



# Harnessing Strengths

Sustainability Report 2015

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# Harnessing Strengths

*The Keppel Group harnesses and synergises the distinctive strengths of its multi businesses to capture opportunities arising from the global demand for energy, sustainable urbanisation and connectivity. Our strong culture and enduring values drive our people to strive for execution excellence and operational efficiency. With financial discipline and sharp focus on optimising returns, we will seize opportunities as well as innovate solutions and services to build a long-term and competitive position and capture sustainable returns for our stakeholders.*

## Vision

A global company at the forefront of our chosen industries, shaping the future for the benefit of all our stakeholders – Sustaining Growth, Empowering Lives and Nurturing Communities.

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## Mission

Guided by our operating principles and core values, we will execute our businesses in Offshore & Marine, Property, Infrastructure and Investments profitably, safely and responsibly.

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## Operating Principles

- 1 Best value propositions to customers.
  - 2 Tapping and developing best talents from our global workforce.
  - 3 Cultivating a spirit of innovation and enterprise.
  - 4 Executing our projects well.
  - 5 Being financially disciplined to earn best risk-adjusted returns.
  - 6 Clarity of focus and operating within our core competence.
  - 7 Being prepared for the future.
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# Letter to Our Stakeholders

Dear Stakeholders,

Keppel places sustainability at the heart of our strategy and operations. Sustainability rose to the forefront of the international agenda in 2015, when world leaders adopted the United Nations' Sustainable Development Goals in September, and the first universal agreement to cut greenhouse gas emissions was reached at the Paris Climate Conference in December.

Keppel shares the international community's commitment to work towards a more sustainable future.

We support initiatives to reinforce sustainability standards, and welcome plans by the Singapore Exchange to introduce sustainability reporting on a "comply or explain" basis. Keppel has been reporting to stakeholders on our environmental, social and governance performance since 2011. We will continue to communicate our sustainability efforts and refine our reporting approach in accordance with global standards.

The Keppel Group harnesses the distinctive strengths of our different businesses to provide solutions for sustainable urbanisation. To cite a few examples, in Offshore & Marine, we are strengthening our capabilities to meet the growing global demand for Liquefied Natural Gas, a clean-burning, low-carbon fuel. Our Property Division develops high quality green homes and offices, while our Infrastructure Division develops sustainable infrastructure such as Waste-to-Energy plants and green data centres. Keppel is also leading the Singapore Consortium in the development of the Sino-Singapore Tianjin Eco-City, a model for sustainable urbanisation in China.

In 2015, we established a Task Force on Climate Change, comprising representatives of our different business units, to assess the risks,

mitigation strategies and also business opportunities associated with climate change. Keppel aims to achieve a 16% improvement in our greenhouse gas emissions from 2020 business-as-usual levels, and we have in place a robust Group-wide carbon management strategy to achieve this target. Energy efficiency initiatives implemented across the Group in 2015 are estimated to have saved 501,650 GJ of energy, equivalent to over 16% of the Group's total energy consumption in 2015. This translates to an avoidance of approximately 60,000 tonnes of carbon dioxide emissions.

Keppel Corporation's Board Safety Committee, established in 2006, continues its relentless efforts to build a strong safety culture in the Group. All employees and suppliers are expected to abide by the Keppel Corporation Health, Safety and Environment Policy. Despite our safety focus, sadly, we suffered four fatalities in 2015. We have investigated these incidents thoroughly and rigorously, and instituted measures to prevent recurrence of similar incidents.

To improve sustainability along our value chain, in 2015, we also established a Supply Chain Management Working Committee, whose role is to manage supply chain risks and impacts. A Supplier Code of Conduct is currently being developed, covering areas pertaining to business conduct, environmental management, safety, health and human rights. Our goal is for Keppel's sustainability principles to be integrated across our supply chain.

We are encouraged by the positive external rankings and endorsement of our sustainability journey. In 2015, Keppel Corporation was once again recognised in the Dow Jones Sustainability Index and the MSCI Global Sustainability Index as one of the most sustainable companies in our industry. We also earned a place in the prestigious Global 100



Most Sustainable Corporations in the World 2016, ranking at the top of the Industrial Conglomerates category. The Company was also conferred the Strategy and Sustainability Management Award at the Sustainable Business Awards Singapore.

As a responsible corporate citizen, Keppel will continue to engage with, listen to and learn from our diverse stakeholders. Our sixth Sustainability Report charts our performance in 2015 and reflects our unwavering commitment to build a lasting, positive legacy.

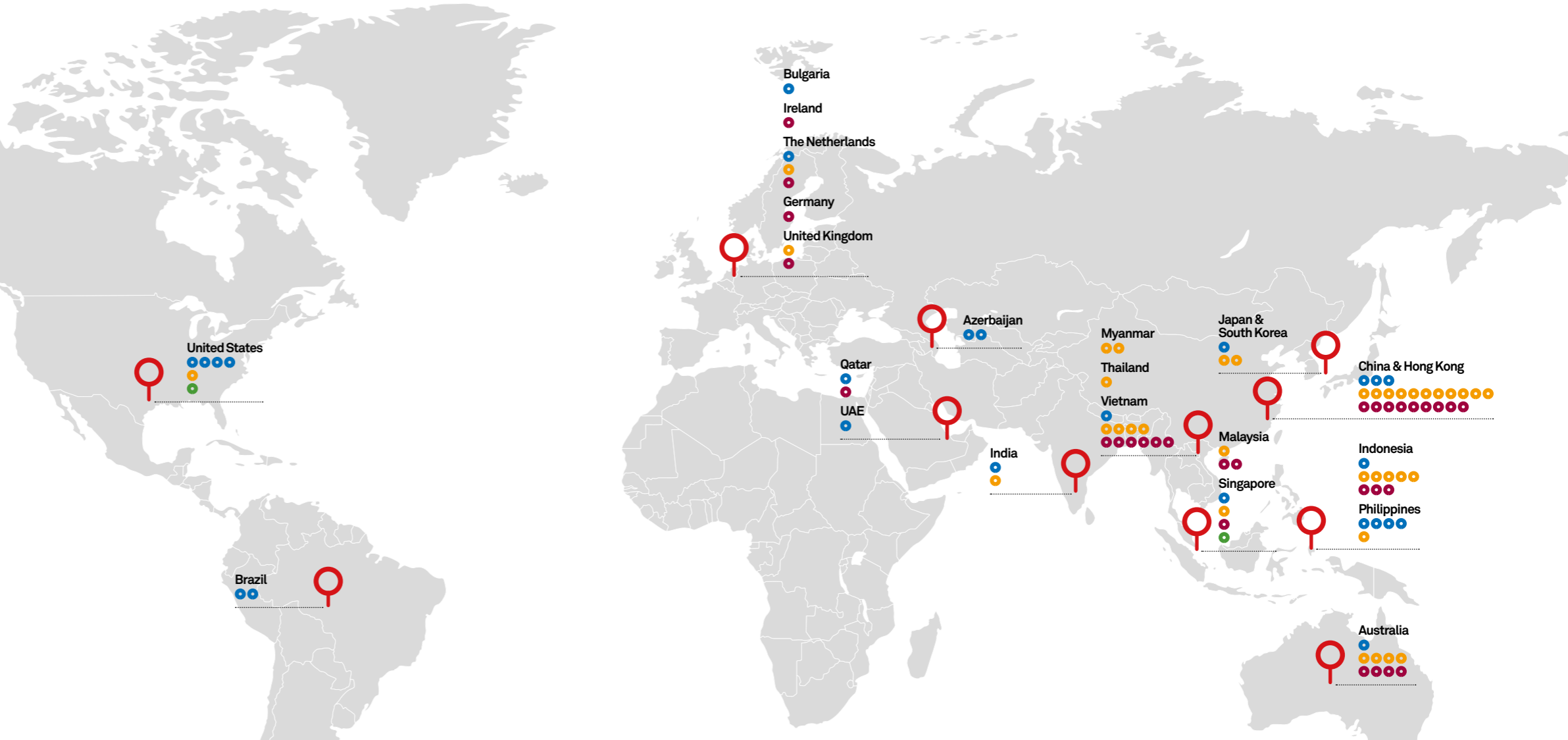
**Loh Chin Hua**  
Chief Executive Officer  
6 June 2016

# Corporate Profile

Keppel Corporation is a Singapore-grown conglomerate with key businesses in Offshore & Marine, Property, Infrastructure and Investments. With a global footprint in close to 30 countries, we create sustainable growth and value for our stakeholders by executing our businesses profitably, safely and responsibly.

We will leverage and enhance strengths intrinsic in our different businesses, promote collaboration and harness human, knowledge and financial capital across the Group to forge ahead on the path to sustainable growth for Keppel.

- Offshore & Marine ●
- Property ●
- Infrastructure ●
- Investments ●



### Offshore & Marine

Keppel Offshore & Marine is a global leader in offshore rig design, construction and repair, ship repair and conversion, and specialised shipbuilding.

It integrates and harnesses the experience and expertise of 20 yards and offices worldwide to be near customers and markets.

The company's Offshore Division is helmed by Keppel FELS, a leading designer, builder and repairer of high-performance mobile offshore rigs. Its portfolio of proprietary designs and floating production solutions meets a broad spectrum of operating requirements, including deep waters and harsh environments.

The Marine Division is represented by Keppel Shipyard, the trusted industry name for the repair, conversion and upgrading of a diverse range of vessels, while the Specialised Shipbuilding Division is led by Keppel Singmarine, which has a track record of some 400 newbuildings of diverse types and levels of sophistication.

