY FOLLOWING THE LAW AND OUR CODE ALWAYS.



Alberto Calderon
Managing Director and CEO

*Excerpt from the Orica Code of Conduct
which can be found at www.Orica.com*

ETHICAL BUSINESS PRACTICES AND GOOD GOVERNANCE



Code of Business Conduct

In FY18 we refreshed our Code of Business Conduct, which outlines the expected behaviours of the people who work for, or on behalf of Orica globally.

The scope of the code includes expectations around compliance with regulations, our values and group policies and standards. It is a condition of working for, or with, Orica that people abide by Our Charter Values and the Code of Business Conduct.

If a breach of the Code of Business Conduct is suspected, employees and contractors can report directly to Orica line management or other management teams such as Human Resources.

Concerns can also be raised confidentially and anonymously through the Orica Speak-Up service. The Speak-Up service is available globally and is operated by an independent provider. It is now also available to any external parties such as partners, customers and suppliers.

When a concern is raised, the facts are reviewed and a response is determined according to the framework in the group procedure. In FY18, the reports received through the Speak-Up service or direct to management included:

- allegations of bullying, harassment or discrimination (34%)
- health and safety concerns (21%)
- ethics or integrity issues, including conflicts of interest (5%)
- theft, fraud and false accounting or financial claims (31%), and
- misuse of equipment or workplace grievances (8%).

Of these reports:

- 24% originated from Europe, Middle East and Africa
- 21% from Australia, Pacific and Asia
- 20% from our Manufacturing & Supply business
- 15% from Latin America
- 8% from North America
- 6% from group functions, and
- 5% from the global monitoring business.

When allegations were substantiated and non-compliance with our code occurred, appropriate action was taken to apply a remedy and prevent reoccurrence. In some cases, disciplinary action or termination of contract was justified and occurred.

The business conduct program is overseen by a Business Conduct Committee that meets regularly to ensure:

- people understand what is expected
- the channels to raise concerns are effective, and
- the response to reports is appropriate and commensurate, and
- significant issues are reported to the Board Audit and Risk Committee.

Orica's Internal Audit function is responsible for site audits and analysis of financial information to identify possible breaches. Orica's management of reported matters is audited six-monthly against the group procedure. The outcomes are reported to management, the Business Conduct Committee and Board Audit and Risk Committee.

Ethics and Compliance Framework and Group Standard

Orica's Ethics and Compliance Group Standard sets out clear requirements and controls to support compliance with anti-corruption, trade sanctions and competition (anti-trust) laws. These include notification and approval requirements designed to ensure higher risk activities are subject to review and approval by a dedicated Ethics & Compliance team. These requirements, with associated resources, training, risk assessments and other measures, are intended to embed a compliance framework that reflects global best practice and meets the requirements of the US Foreign Corrupt Practices Act, the UK Bribery Act and the Australian Criminal Code.

Online compliance tool: To underpin the Ethics & Compliance Group Standard, Orica has a multi-lingual, online compliance tool available to all employees on the global intranet. The system records due diligence, notifications and approvals required by the Ethics & Compliance Group Standard. The system provides an alternative to the Speak-Up service and another channel for reporting of Ethics & Compliance concerns (anonymously), and is available in multiple languages.

Roll out and implementation program completed:

During FY18 the Ethics & Compliance team continued the implementation of the new Ethics & Compliance Group Standard including joint ventures and new acquisitions. This program involved numerous country visits by the Ethics & Compliance team, incorporating briefing and training sessions for management and relevant stakeholders, with risk assessment discussions to identify local risks and challenges. This included the development of risk mitigation plans, with mitigation plans now in place for all high risk countries where Orica has established operations, following completion of risk assessments by the Ethics and Compliance team.

Ethics & Compliance have undertaken focused monitoring of compliance with trade sanctions controls. In FY19 we have set a target to develop and implement an expanded risk-weighted monitoring program across 10 countries, to better assess implementation of the enhanced Ethics & Compliance controls, and this is referenced in our public scorecard.