### Property

As one of Asia's premier property companies, Keppel Land is committed to create live-work-play environments of enduring value for the community with its hallmark excellence.

It focuses on a two-pronged strategy of property development for sale and property fund management.

It is recognised for its sterling portfolio of award-winning residential developments and investment-grade commercial properties.

With a pipeline of over 70,000 homes in Singapore and overseas as well as an increasing commercial presence in the region, Keppel Land is well-positioned to meet the growing demands for quality residential, office and mixed-use developments.

The company is geographically diversified in Asia, with Singapore and China as its core markets, as well as Indonesia and Vietnam as its growth markets.

### Infrastructure

The Infrastructure Division is poised to grow further with its robust portfolio of power and gas, environmental engineering, logistics and data centres businesses.

Keppel Infrastructure drives the Group's strategy to invest in, own and operate competitive energy and infrastructure solutions and services. Through its subsidiary, Keppel Seghers, its advanced technology solutions addresses a wide spectrum of environmental issues such as solid waste, wastewater, drinking and process water, biosolids and sludge.

Keppel Telecommunications & Transportation (Keppel T&T) is a leading service provider in the Asia-Pacific region and Europe with businesses in Logistics and Data Centres. Its data centre facilities provide state-of-the-art data centre colocation and business contingency services. It is also one of the leading third party logistics companies in the Asia Pacific region.

### Investments

The Investments Division is Keppel's fourth business vertical, which presently comprises mainly the Group's investments in k1 Ventures, M1 Limited and KrisEnergy.

The segment as part of the Investments Division. Through Keppel Capital, we aim to grow our assets under management, strengthen the Group's capital-recycling platform, as well as expand its capital base with co-investors.

In January 2016, Keppel Corporation announced a significant restructuring exercise to consolidate its interests in Alpha Investment Partners and the managers of Keppel Infrastructure Trust, Keppel DC REIT and Keppel REIT under Keppel Capital, and report them under a new segment as part of the Investments Division. This restructuring will bring greater focus and scale to our asset management business, as we grow the Investments Division into a steady pillar of recurring income for the Group.

# Group Structure

G4-17

## Keppel Corporation Limited

### Offshore & Marine

- Offshore rig design, construction, repair and upgrading
- Ship conversion and repair
- Specialised shipbuilding

#### KEPPEL OFFSHORE & MARINE LTD

100%

Keppel FELS Limited 100%

Keppel Shipyard Limited 100%

Keppel Singmarine Pte Ltd 100%

Keppel Nantong Shipyard Company Limited China 100%

Offshore Technology Development Pte Ltd 100%

Deepwater Technology Group Pte Ltd 100%

Marine Technology Development Pte Ltd 100%

Keppel AmFELS LLC United States 100%

Keppel Verolme BV The Netherlands 100%

Keppel FELS Brasil SA Brazil 100%

Keppel Singmarine Brasil Ltda Brazil 100%

Keppel Philippines Marine Inc The Philippines 98%

Keppel Subic Shipyard Inc The Philippines 86%

Caspian Shipyard Company Limited Azerbaijan 51%

Arab Heavy Industries PJSC United Arab Emirates 33%

Nakilat-Keppel Offshore &amp; Marine Ltd Qatar 20%

Dyna-Mac Holdings Limited<sup>5</sup> 24%

### Property

- Property development
- Property fund management
- Property trusts

#### KEPPEL LAND LIMITED

99%

Keppel Land International Limited Southeast Asia and India 100%

Keppel Land China China 100%

Alpha Investment Partners Ltd 100%

Keppel REIT<sup>5</sup> 46%

#### KEPPEL BAY PTE LTD<sup>2</sup>

100%

### Infrastructure

- Gas-to-Power
- Waste-to-Energy
- X-to-Energy
- Logistics and data centres

#### KEPPEL INFRASTRUCTURE HOLDINGS PTE LTD

100%

##### Gas-to-Power

Keppel Gas Pte Ltd 100%

Keppel Electric Pte Ltd 100%

Keppel Merlimau Cogen Pte Ltd<sup>6</sup> 49%

##### Waste-to-Energy

Keppel Seghers Engineering Singapore Pte Ltd 100%

##### X-to-Energy

Keppel DHCS Pte Ltd 100%

Keppel Infrastructure Trust<sup>5</sup> 18%

#### KEPPEL TELECOMMUNICATIONS & TRANSPORTATION LTD<sup>5</sup>

80%

##### Logistics & Data Centres

Keppel Logistics Pte Ltd 100%

Keppel Data Centres Holding Pte Ltd 100%

Keppel Logistics (Foshan) Pte Ltd China 70%

Keppel DC REIT<sup>4&5</sup> 35%

### Investments<sup>7</sup>

- Investments
- Telco

#### K1 VENTURES LIMITED<sup>5</sup>

36%

KRISENERGY LTD<sup>5</sup> Cayman Islands 40%M1 LIMITED<sup>3&5</sup> 19%

1 Owned by a Singapore Consortium, which is in turn 90%-owned by the Keppel Group.

2 Owned by Keppel Corporation Limited (70%) and Keppel Land Limited (30%).

3 Owned by Keppel Telecommunications & Transportation Ltd, an 80%-owned subsidiary of Keppel Corporation.

4 Owned by Keppel Telecommunications & Transportation (30%) and Keppel Land Limited (5%).

5 Public listed company.

6 Owned by Keppel Infrastructure Holdings Pte Ltd (49%) and Keppel Infrastructure Trust (51%).

7 Keppel Corporation has announced its plans to consolidate the Group's asset management businesses under Keppel Capital Holdings Pte Ltd in the Investments Division by 2H 2016.

The complete list of subsidiaries and significant associated companies is available at Keppel Corporation's website [www.keppcorp.com](http://www.keppcorp.com).

## GROUP CORPORATE SERVICES

## SINO-SINGAPORE TIANJIN ECO-CITY INVESTMENT AND DEVELOPMENT CO., LTD<sup>1</sup>

China

50%

# Our Sustainability Strategy

Keppel embraces sustainability not only as a guiding principle, but on strategic and operational levels.

Our Vision, Mission, Core Values and Operating Principles define our purpose, strategy and values, and how we measure success.

Our Sustainability Framework articulates our commitment to deliver value to all our stakeholders through Sustaining Growth in our businesses, Empowering Lives of people and Nurturing Communities wherever we operate. The Framework is underpinned by our Employee Code of Conduct, which establishes a clear tone at the top with regard to employees' business

and ethical conduct, as well as Group Level documents including our Anti-Bribery and Corruption Statement, Health, Safety and Environment Policy, Corporate Statement on Human Rights as well as sustainability performance targets.

The Framework guides our investments in our host countries and local communities. As part of our operating philosophy, we are committed to making lasting contributions to the communities in which we operate.




### Tracking Trends

We track external trends to determine the issues most relevant for our company and

those where we can make a positive contribution to society at large.

We take reference from a variety of sources, including the United Nations Global Compact, Organisation for Economic Co-operation and Development, World Business Council for Sustainable Development, United Nations Guiding Principles on Business and Human Rights, Global Reporting Initiative and Singapore Exchange Guide to Sustainability Reporting. Our work involves tracking topics of concern to governments, regulatory bodies, academia, non-governmental organisations and our other stakeholders.

## Sustainability Framework

Sustaining Growth	Empowering Lives	Nurturing Communities
		
<p>Our commitment to business excellence is driven by our unwavering focus on strong corporate governance and prudent risk management.</p> <p>Resource efficiency is our responsibility and makes good business sense.</p> <p>Innovation and delivering quality products and services sharpen our competitive edge.</p>	<p>People are the cornerstone of our businesses.</p> <p>As an employer of choice, we are committed to grow and nurture our talent pool through continuous training and development to help our people reach their full potential.</p> <p>We want to instil a culture of safety so that everyone who comes to work goes home safely.</p>	<p>As a global citizen, Keppel believes that as communities thrive, we thrive.</p> <p>We engage and nurture communities wherever we are, with the aim of achieving a sustainable future together.</p> <p>As leaders in our businesses, we support industry initiatives and encourage open dialogue to promote growth.</p>

# Managing Sustainability

Sustainability issues are managed and communicated at all levels of the Group.

The Group Sustainability Steering Committee sets our sustainability strategy, and provides leadership in determining priorities and operating principles.

Comprising senior management from across the Keppel Group, the Steering Committee is chaired by Mr Loh Chin Hua, Chief Executive Officer (CEO) and an Executive Director of Keppel Corporation.

To ensure consistent development of the Group's strategy, high-level matters pertaining to sustainability issues are addressed at the Group Sustainability Steering Committee meetings.

Supporting the Steering Committee is the Working Committee, chaired by Mr Ho Tong Yen, General Manager of Group Corporate Communications, Keppel Corporation.

The Working Committee, comprising eight functional committees, oversees, executes and reports on the Group's strategic efforts across the material aspects of Economic Sustainability, Corporate Governance, Risk Management, Environmental Performance, Product Excellence, Safety & Health, Labour Practices & Human Rights and Supply Chain Management.

The Steering and Working Committees are supported by the Secretariat, sited in Group Corporate Communications, as well as by Group Internal Audit. The Secretariat facilitates reporting while Group Internal Audit advises on performance issues.

To enhance the data collection process and improve data integrity, the Group uses a web-hosted integrated sustainability reporting platform.

## Keppel Group's Sustainability Management Structure



Mr Loh also chairs the Keppel Group Task Force on Climate Change, comprising heads of the respective business units and supported by working-level representatives across the Keppel Group. The Task Force sets out to assess business opportunities, risks and mitigation strategies associated with climate change.

The Group's Risk & Compliance Division, Enterprise Risk Management and Regulatory Compliance Committee are led by Keppel Corporation's Director of Group Risk and Compliance. The teams work with all business units and departments to identify, assess, mitigate and monitor significant risk and compliance matters across the Group, and strengthen Keppel's capabilities in these areas.

Health, Safety and Environment (HSE) teams across the various business units play an active part in supporting the businesses to comply with HSE legislation, Group HSE policies and standards, implement HSE management programmes, conduct HSE audits, investigate incidents and analyse trends to ensure a robust HSE management system is maintained. In addition, they conduct activities to enhance HSE awareness and culture within the Group.

Keppel Corporation appointed a dedicated General Manager of HSE in January 2015 to lead the coordination of safety efforts across the Group.

Keppel's efforts to improve energy efficiency are championed by the Energy Efficiency Committee, which is chaired by Director/Advisor of Keppel Offshore & Marine Technology Centre and comprises representatives from the respective business units, many of whom are certified energy managers.

## The Keppel Core Values

### Can Do



**Passion and Vigour**

### Integrity



**Act with Ethics and Honesty**

### Customer Focus



**Forge Value-Added Partnerships**

### People-Centredness



**Value and Nurture People**

### Safety



**Zero Accident, Zero Loss**

### Agility & Innovation



**Adapt to Change and Innovate for Growth**

### Collective Strength



**Global Mindset and Teamwork**

### Accountability



**Responsible to all Stakeholders**



# Materiality

G4-18 / G4-19 / G4-20 / G4-21



**01** Keppel involves internal and external stakeholders in its materiality assessments and stakeholder consultation exercises.

01

## Materiality

Materiality assessments are important components of Keppel's sustainability strategy and reporting. Keppel Corporation commissioned an independent sustainability consultancy to guide its assessments and provide a neutral perspective.

The assessments were based on the AccountAbility AA1000 Principles of inclusivity and materiality, as well as the Global Reporting Initiative (GRI) Principles for Defining Report Content – stakeholder inclusiveness, sustainability context, materiality and completeness. Materiality with respect to sustainability reporting, as defined by GRI guidelines, includes topics and indicators that reflect the organisation's significant economic, environmental, and social impacts, or would substantively influence the assessments and decisions of stakeholders.

## Process

The company embarked on a materiality assessment involving internal stakeholders in 2010 to prioritise the social, economic, and environmental challenges, opportunities and issues of particular concern to the company.

This was followed by a stakeholder consultation project which took place over 2013 and 2014 involving respondents from six stakeholder categories: customers, employees, investors and analysts, government, suppliers and community groups. The respondents agreed that the focus areas of economic performance, corporate governance, environmental performance, product excellence, safety and health, labour practices and community development covered in the company's reports are material. In addition, the stakeholder consultation project assisted in assessing Keppel's corporate reputation and leadership opportunities in the area of sustainability.

Keppel Corporation's material issues were reassessed and updated in a subsequent study spanning 2014 and 2015. This most recent study encompassed an online survey and workshops to rank Keppel's material issues. Workshops for senior management of Keppel Offshore & Marine and Keppel Infrastructure were held, and the findings from the workshops were analysed together with materiality analyses of Keppel Land and Keppel Telecommunications & Transportation to produce a consolidated review of issues material to the company. The analysis combined an internal review of our businesses with a review of external stakeholder issues and long-term global shifts, such as urbanisation and climate change, which could impact our businesses.

A key output of the research conducted is the sustainability materiality matrix detailed on page 9.

Materiality

G4-18 / G4-19 / G4-20 / G4-21 / G4-22 / G4-23

The matrix plots significant issues related to sustainability along two axes and illustrates the degree of importance both internal and external stakeholders accord to each issue and the level of impact these issues may have on the company.

**Findings**

The results of the latest materiality analysis validate findings of the previous study. Issues that have been identified as material continue to remain ‘critical’ and of ‘high’ importance to Keppel and our stakeholders.

These are: economic performance, corporate governance, environmental performance, product excellence, safety and health, labour practices and community development.

Within these focus areas, there is an increased understanding of aspects such as anti-corruption and the impact of our human

resource practices on local economies as salient issues for the Group.

**Report Boundary**

As a guide, this report covers global operations and all subsidiaries for which the Group has management control, unless otherwise indicated. The reporting boundary for financial data is the same as that of Keppel Corporation’s Report to Shareholders 2015. The exact reporting boundaries for Environmental Performance, Product Excellence, Safety & Health and Labour Practices & Human Rights differ. Business entities included within the respective boundaries contribute materially to overall Group performance data.

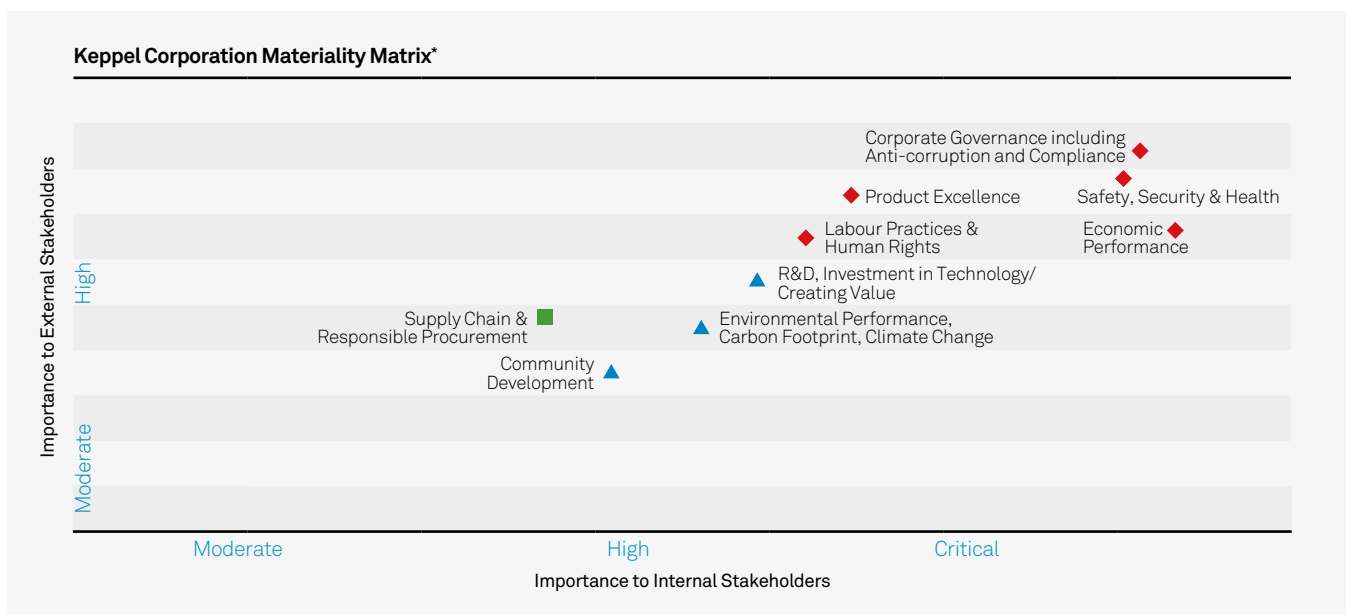
The Company has 249 significant subsidiaries and associated companies as at 31 December 2015. Information pertaining to them is published on pages 198

to 208 of Keppel Corporation’s Report to Shareholders 2015.

Keppel Land was privatised through a voluntary unconditional cash offer by Keppel Corporation in 2015. The privatisation of Keppel Land fully aligned the interests of the Property Division with the Keppel Group, and provides the Group with a strong pillar for earnings and long-term value creation.

2015 also saw the successful combination of Keppel Infrastructure Trust and CitySpring Infrastructure Trust. During the same year, Keppel Infrastructure injected 51% of Keppel Merlimau Cogen, which owns the 1,300-MW power plant on Jurong Island, into the enlarged Keppel Infrastructure Trust, a public listed company, as part of its efforts to unlock value from matured assets in its portfolio.

There are no restatements of information in this report.



◆ Aspects of critical importance ▲ Aspects of high importance ■ Rating determined by internal stakeholder exercise only

\* All of our material issues occur within Keppel Corporation. Community development is also material outside our company boundary and of particular relevance to our Local Communities stakeholder group.