Training and communication: Orica has a risk-based, tailored training program to build and maintain awareness of Ethics & Compliance requirements. During FY18, separate training modules covering anti-corruption, trade sanctions and competition law were allocated to more than 1,500 employees globally in multiple languages.

UK Modern Slavery Act: Orica opposes any form of slavery or human trafficking, and is committed to maintaining and improving systems and processes to avoid complicity in slavery or human trafficking related to our own operations, and our supply chain. We respect and support the rights of our workforce to a healthy, safe and secure working environment, to a workplace free of discrimination, to freedom of association and to preventing the use of all forms of forced, compulsory or child labour in Orica's operations.

Orica supports the policy behind the *United Kingdom's Modern Slavery Act 2015*, and publishes an annual statement pursuant to that legislation setting out steps taken to ensure slavery and human trafficking are not taking place in Orica's supply chain, or any part of our business.



6.

OUR PEOPLE AND HUMAN CAPABILITY



We're powered by the expertise and skill of our people. Together we create, develop and deliver solutions to help our customers be more productive and manage critical risk.



As a global company, we seek to attract and retain the best people at all levels around the world. We provide workplaces where people from diverse groups are respected, included and supported to succeed.

To create success for customers every day, we inspire, motivate and challenge our people. This means world-class leaders who develop outstanding people in roles critical to delivering our strategy. It means motivating our people to succeed through meaningful recognition and rewards and bringing the Orica Charter to life by ensuring everyone clearly understands the business strategy, their role in delivering it, and our cultural values.

Orica's policies, standards, training, development and supporting systems develop and embed capability, culture and competitiveness across the business.

PROGRESS IN 2018

A key priority this year was deploying global HR processes, systems and structures.

Orica implemented an HR information and expense management system globally, supporting more than 11,500 employees across more than 400 sites and 50 countries. The system enables consistent recruitment, onboarding, training, performance management, succession planning, and other HR processes.

We simplified the business structure, implementing a consistent customer-facing model. The new model has a single-point of accountability for meeting customer needs and consolidated consistent structures in manufacturing and support functions.

We also continue to embed talent and succession management practices into the business. The Enterprise Leadership Program, launched in FY17, continued this year. This targets the development of potential successors to senior leadership roles. More than 90% of participants in the first program were promoted or are in new roles, to gain broader business or geographic leadership experience. The second group has started the program, drawing from Orica sites globally. The participants are 25% female.

To enable movement and development of talent across the business, the Global Mobility Program was reviewed as was the approach, policies, processes and providers that support it.

The Enterprise Graduate Program was expanded in Europe and North America. In FY18, the target to retain more than 90% of employees in enterprise critical roles was met, with 3% attrition.

In an environment of significant and continued change, we must inspire, motivate and empower our people to succeed and create an environment where they can give their best. Our Charter and values are the cornerstones of culture and engagement at Orica.

Orica's transformation program, culture and engagement are measured using McKinsey's Organisational Health Index (OHI) survey. In FY18, a second OHI survey was completed, following the 2016 survey. There was a 75% participation rate (up 60% from the previous year) and the overall health score improved significantly. People who participated in the transformation program were strongly engaged. Against other companies in McKinsey's global health database, Orica's overall 'health' (quality of management practices) moved from the third quartile (just below the global median) to second quartile.

Orica made progress against priorities including strengthening alignment and purpose, and driving accountability and performance. The feedback from our people is to maintain this focus. The regions and functions executed plans to increase communication, recognition and involvement in business improvement initiatives. Globally, the focus was on refreshing the Code of Business Conduct. The Code aligns with Our Charter values and is as much about creating a workplace culture where our values are lived as it is about managing risk to Orica.

In the final OHI survey, a participation rate of 80% was achieved. The responses will shape our work to strengthen Orica's culture in FY19.

OUR PEOPLE AND HUMAN CAPABILITY



To strengthen training governance and delivery of training to frontline team members, we finalised and launched a multi-year transformation of learning. The governance framework was established and training management, records and programs are migrating onto the new HR system to ensure a systematic approach to technical and functional capability training. This work will continue in FY19. More than 3% of payroll was invested in training and development, focused on systems and safety training and development of area and territory managers, who lead relationships with customers in region.