# Management Systems

## Management Systems

### Offshore & Marine

#### Keppel FELS

ISO 9001 Quality Management System	Since 1994
Singapore Quality Class Certification (SQC)	Since 2002
People Developer Singapore	Since 2003
Singapore Innovation Class Certification (I-Class)	Since 2004
International Sustainability Rating System 7 <sup>th</sup> Edition Level 5; 8 <sup>th</sup> Edition Level 7	Since 2008; 2015
SS 506 Singapore Standard for Occupational Safety & Health Management System	Since 2014

#### Keppel Shipyard

ISO 9001 Quality Management System	Since 1996
Singapore Quality Class Certification (SQC)	Since 1999
ISO 14001 Environmental Management System	Since 2004
SS 506 Singapore Standard for Occupational Safety & Health Management System (Compliance)	Since 2010

#### Keppel Singmarine

ISO 9001 Quality Management System	Since 1997
OHSAS 18001 Occupational Health & Safety Management System	Since 2010
SS 506 Singapore Standard for Occupational Safety & Health Management System (Compliance)	Since 2010

#### Keppel AmFELS

ISO 9001 Quality Management System	Since 2015
ISO 14001 Environmental Management System	Since 2015
OHSAS 18001 Occupational Health & Safety Management System	Since 2015

#### BrasFELS

ISO 9001 Quality Management System	Since 2001
ISO 14001 Environmental Management System	Since 2006
OHSAS 18001 Occupational Health & Safety Management System	Since 2006

#### Keppel Verolme

ISO 9001 Quality Management System	Since 1993
ISO 14001 Environmental Management System	Since 2011
OHSAS 18001 Occupational Health & Safety Management System	Since 2011

#### Nakilat-Keppel Offshore & Marine

ISO 14001 Environmental Management System	Since 2013
OHSAS 18001 Occupational Health & Safety Management System	Since 2013

#### Keppel Nantong Shipyard

OHSAS 18001 Occupational Health & Safety Management System	Since 2013
Work Safety Standardisation Certificate by State Administration of Work Safety	Since 2014

#### Keppel Batangas Shipyard

ISO 9001 Quality Management System	Since 2015
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#### Baku Shipyard

ISO 9001 Quality Management System	Since 2014
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#### Caspian Shipyard Company

ISO 9001 Quality Management System	Since 2015
ISO 14001 Environmental Management System	Since 2011
OHSAS 18001 Occupational Health & Safety Management System	Since 2011

### Infrastructure

#### Keppel Infrastructure Holdings

ISO 9001 Quality Management System	Since 2014
ISO 14001 Environmental Management System	Since 2014
OHSAS 18001 Occupational Health & Safety Management System	Since 2014

#### Keppel Infrastructure Services

ISO 9001 Quality Management System	Since 2015
ISO 14001 Environmental Management System	Since 2016
OHSAS 18001 Occupational Health & Safety Management System	Since 2016

#### Keppel Seghers

ISO 9001 Quality Management System	Since 2015
ISO 14001 Environmental Management System	Since 2016
OHSAS 18001 Occupational Health & Safety Management System	Since 2016

#### Keppel Seghers Engineering Singapore

ISO 9001 Quality Management System	Since 1999
ISO 14001 Environmental Management System	Since 2006
OHSAS 18001 Occupational Health & Safety Management System	Since 2007

## Management Systems

### Domestic Solid Waste Management Centre operated by Keppel Seghers Engineering

ISO 9001 Quality Management System	Since 2012
ISO 14001 Environmental Management System	Since 2012
OHSAS 18001 Occupational Health & Safety Management System	Since 2012

### Keppel Merlimau Cogen

ISO 9001 Quality Management System	Since 2015
ISO 14001 Environmental Management System	Since 2016
ISO 27001 Information Security Management System	Since 2014
OHSAS 18001 Occupational Health & Safety Management System	Since 2016

### Keppel Seghers Belgium N.V.

ISO 9001 Quality Management System	Since 2004
OHSAS 18001 Occupational Health & Safety Management System	Since 2011

### Keppel DHCS

ISO 9001 Quality Management System	Since 2005
ISO 14001 Environmental Management System	Since 2005
OHSAS 18001 Occupational Health & Safety Management System	Since 2005

### Keppel Logistics

ISO 9001 Quality Management System	Since 1993
ISO 13485 Quality Management System for Medical Devices	Since 2009
ISO 14001 Environmental Management System	Since 2002
OHSAS 18001 Occupational Health & Safety Management System	Since 2002
Workplace Safety and Health Council – bizSAFE Star	Since 2009
Secure Trade Partnership for robust security measures in trading operations (STP)	Since 2008
Good Distribution Practice for Medical Devices in Singapore (GDPMDS)	Since 2009
Trade Facilitation & Integrated Risk-based System (TradeFIRST) – Enhanced Band	Since 2011
SS 590 Management of Food Safety based on Hazard Analysis and Critical Control Point (HACCP)	Since 2011

### Keppel Logistics (Foshan)

ISO 9001 Quality Management System	Since 2000
"A Class River Port" certification (By Guangzhou Customs)	Since 2015

### Keppel Data Centres

SS 507 Singapore Standard for Information and communications technology disaster recovery services (Keppel Datahub, Keppel Digihub, Keppel Datahub 2)	Since 2009/ 2011/2015
ISO/IEC 24762 Information and communications technology disaster recovery management standard (Keppel Datahub & Keppel Digihub)	Since 2010/2013
TIA-942 Tier III Telecommunications Infrastructure Standards (Keppel Datahub, Keppel Digihub, Keppel Datahub 2)	Since 2010/ 2013/2015
SS 564 Singapore Standard for National Green Data Centre Management System (Keppel Datahub, Keppel Digihub and Keppel Datahub 2)	Since 2011/2015
Threat Vulnerability Risk Assessment (TVRA) by the Monetary Authority of Singapore (Keppel Digihub)	Since 2012
SS 577:2012 Water Efficiency Management System (WEMS) (Keppel Digihub)	Since 2015
ISO/IEC 9001:2008 – Quality Management System (QMS) (Keppel Digihub)	Since 2015
ISO/IEC 27001:2013 – Information security management systems (ISMS) (Keppel Digihub)	Since 2015
Workplace Safety and Health Council – bizSAFE level 3 (Keppel Datahub, Keppel Digihub and Keppel Datahub 2)	Since 2013/2014
ISO 50001:2011 Energy Management System (Keppel Datahub 2)	Since 2015

### Keppel Logistics (Hong Kong)

ISO 9001 Quality Management System	Since 2000
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### Indo-Trans Keppel Logistics Vietnam

Food Safety Conditions (VSIP 1 DC/Ha Binh Phuong)	Since 2015/2014
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### Property

#### Keppel Land Singapore

ISO 9001 Quality Management System	Since 2014
ISO 14001 Environmental Management System	Since 2008
OHSAS 18001 Occupational Health & Safety Management System	Since 2012

#### Keppel Land China

ISO 9001 Quality Management System	Since 2015
ISO 14001 Environmental Management System	Since 2009
OHSAS 18001 Occupational Health & Safety Management System	Since 2012

#### Keppel Land Indonesia

ISO 14001 Environmental Management System	Since 2013
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#### Keppel Land Vietnam

ISO 14001 Environmental Management System	Since 2009
OHSAS 18001 Occupational Health & Safety Management System	Since 2012

# Awards & Benchmarks

## Sustainability Benchmarks

### Global 100 Most Sustainable Corporations in the World

Keppel Corporation debuted on the Global 100 Most Sustainable Corporations in the World 2016, a list of the world's most sustainable corporations. The rankings by Corporate Knights, issued at the World Economic Forum, were determined by screening publicly-listed companies with a market capitalisation of at least US\$2 billion. Companies were evaluated across 12 key performance indicators that measure the management of resources, employees and finances.



### Sustainable Business Awards Singapore

Keppel Corporation was conferred the Strategy and Sustainability Management Award at the Sustainable Business Awards Singapore and singled out for its commitment to implement its sustainability strategy at the highest level. The awards were organised by Global Initiatives in partnership with PwC Singapore. Keppel was judged on the sustainability of its business practices in benefiting not only the company itself, but also the environment and its stakeholders.



### Dow Jones Sustainability Indices (DJSI)

Keppel Corporation is listed as an index component of the DJSI Asia Pacific Index. The index tracks the performance of the top 20% of the 600 largest Asia Pacific companies in the S&P Global Broad Market Index that lead the field in terms of sustainability. The DJSI, offered cooperatively by RobecoSAM and S&P Dow Jones Indices, is the first global sustainability benchmark and tracks the stock performance of the world's leading companies in terms of economic, environmental and social criteria.



### MSCI Global Sustainability Index

Keppel Corporation is listed as an index component of the MSCI Global Sustainability Index. The index comprises companies with high environmental, social and governance (ESG) ratings relative to their sector peers. The benchmark targets the highest ESG-rated companies making up 50% of the adjusted market capitalisation in each sector of the underlying index.



### Euronext Vigeo World 120 Index

Keppel Corporation is listed as an index component of the Euronext Vigeo World 120 Index. Developed by Euronext, the primary exchange in the Eurozone, and Vigeo, the leading European agency in Corporate Social Responsibility ratings, the Euronext Vigeo World 120 Index is composed of 120 of the highest-ranking listed companies globally in terms of performance in corporate responsibility.

## Corporate Citizenry

### Patron of the Arts Award

Keppel Corporation was conferred the Distinguished Patron of the Arts Award by Singapore's National Arts Council for the eighth consecutive year. The award recognises organisations which have contributed significantly towards the development of the arts.

### Community Chest Award

Keppel Care Foundation was awarded the Corporate Gold Award at the Community Chest Awards in 2015. The Community Chest is the fund-raising and engagement arm of Singapore's National Council of Social Service. The awards acknowledge organisations who champion community giving through partnerships with Community Chest to fund social service programmes for those in need.



## Corporate Governance & Transparency

### Singapore Corporate Awards

Keppel Corporation was awarded Gold, Best Managed Board (Market capitalisation of \$1 billion and above) at the Singapore Corporate Awards, jointly organised by the Institute of Singapore Chartered Accountants, Singapore Institute of Directors (SID) and The Business Times. The awards recognise exemplary corporate governance practices among listed companies in Singapore.

### Securities Investors Association of Singapore (SIAS) Investors' Choice Awards

Keppel Corporation was awarded Runner-up, Singapore, Corporate Governance Award (Big Cap) and Runner-up, Internal Audit Excellence Award, at the SIAS Investors' Choice Awards.

### Governance and Transparency Index (GTI)

Keppel Corporation was ranked third in the annual GTI as one of the best governed and most transparent listed companies in Singapore. The index is jointly launched by The Business Times and the Centre for Governance, Institutions and Organisations (CGIO), National University of Singapore (NUS) Business School. It assesses the financial transparency of companies based on their annual announcements.

### ASEAN Corporate Governance Scorecard

Keppel Corporation was among Singapore's Top 25 listed companies in terms of corporate governance. The scorecard is an initiative of the ASEAN Capital Markets Forum and the Asian Development Bank to create a common tool for assessing the corporate governance of publicly listed companies in the ASEAN countries. Results are based on companies' disclosures on websites and annual reports. The ranking agencies in Singapore are SID and CGIO, NUS Business School.

## Safety & Health

### Workplace Safety & Health Awards

The Keppel Group clinched 35 Workplace Safety & Health (WSH) Awards conferred by the WSH Council and Singapore's Ministry of Manpower in 2015. This is the highest number of WSH awards won by a single organisation in 2015. The annual awards recognise organisations and individuals who have contributed to achieving excellence in workplace safety and health.



## Labour Practices

### Randstad Awards

Keppel Corporation was named the Most Attractive Employer in the Engineering and Construction Sector at the Randstad Awards. Results of the awards, organised by global human resources services company Randstad, are based on the outcome of the world's largest survey on employer branding.

# Performance Overview

## Top Industrial Conglomerate

on Corporate Knights' Global 100 Most Sustainable Corporations in the World 2016.

# \$46m

Invested to improve safety systems and training in 2015.

# 501,650GJ

Of energy savings expected through energy efficiency initiatives implemented in 2015, translating to estimated cost savings of about \$30 million\*.

# 89%

Of employees surveyed are proud to work for Keppel.

### Performance Data

	2013	2014	2015	Interpretation	Page No
<b>Environment (Singapore Operations)</b>					
Direct Energy (GJ)	1,063,660	738,529	738,935	●	39
Indirect Energy (GJ)	1,600,431	1,625,457	1,592,299	●	39
Potable Water Used (m <sup>3</sup> )	1,483,679	1,386,505	1,371,690	●	40
NEWater Used (m <sup>3</sup> )	2,660,445	2,593,781	2,370,696	●	40
Recycled Waste (tonnes)	156,759	178,912	168,315	●	40
Incinerated Waste (tonnes)	40,225	40,524	33,556	●	40
Direct Carbon Emissions (t-CO <sub>2</sub> )	555,814	578,725	663,557	●	43
Indirect Carbon Emissions (t-CO <sub>2</sub> )	221,311	202,747	175,165	●	43
<b>Safety</b>					
Accident Frequency Rate (Global) (reportable accidents per million man-hours)	0.18	0.23	0.13	●	60
Accident Severity Rate (Global) (man-days lost per million man-hours)	55	108	115	●	60
Accident Frequency Rate (Singapore) (reportable accidents per million man-hours)	0.12	0.16	0.09	●	60
Accident Frequency Rate (Overseas) (reportable accidents per million man-hours)	0.26	0.32	0.19	●	60
Accident Severity Rate (Singapore) (man-days lost per million man-hours)	47	140	54	●	60
Accident Severity Rate (Overseas) (man-days lost per million man-hours)	65	67	187	●	60
<b>Labour</b>					
Training Hours per Employee (Singapore)	50	49	27.2	●	70
Training Hours per Employee (Global)	29	31	23.2	●	70
Group Employee Turnover Rate (%)	8.6	8.8	8.9	●	71
Local Hires (%)	61.2	62.7	60.0	●	69
Senior Management Hired Locally (%)	61.4	61.8	60.3	●	70
<b>Community</b>					
Philanthropic Investments (S\$million)	10.7	5.88	6.27	●	77

● Generally Desirable   ● Neutral   ● Undesirable

\* The electricity conversion factor used is based on the United Kingdom's Department for Environment, Food and Rural Affairs (DEFRA) 2015 Government GHG Conversion Factors for Company Reporting, whereby 1kWh = 0.0036 GJ. Estimated monetary savings are calculated based on the average electricity tariff rates in 2015 as published by Singapore Power, whereby 1kWh = \$0.2173.

# Industry Outlook



01

## Supporting the Climate Change Agenda

The first universal agreement to cut greenhouse gas emissions was reached at the Paris Climate Conference in December 2015. The agreement was designed to put the world on course for strong and decisive action to reduce greenhouse gas emissions and help all nations build a sustainable future for their citizens.

Singapore ratified the agreement on 22 April 2016. In line with the agreement, Singapore committed to reduce its Emissions Intensity by 36% from 2005 levels by 2030, and stabilise greenhouse gas emissions with the aim of peaking around 2030.

The Energy Conservation Act aims to help Singapore achieve its target to improve its energy intensity. Under the act, companies that are large energy users are required to appoint energy managers to monitor and manage their energy consumption and report their energy consumption.

The act applies to several of Keppel's business units. In addition to meeting regulatory requirements, Keppel continues its efforts to re-examine processes and implement measures to enhance energy efficiency and reduce emissions.

## A Global Energy Transition

Pledges made to rein in greenhouse gases give new impetus to lower-carbon and more efficient energy systems. However, they do not alter the picture of rising global needs for energy.

Overall, world energy demand is projected to grow by nearly one-third between 2013 and 2040, with net growth driven entirely by developing countries<sup>1</sup>.

Today, fossil fuels meet two-thirds of global energy needs<sup>2</sup>. While we foresee hydrocarbons to remain a substantial part of the world energy mix in the coming decades, its share in the mix will be reduced over time.

The oil and gas industry is stepping up efforts to develop

low carbon technologies. As a conglomerate servicing customers in the oil and gas sector, we are tracking developments closely and making prudent investments in research and development, so as to strengthen our capabilities to fulfil market needs in this energy transition.

## Sustainable Urbanisation

Engines of growth continue to be powered by urbanisation, especially in Asia. The global urban population grew rapidly from around 700,000 in 1950 to close to 3.9 billion in 2014 and is expected to reach 6.3 billion in 2050. Asia was home to slightly over half of the world's urban population in 2014<sup>3</sup>.

The process of urbanisation will create demand for clean energy, high quality homes and offices, clean urban environments, good infrastructure such as Waste-to-Energy plants and data centres, and connectivity—areas where Keppel has strong core competencies and can make a decisive impact.

**01** *Urbanisation in Asia creates demand for clean energy, high quality homes and offices, clean urban environments, good infrastructure and connectivity—areas where Keppel has strong core competencies.*

<sup>1</sup> Based on the central scenario of World Energy Outlook 2015, published by the International Energy Agency  
<sup>2</sup> Bloomberg New Energy Outlook 2015  
<sup>3</sup> United Nations Population Division, 2014, World Urbanization Prospects

# Stakeholder Engagement

G4-24 / G4-25 / G4-26 / G4-27



**01** We engage our stakeholders in shaping our sustainability approach.

01

We engage with, listen to and learn from our diverse groups of stakeholders.

When appropriate and relevant to our businesses, we incorporate their feedback into our planning and actions.

Keppel Corporation has considered the feedback arising from the stakeholder engagements conducted in 2015. This includes feedback on our sustainability reporting and materiality, which has helped us strengthen both our reporting and our materiality assessment.

Our stakeholder engagement framework is developed in accordance with the AccountAbility AA1000 Stakeholder Engagement Standard, whereby stakeholders are defined to be individuals, groups of individuals or organisations that affect and/or could be affected by Keppel's activities, products or services and associated performance.

Stakeholder relations, including engagement with customers, government and local communities, are managed by departments at the corporate level, as well as by functional divisions and volunteer

committees across our business units worldwide.

Human Resources departments across the Group implement employee engagement efforts, while Group Legal and Group Corporate Communications departments lead initiatives to engage with shareholders and the investment community.

The commercial and procurement teams of our business units, as well as Group Health, Safety and Environment (HSE) coordinate efforts to engage our suppliers on compliance and HSE related issues.

We communicate with our stakeholders through various platforms, including:

- Dialogue and sharing sessions
- Corporate website at [www.keppcorp.com](http://www.keppcorp.com)
- Senior executives' speeches at press briefings and employee communication forums
- Email communications
- Publications such as Keppel Corporation's Report to Shareholders, Sustainability Report and corporate newsletters including *Keppelite*, *吉宝精典*, *HSE Matters*, *OffshoreMarine* and *Across Borders*

## Memberships in Associations

In addition to engaging our stakeholders, we participate as members of organisations that include:

- World Economic Forum\* to engage the foremost leaders of society to shape industry agendas and find sustainable solutions to improve the state of the world;
- Global Compact Network Singapore to advance the United Nations Global Compact initiative and its 10 principles at the country level;
- Singapore Institute of Directors to promote the professional development of directors and corporate leaders and uphold the highest standards of corporate governance and ethical conduct;
- Singapore National Employers Federation to promote excellence in employment practices;
- Workplace Safety & Health (WSH) Council to build industry capabilities to better manage WSH and promote safety and health at work;
- World Ocean Council to collaborate on sustainable stewardship of the seas.

\* From 1 July 2014 to 30 June 2015

**Our Stakeholders** G4-24 / G4-25 / G4-26 / G4-27

**Employees**



People are one of Keppel’s vital strengths. Our employees take a shared responsibility for our goal to deliver value to all stakeholders.

To stay competitive, we aim to be an employer of choice, so as to win and retain the best talents worldwide. We are committed to embrace diversity and inclusiveness, build the capabilities of our workforce at all levels of the business, and enhance our employees’ affiliation with the company.