Several specialised safety training programs were launched following the ongoing Major Hazards Initiative. These include training on permit to work and safe pump operation, explosives awareness training, and responsible engineer training for manufacturing sites. These programs will be extended across relevant sites and regions in FY19.

We continue to focus on improving diversity and inclusion by employing people of different genders, ages, ethnic and cultural backgrounds and giving them the opportunity to apply their diverse skills, experiences and perspectives to create value for the organisation and for customers.

The Human Rights at Work and Diversity and Inclusion policies protect peoples' workplace rights. Approximately 40% of Orica's employees have chosen to be part of collective bargaining agreements.

Reflecting Orica's diverse operations, 79.5% of the global workforce is based outside Australia and New Zealand. Contractors make up 10% of the total workforce. During FY18, turnover was 17%, the majority was managed due to business structuring.

Focus during the year was also maintained on the gender and ethnic/cultural diversity of our senior leadership team. This year diversity stabilised. Senior leadership roles were held by 53% of individuals with ethnic/cultural

backgrounds outside of Australia and New Zealand, with women representing 21%. The aim continues to be for women to represent at least 25% of senior leaders by end FY20.

Internal promotions and appointments have resulted in an increase in gender diversity in critical talent pipelines. Regional activity has increased to promote Orica as a place to work and established networking groups to provide support and mentoring in developing careers at Orica. Reflecting Orica's ethnic and gender diversity goals, the Enterprise Graduate Program now operates in all regions, with 35% female participation and 67% of current participants from outside Australia and New Zealand.

FY19 PRIORITIES

In 2019, global processes, systems and structures will be implemented for finance, manufacturing & supply and commercial operations. The day-to-day activities of many of our people will change, requiring significant investment in training. In addition, safety programs launched in 2018 will continue, and we will complete migration of training management onto the new system.

Orica is resourcing for growth, particularly in the Australia Pacific Asia and CIS regions, and will continue to develop talent in critical talent pipelines: technology (digital), regional business leadership and manufacturing and supply.

Strengthening Orica's culture is as important as the results we generate. The Code of Business Conduct training will be rolled out across the business globally. We will continue to drive initiatives to improve alignment, accountability and performance.

The focus on gender and ethnic and cultural diversity will be maintained, driving regional and functional ownership and accountability.

TALENT ATTRACTION, DIVERSITY AND CULTURE

Employees by Gender and employment type	Total %	Male %	Female %
Full-time	93.77%	82.92%	17.08%
Part-time	1.11%	31.58%	68.42%
Fixed term full-time	4.03%	88.61%	11.39%
Fixed term part-time	0.24%	58.62%	41.38%
Casual	0.84%	93.07%	6.93%
Total	100.00%	82.61%	17.39%

Employee by category and diversity	Total %	Gender %		Age group %		
		Male %	Female %	Under 30	30-50	Over 50
Senior managers	0.52%	79.03%	20.97%	0.00%	46.77%	53.23%
Managers	2.04%	79.51%	20.49%	0.41%	68.44%	31.15%
Supervisory and professional	28.06%	79.55%	20.45%	9.55%	67.29%	23.15%
Operators and general support	69.39%	83.96%	16.04%	15.09%	62.05%	22.86%
Total	100.00%	82.61%	17.39%	13.16%	63.57%	23.27%

Employees by Gender and employment type	Total %	Male %	Female %
APA	36.88%	82.64%	17.36%
EMEA	24.26%	77.90%	22.10%
LATAM	18.97%	88.86%	11.14%
NA	19.89%	82.33%	17.67%
Total	100.00%	82.61%	17.39%

Employee by new hires and turnover	Total %	Gender %		Age group %			Region			
		Male %	Female %	Under 30	30-50	Over 50	APA	EMEA	LATAM	NA
Employee new hires	16.79%	16.40%	18.68%	40.65%	14.13%	10.52%	16.36%	20.78%	14.16%	15.67%
Employee turnover	16.90%	16.43%	19.17%	25.03%	15.15%	17.12%	12.96%	15.66%	24.07%	17.83%

CASE STUDY

We are committed to making our customers successful, every day, all around the world. Our organisation is structured to ensure great customer experience every time, at every location. Our Area Business and Territory Managers understand customer needs and deliver superior products and services. In FY18 we invested in building the capability of these business-critical leaders through week-long, face-to-face workshops in our four regions. These workshops provided strategic and practical skills, including safety and people leadership, technical knowledge of our products, and commercial acumen. They also enabled relationship building and shared customer knowledge.