**Key topics**

Vision, strategy and direction; innovation; productivity; teamwork and collaboration; people development.

**Approach**

Employee engagement surveys; town hall meetings; orientation sessions and mentorship programmes for new hires.

**Customers**



Customer satisfaction is crucial to the success of our businesses. Our customers trust us to provide value-added and reliable solutions tailored to their needs.

We are committed to build enduring relationships with our customers and provide a superior experience. Through innovation and enterprise, and by harnessing customer insights, we continue to strengthen our range of products and solutions.

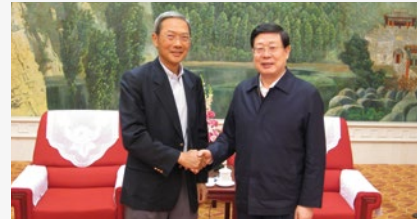
**Key topics**

Product and service quality; HSE excellence.

**Approach**

Meetings; feedback channels such as email communications, phone calls and teleconferences; customer satisfaction surveys.

**Governments**



Governments shape the business environments in which we operate. Political factors, policies and regulations impact our businesses.

We track topics of concern to governments and regulatory bodies in countries where we operate and collaborate with public policy leaders on issues of mutual interest.

**Key topics**

Opportunities for business collaboration and investment.

**Approach**

Official visits and meetings; industry networking functions.

**Shareholders**



Shareholders play an important role in the financing, governance and control aspects of our business.

Keppel has in place an Investor Relations Policy which sets out the principles and practices that the Company applies in order to provide shareholders and prospective investors with information necessary to make well-informed investment decisions and to ensure a level playing field.

**Key topics**

Business strategy and direction; economic performance.

**Approach**

Conference calls; shareholder meetings; roadshows; facility visits; industry conferences; webcasts of quarterly results and presentations; email communications.

**Suppliers**



Strong, effective relationships with our suppliers give our businesses strategic advantages, including improved planning and product development, secure access to key resources, responsive vendor support, on-time deliveries and lower costs.

We manage our supply chain proactively for a mutually beneficial relationship with our suppliers, and work alongside with them to influence and improve their sustainability performance.

**Key topics**

Compliance; HSE excellence.

**Approach**

Regular meetings with key subcontractors and suppliers; site visits by management.

**Local Communities**



We are accountable to the local communities that give us the social licence to operate. We engage with community leaders and non-profit organisations to build trust and goodwill, and give back to our communities through social investments and collaborative community programmes.

**Key topics**

Community investments.

**Approach**

Meetings; community outreach initiatives.

The above mentioned stakeholder engagements are typically conducted at least annually, with many of our stakeholder engagements being continuous or quarterly. We also engage with our stakeholders as and when it is required on an ad-hoc basis.



# Managing Our Supply Chain



**01** We work closely with stakeholders in our supply chain to positively influence their sustainability performance.

**02** New suppliers are screened and qualified in accordance with our requisition and purchasing policies. Health, Safety and Environment as well as labour criteria are included in the assessments.

01

## Our Supply Chain

The Keppel Group contracts local and foreign vendors for our different lines of businesses, and we work closely with our suppliers to make a positive impact on their sustainability performance.

At our Offshore & Marine Division, our contractors work jointly with employees in constructing, converting and repairing offshore and marine vessels at our yards. Equipment manufacturers supply us with large-scale equipment such as offshore drilling equipment, thrusters and winches for installation on the rigs and offshore service vessels that we build for clients. In addition, we also procure cranes and panel line systems, as well as process equipment such as diesel generators, blasting and painting systems, switchgears and variable control systems. Raw material suppliers include

suppliers of fuel, including petrol, diesel, furnace oil and Liquefied Petroleum Gas, as well as suppliers for steel plates, piping, grit and paint.

Our Property Division engages architectural, engineering, construction and interior design firms to provide architectural and engineering design management, civil engineering works, construction and interior design services for our real estate development sites. As a manager of real estate properties, we also employ facility management companies to service our commercial and residential buildings.

Our Infrastructure Division engages contractors to provide Engineering, Procurement and Construction (EPC) services in the construction of our plants and data centres. We also purchase raw materials, such as feedstock,

to power the co-generation plant for our Gas-to-Power business. In addition, we procure goods and services for the operations and maintenance of our plants.

In the Logistics Division, contractors are engaged for transportation services, warehouse operations and facility maintenance. In the Data Centres Division, contractors are engaged mainly for equipment maintenance.

## Management

In general, new suppliers are screened and qualified in accordance with our requisition and purchasing policies. Health, Safety and Environmental (HSE) and labour criteria are included in the assessments.

We review potential suppliers' industry reputation, track record and certifications in these areas.

Managing Our Supply Chain

Contractors with ISO 9001, ISO 14001 and OHSAS 18001 certifications are preferred.

Upon selection, new vendors are assessed again by the respective work teams based on specified criteria. All contractors are required to abide by the relevant laws and regulations during the course of engagement. The feedback provided to the procurement teams helps determine whether new vendors are included in our approved vendor list.

We also exercise influence on our supply chain by working closely with our subcontractors to ensure that they are aligned with our HSE standards.

As a participant of the Marine Sponsorship Scheme by Singapore’s Ministry of Manpower (MOM), Keppel Offshore & Marine is obliged to ensure that its appointed resident contractors adhere to MOM guidelines for the employment of both local and foreign employees.

Keppel established the Supply Chain Management Working Committee in 2015, headed by Mr Jay Singham, General Manager of Commercial at Keppel FELS. The committee

comprises representatives from various business units and sets out to identify and initiate measures to manage supply chain risks and impacts, track and report on sustainability performance, and recommend and implement strategies pertaining to supply chain sustainability.

Presently, third-party associates of the Group that provide services or engage in business activities on behalf of a Group company are required to abide by Keppel’s Rules of Business Conduct. The rules, which are articulated in the Keppel Employee Code of Conduct, specify the Group’s policy with regard to ethical conduct and compliance with laws, anti-corruption, gifts and hospitality, and donations and contributions.

In 2015, the Supply Chain Management Working Committee worked to develop a Supplier Code of Conduct which is broader in scope and covers areas pertaining to business conduct, human rights, safety and health, and environmental management. The Committee is formalising the Code and aims to have it ratified by significant suppliers identified by the business units.





# Economic Sustainability

*Against a challenging backdrop in 2015, Keppel Corporation performed creditably, demonstrating that with financial discipline and a focus on optimising returns, the Company is able to build a long-term and competitive position and capture sustainable returns for its stakeholders.*

*01 The privatisation of Keppel Land was a strategic move that has fully aligned the interests of the Property Division with the Group, and is providing a strong pillar for earnings and long-term value creation.*

## Total Assets

# \$28.9b

Value of the Keppel Group's total assets as at end-2015.

## Net Profit

# \$1,525m

Net profit in FY 2015.



## Major Developments in 2015

### Offshore & Marine

- Entered into an agreement to acquire Cameron's offshore rig business, which comprises the LETOURNEAU™ jackup rig designs, rig kit business, as well as aftersales and aftermarket services.
- Reinforced expertise as a total solutions provider for the offshore & marine industry with the delivery of the world's deepest Floating Production Storage and Offloading vessel, Turritella, to SBM Offshore.
- Signed a contract with Golar for the conversion of a third Moss-type Liquefied Natural Gas carrier into a Floating Liquefaction facility.

### Property

- Privatisation of Keppel Land.
- Invested \$615 million to strengthen portfolio in key markets in China and Indonesia, and opportunistically in the United Kingdom (UK).
- Sold about 4,570 homes in Asia, mostly in China and Vietnam, almost twice the total number of units sold in 2014.
- Grew assets under management by Keppel REIT and Alpha Investment Partners by 9.6% to \$20.5 billion as at end-2015.

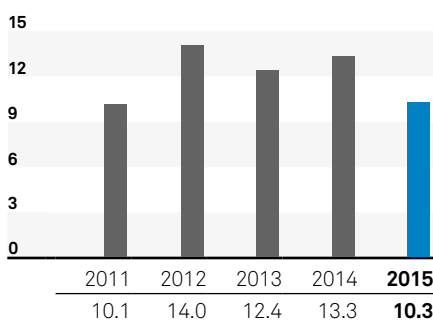
### Infrastructure

- Delivered on the Engineering, Procurement and Construction projects – Greater Manchester Energy-from-Waste Plant in UK, Doha North Sewage Treatment Works in Qatar and Bialystok Waste-to-Energy combined heat and power project in Poland.
- Completed the combination of Keppel Infrastructure Trust with CitySpring Infrastructure Trust and injected 51% of Keppel Merlimau Cogen into the enlarged trust.
- Keppel T&T commenced operations at its Tampines Logistics Hub in Singapore and a distribution centre in Vietnam.

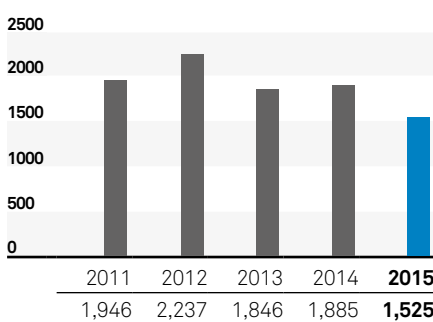
### Investments

- k1 Ventures completed the sale of its childcare operating business and received a cash distribution of US\$61.5 million from Knowledge Universe Holdings.
- M1 launched Voice over LTE which provides customers with higher quality voice calls, and introduced XGPON connectivity which offers speeds of up to 10 Gbps.
- KrisEnergy achieved first oil in two new oil fields located in the Gulf of Thailand.