ABOUT THE DATA AND REPORT

DATA DEFINITIONS, CORRECTIONS AND RESTATEMENTS

Incident severity categorisation

This report includes reporting incidents by severity rating, a measure to categorise the impact of an incident on people, the environment, the community and Orica's reputation.

Severity 1 incidents are recordable incidents with minor or reversible short-term impact. Examples may include a:

- first aid injury
- minor spill or gaseous emission restricted to the immediate vicinity of equipment/incident
- fire that causes limited damage to equipment, or a
- minor spill of product during transportation to a customer.

Severity 2 incidents are more significant with short-to-medium term impact, generally requiring some treatment or remedial action.

Severity 3 incidents are serious, that are severe or widespread, and have medium-to-long-term impact requiring significant remedial action.

High Potential Incidents (HPI) are incidents with the potential for a very serious (severity 4) outcome. Incidents may be captured under a variety of classifications.

REPORTING OF GREENHOUSE GAS EMISSIONS

Orica reports greenhouse gas emissions, energy consumption and energy production from the company's Australian facilities under the Australian Government's *National Greenhouse and Energy Reporting Act 2007* and appropriate guidelines. Greenhouse gas emissions from the company's non-Australian sites are reported using the same general framework, with the application of local energy and emission factors. The reporting of non-Australian data is based on materiality thresholds.

DATA ACCURACY AND VERIFICATION

Independent verification wasn't sought for the information in this report, with the exception of:

- financial information, which is drawn from the 2018 Annual Report
- N₂O emissions data from Orica's nitric acid plants at the Carseland, Kooragang Island and Yarwun facilities.

Independent reasonable assurance reports were provided with the company's 2018 submissions.

While every effort was made to ensure the accuracy of this report, you shouldn't rely on this information or draw conclusions from the data before contacting Orica for verification first.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE INDICES

In 2018 Orica was a constituent member of the following environmental, social and governance (ESG) indices:

- Dow Jones Sustainability Index of Australia, and the
- FTSE4 Good Index Series, an equity index series designed to facilitate investment in companies that meet globally recognised corporate responsibility standards.

ORICA'S TAX POSITION

TAX TRANSPARENCY REPORTING

Orica believes that enhanced tax transparency is a critical element of ethical business behaviour.

Tax Policy – Orica's approach to tax

Orica's tax policy and approach to tax is published on orica.com. Some important aspects of that policy are in this report.

As an Australian mining services company with global operations, Orica generates a substantial amount and variety of taxes across its jurisdictions including income taxes, stamp duties, employment taxes and other taxes. Orica also collects and remits a number of taxes on trust including employment taxes and indirect taxes such as GST/VAT.

The taxes Orica pays and collects form a significant part of the economic contribution to the countries of operation.

Tax strategy and governance

Orica's tax strategy is reviewed by the Board of Directors annually. The tax strategy is aligned with the overall corporate strategy and supplements the Risk Management Policy.

The Chief Financial Officer has oversight responsibility over the tax risk management framework. Operational and governance responsibility for the execution of the Group's tax strategy rests with the Vice President Taxation, supported by a team of tax professionals. External tax expertise is used where required.

The Vice President Taxation reports on tax matters bi-annually to the Board Audit and Risk Committee.

Orica's approach to tax is applicable across the Orica Group and is reviewed and updated annually.

Compliance

Orica is committed to complying with all relevant revenue laws in a responsible manner, with all taxes properly due, accounted for and paid. A tax standard and relevant procedures are in place to ensure tax compliance obligations are managed.

There is an in house global tax team that manages Orica's tax affairs which is supplemented with external compliance support where required.

Structure

Orica does not support the use of artificial structures that are established just to avoid paying tax and have no commercial purpose. Orica will not enter into any tax avoidance activities.

Relationships with tax authorities

Orica aims for open, transparent and respectful relationships with the Australian Taxation Office and other tax authorities globally. Orica seeks advance rulings from taxation authorities on transactions where appropriate.

Use of tax havens

Tax havens are not used for tax planning purposes. Orica has operations in countries that are 'low tax' jurisdictions. There is genuine operational substance in these locations, or the entities are dormant.

Orica's overseas companies are subject to Australia's international tax rules (Controlled Foreign Corporation rules).

Transparency

Orica supports the ongoing global development of improved tax transparency to increase understanding of tax systems and build public trust.

On 3 May 2016, the Treasurer of Australia released a Corporate Tax Transparency Code. The Code was developed by the Board of Taxation in Australia and Orica has signed the Corporate Tax Transparency Code Register and is committed to applying the principles and the details of the Code.

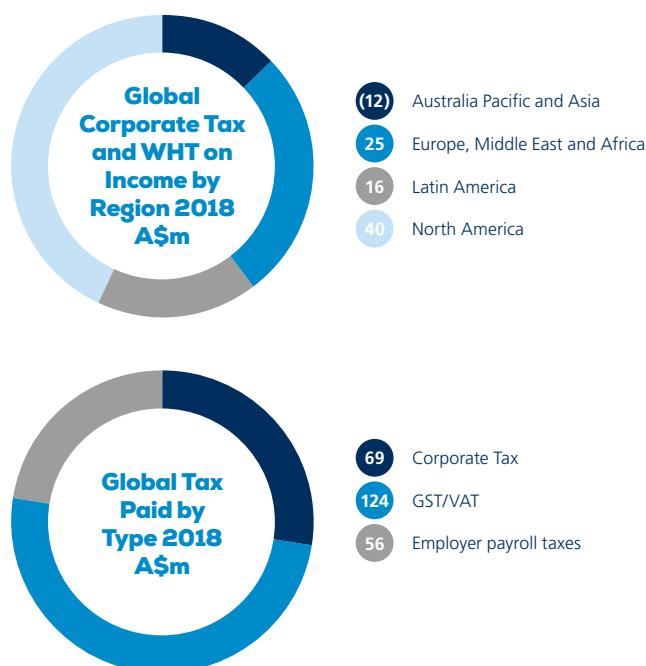
ORICA'S TAX POSITION

Tax contribution summary

In 2018, Orica paid \$69 million (2017 \$189 million) globally in corporate income taxes and \$56 million (2017 \$48 million) globally in payroll taxes. Orica collected and remitted \$124 million (2017 \$120 million) globally in GST/VAT.

The charts show 2018 corporate income tax paid/(refunded) in each region (including withholding tax and trade taxes), and an analysis of total tax paid by type.

In Australia, Orica received corporate income tax refunds of \$42 million relating to tax on prior years and resolution of a tax dispute with the Australian Taxation Office (Orica paid tax in 2017 of \$91 million). Orica also paid \$19 million (2017 \$17 million) in payroll tax and \$2 million (2017 \$2 million) in fringe benefits tax. Orica collected and remitted \$43 million (2017 \$48 million) in GST and \$105 million (2017 \$92 million) in 'pay as you go' withholding taxes.