Revenue (\$ billion)



Net Profit (\$ million)



### Overview

Globally, more people live in urban areas than in rural areas, with 54% of the world's population residing in urban areas. This proportion is expected to increase to 66% by 2050. Projections show that urbanisation combined with the overall growth of the world's population could add another 2.5 billion people to urban populations by 2050.

As the world continues to urbanise, sustainable development challenges will be increasingly concentrated in cities, particularly in the lower-middle-income countries where the pace of urbanisation is fastest. Economic growth in emerging economies will enable some 3 billion people to rise into the ranks of the middle class in the next 15 years. In less than two decades, the world will have as many as 41 mega-cities, up from 28 in 2014.

Sustainable urbanisation requires that cities expand the necessary infrastructure for water and sanitation, energy, transportation, information and communications and preserve the natural assets within the city and surrounding areas.

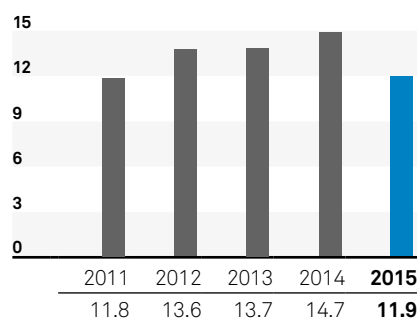
Through its key businesses in Offshore & Marine, Property, Infrastructure and Investments, Keppel is primed to meet the needs of our urbanising world.

### Management Approach

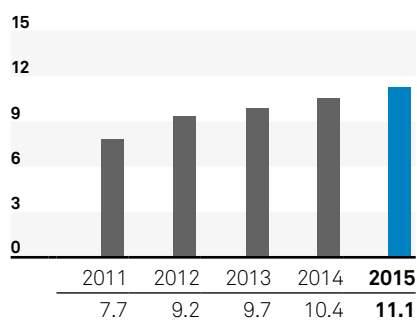
Keppel is building on a robust ecosystem to create and capture greater value from all businesses of the Group, leveraging its core competencies in Technology & Innovation, Engineering & Project Management, Operations & Maintenance and Capital Management.

## Economic Sustainability

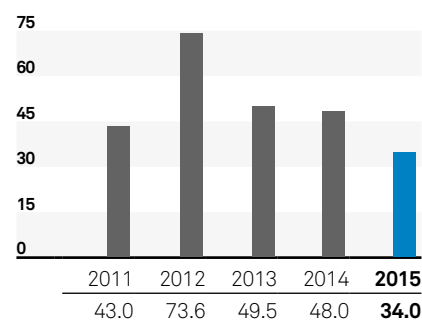
### Capital Employed (\$ billion)



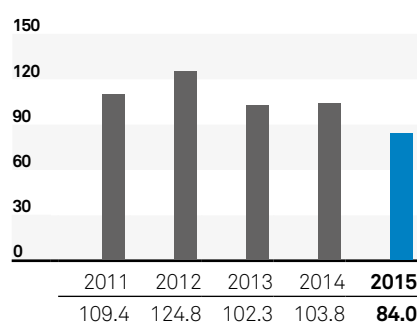
### Shareholders' Funds (\$ billion)



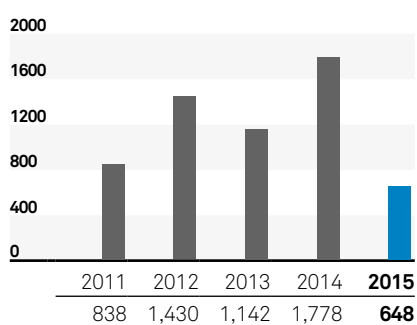
### Total Distribution Per Share (cents)



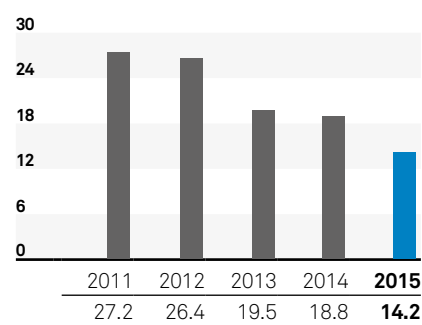
### Earnings Per Share (cents)



### Economic Value Added (\$ million)



### Return On Equity (%)



One of the Company's key strengths as a multi-business company with a strong balance sheet is our access to capital and ability to invest during tough times when opportunities present themselves. We are committed to strengthen and transform the Company into a global best-in-class conglomerate at the forefront of our chosen industries.

We have simplified our corporate structure, and will be sharpening our business model, recycling capital to seek the best possible returns, and promoting innovation, collaboration and synergy across the Group's businesses.

The privatisation of Keppel Land in 2015 was a strategic move that has fully aligned the interests of our Property Division with the Group. It was immediately accretive and is providing a strong pillar for earnings and long-term

value creation, with the Property Division contributing 46% of the Group's net profit in 2015. The full ownership of this Division has strengthened our ability to rightsize the balance sheet of our property business to capture opportunities, recycle capital and allocate resources across the Group for optimal returns and deliver on our multi-business strategy.

#### Financial Performance in 2015

Group net profit attributable to shareholders decreased by 19% to \$1,525 million. The compounded annual growth for net profit from 2010 to 2015 was negative 0.8%, and for the period from 2005 to 2015 was positive 10.5%.

Earnings Per Share was 84.0 cents. Return On Equity (ROE) was 14.2%. Economic Value Added (EVA) of \$648 million was \$1,130 million below that of the previous year. Net cash used in operating

activities was \$705 million as compared to net cash from operating activities of \$5 million for 2014, due mainly to lower operational cash inflow.

To better reflect its operational free cash flow, the Group had excluded expansionary acquisitions (e.g. investment properties) and capital expenditure (e.g. building of new logistics or data centre facilities), meant for long-term growth for the Group, and major divestments. After excluding expansionary acquisitions and capital expenditure and major divestments, net cash from investment activities was \$11 million. The Group spent \$357 million on investments and operational capital expenditure, mainly from the Offshore & Marine Division. After taking into account proceeds from divestments and dividend income of \$368 million, the resulting free cash outflow was \$694 million.

Economic Sustainability

Total cash dividend for 2015 was 34.0 cents per share, 29% lower than the prior year's total cash dividend of 48.0 cents per share. This comprises a final cash dividend of 22.0 cents per share and the interim cash dividend of 12.0 cents per share distributed in the third quarter of 2015. The total distribution for the year is approximately \$617 million.

**Government Assistance & Taxes Paid**

In 2015, the Group received a total of \$5.6 million in financial assistance from governments. This largely consisted of Research and Development grants as well as a cash grant by the Singapore government's Jobs Credit scheme.

The Group operates in close to 30 countries and paid a total of \$302 million in taxes to the various

countries and tax jurisdictions in which it operates.

**Employee Compensation**

In 2015, staff costs amounted to \$1,600 million in the form of wages and salaries, employer's contribution to Singapore's Central Provident Fund, share options and share plans as well as other staff benefits. The Group's employees in 2015 numbered 33,574\*.

For more details on the Group's financial performance, please refer to pages 42 to 85 of Keppel Corporation's Report to Shareholders 2015.

**Economic Value Delivered to Society**

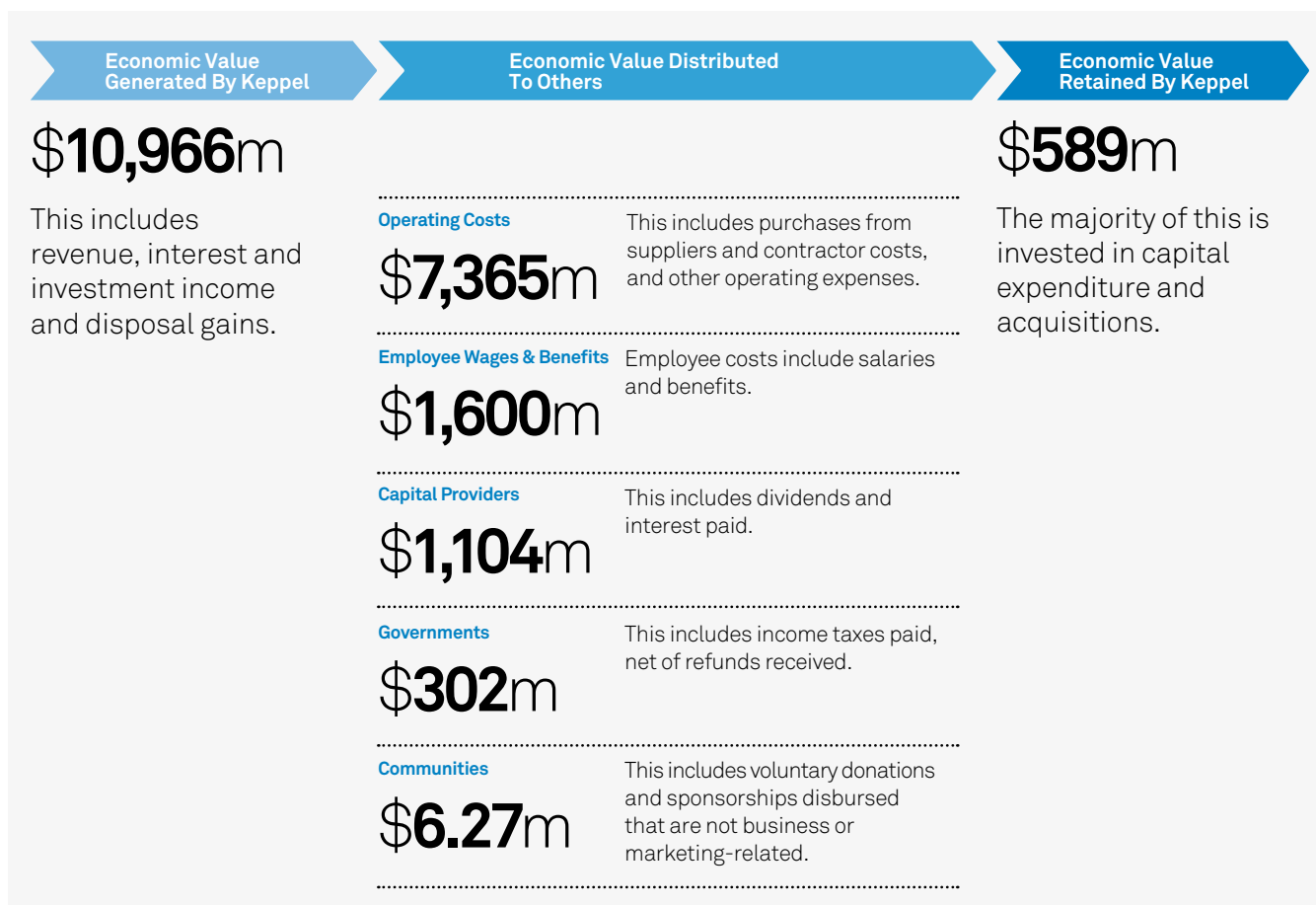
Keppel's business operations generate employment, opportunities for suppliers and