A reconciliation of accounting profit to income tax payable

	Consolidated 2018 A\$m	Consolidated 2017 A\$m
Before individually material items:		
Accounting profit/(loss) before tax	496.8	563.4
Prima facie income tax expense/(benefit) calculated at 30% on accounting profit	149.0	169.0
Material non-temporary differences		
variation in tax rates of foreign controlled entities	(16.3)	(38.6)
tax under provided in prior years	2.0	8.0
de-recognition of booked tax losses	3.5	4.0
taxable/(non taxable) gains on disposal of assets	(3.2)	12.3
other foreign deductions	(3.7)	(23.0)
non creditable withholding taxes	11.2	13.8
non allowable interest deductions	11.3	14.9
non allowable share based payments	4.4	3.0
utilisation of unbooked prior year tax losses	(8.0)	(6.4)
sundry items	7.8	7.0
Income tax expense/(benefit) before individually material items	158.0	164.0
Individually material items:		
Individually material items before tax	(375.3)	–
Prima facie income tax expense/(benefit) calculated at 30% on individually material items	(112.6)	–
Material non-temporary differences		
variation in tax rates of foreign controlled entities	2.1	–
impairment of Minova business	60.6	–
write down of US deferred tax assets	47.9	–
Income tax expense/(benefit) on individually material items	(2.0)	–
Income tax expense/(benefit)	156.0	164.0
Material temporary differences		
deferred tax	(6.3)	(26.9)
write down of US deferred tax assets	(47.9)	–
Tax payments more/(less) than tax charges	(18.6)	14.2
Tax payments/(refunds) on matters in dispute with tax authorities	(13.9)	37.8
Income tax paid per the statement of cash flows	69.3	189.1

Effective tax rate for Australian and global operations

	Notes	Consolidated 2018	Consolidated 2017
Before individually material items:			
Australia	1	39.9%	34.5%
Global operations (including Australia)		31.8%	29.1%

1. The tax rate is the percentage of income tax expense to accounting profit/loss before tax (before individually material items) adjusted to exclude exempt dividend income.

International related party dealings

Orica prices its international related party dealings to reflect the substance in its operations in accordance with the 'arm's length principle' as defined in the Organisation for Economic Co-operation and Development (OECD) guidelines and in accordance with the laws in both Australia and the countries in which it operates.

Orica has transfer pricing procedures which govern the pricing of all international related party dealings. These procedures require all international related party dealings to be priced in accordance with the arm's length standard. Orica maintains contemporaneous records to support the pricing of its international related party dealings and benchmarks and documents the outcome of its material dealings on an annual basis.

The material international related party dealings impacting Orica's Australian taxable income may be summarised as follows:

- The purchase of raw materials and finished products from related parties in Singapore, Indonesia and China. The products purchased are ammonia, caustic soda, gas, bulk explosives and initiating systems.

- The sale of raw materials and finished products to related parties in Peru, Singapore, Papua New Guinea, Russia, Panama and New Zealand. The products sold include bulk explosives, packaged explosives, and initiating systems.
- The provision and receipt of services from entities resident in Singapore, Chile, the Philippines, Germany, the United States, Canada and South Africa. The nature of the services include general management, information technology, sales and marketing and logistics.
- The use of intellectual property held by a related party in Singapore. The nature of the intellectual property includes technical knowhow related to the manufacture of Orica's products and the Orica name and trademarks, and
- The provision of contract research and development activities for a related party in Singapore.

Orica has a treasury function based in Melbourne which provides loans and accepts deposits from in excess of 40 group companies at market interest rates. The material transactions are with related parties in Germany, Indonesia, Russia and Mexico. It also has a subsidiary in Singapore which acts as the Group's captive insurer.

Australian Tax Return Data

	Notes	2017 A\$m	2016 A\$m
Total income	1	1,999	2,629
Taxable income	2	108	95
@ Tax Rate	3	30%	30%
Tax liability		32	29
Offset reductions	4	(26)	(23)
Tax payable		6	6

1. Total Australian income (includes sales, dividends, interest income etc.) before all expenses (for example, Interest, employee costs, depreciation etc.).

2. Taxable income after allowing for all deductible expenses and tax exempt income.

3. Australian Statutory tax rate.

4. Offset reductions of \$26 million (2016 \$23 million) relating to franking credits, foreign income tax credits and research and development.

GLOBAL REPORTING INITIATIVE (GRI) INDEX

This report contains standard disclosures guided by the Global Reporting Initiative (GRI) Sustainability Reporting G4 Guidelines. For additional information refer to the 2018 Orica Annual Report at www.orica.com

GENERAL DISCLOSURES

GRI Standard Number	Disclosure Title	Cross-Reference/Direct Answer
Organisational profile		
102-1	Name of the organisation	Pg 1–4
102-2	Activities, brands, products, and services	Pg 1–4
102-3	Location of headquarters	Pg 1–4
102-4	Location of operations	Pg 1–4
102-5	Ownership and legal form	Pg 1–4
102-6	Markets served	Pg 1–4
102-7	Scale of the organisation	Pg 1–4
102-8	Information on employees and other workers	Pg 39
102-12	External initiatives	Pg 23
102-13	Membership of associations	Pg 31
Strategy		
102-14	Statement from senior decision-maker	Pg 5
102-15	Key impacts, risks, and opportunities	Pg 6
Ethics and integrity		
102-16	Values, principles, standards, and norms of behaviour	Pg 4
102-17	Mechanisms for advice and concerns about ethics	Pg 34

GLOBAL REPORTING INITIATIVE (GRI) INDEX

GENERAL DISCLOSURES *continued*

GRI Standard Number	Disclosure Title	Cross-Reference/Direct Answer
Governance		
102-18	Governance structure	See Orica 2018 Annual Report at www.orica.com
102-19	Delegating authority	See Orica 2018 Annual Report at www.orica.com
102-20	Executive-level responsibility for economic, environmental, and social topics	See Orica 2018 Annual Report at www.orica.com
102-21	Consulting stakeholders on economic, environmental, and social topics	See Orica 2018 Annual Report at www.orica.com
102-22	Composition of the highest governance body and its committees	See Orica 2018 Annual Report at www.orica.com
102-23	Chair of the highest governance body	See Orica 2018 Annual Report at www.orica.com
102-24	Nominating and selecting the highest governance body	See Orica 2018 Annual Report at www.orica.com
102-25	Conflicts of interest	See Orica 2018 Annual Report at www.orica.com
102-26	Role of highest governance body in setting purpose, values, and strategy	See Orica 2018 Annual Report at www.orica.com
102-27	Collective knowledge of the highest governance body	See Orica 2018 Annual Report at www.orica.com
102-28	Evaluating the highest governance body's performance	See Orica 2018 Annual Report at www.orica.com
102-29	Identifying and managing economic, environmental, and social impacts	See Orica 2018 Annual Report at www.orica.com
102-30	Effectiveness of risk management processes	See Orica 2018 Annual Report at www.orica.com
102-31	Review of economic, environmental, and social topics	See Orica 2018 Annual Report at www.orica.com
102-32	Highest governance body's role in sustainability reporting	See Orica 2018 Annual Report at www.orica.com
102-33	Communicating critical concerns	See Orica 2018 Annual Report at www.orica.com
102-34	Nature and total number of critical concerns	See Orica 2018 Annual Report at www.orica.com
102-35	Remuneration policies	See Orica 2018 Annual Report at www.orica.com
102-36	Process for determining remuneration	See Orica 2018 Annual Report at www.orica.com
102-37	Stakeholders' involvement in remuneration	See Orica 2018 Annual Report at www.orica.com
102-38	Annual total compensation ratio	See Orica 2018 Annual Report at www.orica.com
102-39	Percentage increase in annual total compensation ratio	See Orica 2018 Annual Report at www.orica.com

GENERAL DISCLOSURES *continued*

GRI Standard Number	Disclosure Title	Cross-Reference/Direct Answer
Stakeholder engagement		
102-40	List of stakeholder groups	Pg 48
102-41	Collective bargaining agreements	Pg 36
102-42	Identifying and selecting stakeholders	Pg 23–24
102-43	Approach to stakeholder engagement	Pg 23–24
102-44	Key topics and concerns raised	Pg 23–24
Reporting practice		
102-45	Entities included in the consolidated financial statements	Pg 3
102-46	Defining report content and topic Boundaries	Pg 6
102-47	List of material topics	Pg 6
102-49	Changes in reporting	Pg 3
102-50	Reporting period	Pg 3
102-51	Date of most recent report	Pg 3
102-52	Reporting cycle	Pg 3
102-54	Claims of reporting in accordance with the GRI Standards	Pg 3
102-55	GRI content index	Pg 44
Management approach		
103-1	Explanation of the material topic and its Boundary	Pg 6
Economic		
Economic performance		
201-2	Financial implications and other risks and opportunities due to climate change	Pg 24
Anti-corruption		
205-1	Operations assessed for risks related to corruption	Pg 32–35
205-2	Communication and training about anti-corruption policies and procedures	Pg 32–35
205-3	Confirmed incidents of corruption and actions taken	Pg 32–35
Environment		
Materials		
301-1	Materials used by weight or volume	Pg 18–22
301-2	Recycled input materials used	Pg 18–22
301-3	Reclaimed products and their packaging materials	Pg 18–22
Energy		
302-1	Energy consumption within the organisation	Pg 21
302-4	Reduction of energy consumption	Pg 21

GLOBAL REPORTING INITIATIVE (GRI) INDEX

GENERAL DISCLOSURES *continued*

GRI Standard Number	Disclosure Title	Cross-Reference/Direct Answer
Environment <i>continued</i>		
Water		
303-1	Water withdrawal by source	Pg 20
303-3	Water recycled and reused	Pg 20
Emissions		
305-1	Direct (Scope 1) GHG emissions	Pg 26–32
305-2	Energy indirect (Scope 2) GHG emissions	Pg 26–32
305-3	Other indirect (Scope 3) GHG emissions	Pg 26–32
305-4	GHG emissions intensity	Pg 26–32
305-5	Reduction of GHG emissions	Pg 26–32
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Pg 31
Effluents and waste		
306-1	Water discharge by quality and destination	Pg 21
306-2	Waste by type and disposal method	Pg 21
Environmental compliance		
307-1	Non-compliance with environmental laws and regulations	Pg 19–22
Society		
Occupational health and safety		
403-1	Occupational health and safety management system	Pg 10–13
403-2	Hazard identification, risk assessment, and incident investigation	Pg 10–13
403-9	Work-related injuries	Pg 10–13
403-10	Work-related ill health	Pg 10–13
Diversity and equal opportunity		
405-1	Diversity of governance bodies and employees	Pg 36–39
405-2	Ratio of basic salary and remuneration of women to men	Pg 36–39
Public policy		
415-1	Political contributions	Nil

OUR STAKEHOLDERS

Orica understands that effective engagement and communication are fundamental to gaining the trust and support of our key stakeholders. The company seeks to tailor engagement to each stakeholder group. A summary of key issues raised by, and responded to, those stakeholder groups is listed below.

Stakeholder	Concerns and interests	Engagement mechanisms used
Employees and contractors	Career and development opportunities, performance management and senior leadership.	Direct engagement at company work locations; intranet; regular internal written or face-to-face communications about changes that could impact employees; leadership forums; leadership development programs; internal workshops and conferences.
Customers	Performance of product, cost, reliability of supply, ability to add value to customer performance, sustainability impacts of products and services.	Direct engagement, including commercial and contract negotiations and extensive interactions as part of Orica's customer engagement initiative; the Mining Services Global Feedback Database (Salesforce), a formal mechanism for capturing compliments and complaints relating to products and services; customer technical workshops; presentations at industry events, forums and conferences.
Suppliers and business partners	Performance of product, cost, reliability of supply, sustainability impacts of products and services.	Direct engagement; supplier engagement processes; supplier questionnaires; regular meetings with joint venture partners.
Shareholders and the investment community	Company performance, delivery on company strategy and governance.	Annual General Meeting; half-year and end-of-year results presentations and webcasts; investor road show meetings; direct shareholders engagement, including site visits, calls and meetings, with feedback to the board where appropriate. Sustainability performance is disclosed on the website and the annual Sustainability Report. Orica reports its performance to the Dow Jones Sustainability Index (materials sector), FTSE4Good Index and the Carbon Disclosure Project. Orica also responds to a number of investor and analyst queries, including ESG analysts.
Community and local residents	Employment opportunities, socio-economic contribution to local communities, local operational impacts such as noise, odour, emissions and contamination.	Site-specific stakeholder plans and programs for community contact and information sharing; direct engagement with individuals and key opinion leaders; community investment and partnership programs; posting of employment opportunities on the website; systems to register, investigate and promptly respond to community complaints; community meetings, site visits and tours by local community members including local school groups.



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