tax revenues for governments. Committed to positively impact the communities in which we operate, we contribute to worthy social causes through donations and sponsorships.

In 2015, Keppel generated \$10,966 million of economic value for our stakeholders, which was distributed through our business operations to suppliers, contractors, subcontractors, employees, investors, governments and community organisations, among others.

The majority of the economic value retained by Keppel after this distribution is invested in capital expenditure and acquisitions as we maintain our competitive edge and stand poised to seize growth opportunities.

\* The figures in this section do not take into account the headcount and staff costs of associated companies, whereby an associated company is an entity, not being a subsidiary, over which the Keppel Group has significant influence, but not control.



# Corporate Governance

*The long term sustainability of the Keppel Group’s businesses is underpinned by our core value of integrity and driven at the highest level through strong corporate governance and proactive engagement with stakeholders.*

### Female Representation

**20%**

Female representation on the Board.

### Independent Directors

**8 out of 10**

Independent Directors on the Board.

### Meetings

**227**

Meetings and conference calls with institutional investors.



## Performance Overview

<h3>What we said in 2015</h3>	<h3>What we did in 2015</h3>	<h3>What we plan to do</h3>
<ul style="list-style-type: none"> <li>● Continue to maintain strong Board independence and performance.</li> <li>● Continue to enhance anti-bribery measures.</li> <li>● Continue to enhance Personal Data Protection procedures and processes.</li> <li>● Continue the roll-out of Control Self-Assessment programme in phases.</li> </ul>	<ul style="list-style-type: none"> <li>● Enhanced Employee Code of Conduct.</li> <li>● Strengthened business resilience through ongoing improvements and refinements to Business Continuity Plans.</li> <li>● Formalised Regulatory Compliance Governance Structure to strengthen corporate governance and provide enhanced assurance to the adequacy and effectiveness of Keppel's risk management system in relation to regulatory compliance.</li> </ul>	<ul style="list-style-type: none"> <li>● Continue to guide business units on the enhanced Employee Code of Conduct.</li> <li>● Continue to strengthen the adequacy and effectiveness of Keppel's risk management system.</li> <li>● Continue to enhance operational resilience through ongoing business continuity tests.</li> <li>● Develop continual training and education programmes to support the regulatory compliance programme and foster a compliance-centric culture.</li> </ul>

**01** As a testament to Keppel's high standards of corporate governance, the Group swept four awards at the Singapore Corporate Awards.

### Overview

The Board and management of Keppel Corporation Limited ("KCL", "Keppel" or the "Company") firmly believe that a genuine commitment to good corporate governance is essential to the sustainability of the Company's business and performance.

Keppel is focused on upholding high standards of corporate governance with a strong and independent board, demonstrating its strong commitment to good business ethics and maintaining clear, consistent and regular communication with shareholders.

The Group Sustainability Steering Committee drives the Group's sustainable development strategy. For the financial year ended

31 December 2015 ("FY2015"), the Steering Committee was chaired by the Company's Executive Director cum Chief Executive Officer (CEO), Mr Loh Chin Hua. The Chief Financial Officer of the Company, Mr Chan Hon Chew, and the CEOs of the principal business units of the Group are all members of the Steering Committee. For a full list of members of the Steering Committee, please refer to page 96 of this report.

Keppel adheres to the principles and guidelines of the Code of Corporate Governance 2012 issued by the Monetary Authority of Singapore (the "2012 Code").

**Board Conduct of Affairs**  
Keppel's Board of Directors fully

understand that they must act in the best interest of the Company at all times, are accountable to the shareholders and have the responsibility to safeguard the interests of all shareholders.

### Board Strategic Review

The Board periodically reviews and approves the Group's strategic plans. In FY2014, the Board approved the Group's Vision 2020<sup>1</sup> which sets out the vision, operating principles and values of the Group, and the roadmap<sup>2</sup> to take the Group's businesses into 2020 to achieve faster growth, build a stronger Keppel that fully captures the significant synergies within and among its Group companies, and fully develop the potential of its people.

<sup>1</sup> With effect from FY2014, the vision of the Company is to be a global company at the forefront of its chosen industries, shaping the future for the benefit of all its stakeholders – Sustaining Growth, Empowering Lives and Nurturing Communities. Guided by its operating principles and core values, the Company's mission is to execute its business in Offshore & Marine, Property, Infrastructure and Investments profitably, safely and responsibly.

<sup>2</sup> This roadmap includes four broad areas for sustainable growth: (1) Business: Setting the overarching strategies, targets, and key actions to be undertaken by the business units; (2) People: Building a robust succession pipeline and continued strong employee satisfaction; (3) Process: Pursuing excellence in safety, productivity and innovation; and (4) Corporate Citizenry: Formalising and further organising community outreach efforts to positively impact communities in which the Group operates.





## Corporate Governance

### Review Process

A rigorous process is in place to support the Board in reviewing and monitoring the Group's strategic plans, including providing directors with the necessary context and opportunity to undertake effective and robust deliberation and debate.

In this regard, a two-day off-site board strategy meeting is organised annually for in-depth discussion on strategic issues and direction of the Group. This is followed by an update of each business unit's strategic plans for alignment with the Group's strategy. In addition, in FY2015, management presented a study of the key drivers underpinning high performance conglomerates and proposed initiatives to focus the Group's efforts in strengthening these areas. To support the Board's oversight of the implementation of the strategic plans, a progress update is provided to the directors ahead of the following year's off-site board strategy meeting. In addition, one business unit is invited to each quarterly Board meeting to present on its immediate plans and current challenges and provide the Board an opportunity to perform an in-depth review into each of the Group's core businesses.

### Independent Judgment

All directors are expected to exercise independent judgment in the best interests of the Company. This is one of the performance criteria for the peer and self-assessment on the effectiveness of the individual directors. Based on the results of the peer and self-assessment carried out by the directors for FY2015, all directors have discharged this duty consistently well.

### Conflict of Interest

Every director is required to declare any conflict of interest in a transaction or proposed transaction with the Company as soon as is practicable after the relevant facts have come to his knowledge. On an annual basis, each director is required to

submit details of his associates for the purpose of monitoring interested persons transactions. Interested persons transactions entered into by the Group during the financial year are disclosed in the Company's annual report.

### Training

Our directors are also provided with continuing education in areas related to their duties and responsibilities, as well as to the Group's businesses and industries. All newly-appointed directors undergo a comprehensive orientation programme which includes management presentations on the Group's businesses, strategic plans and objectives, and site visits. Site visits are also conducted periodically for directors to strengthen their understanding of the Group's various business operations.

### An Effective & Independent Board

Keppel believes that a cornerstone of good governance is an effective, strong and independent board as the highest governing body responsible for setting the strategic direction, overseeing the business and affairs of the Company, establishing with management the strategies and financial objectives to be implemented by management, and monitoring the performance of management.

There must be a strong commitment to practise good business ethics across the Group and maintain clear, consistent and regular communication with the Company's investors.

### Board Information

The Board and management fully appreciate that fundamental to good corporate governance is an effective and robust Board whose members engage in open and constructive debate and challenge management on its assumptions and proposals.

In order to do this, the Company has adopted initiatives to put in place processes to ensure that

the non-executive directors, who are generally not involved in the day-to-day management of the Company, are well supported by accurate, complete and timely information, have unrestricted access to management, and have sufficient time and resources to discharge their oversight function effectively.

These initiatives include regular informal meetings for management to brief the directors on prospective deals and potential developments at an early stage before formal board approval is sought, and the circulation of relevant information on business initiatives, industry developments and analyst and press commentaries on matters in relation to the Company or the industries in which it operates. A two-day off-site board strategy meeting is organised annually for in-depth discussion on strategic issues and direction to give non-executive directors a better understanding of the Group and its businesses. The meeting also provides an opportunity for non-executive directors to familiarise themselves with the management team so as to facilitate the Board's review of the Group's succession planning and leadership development programme.

### Independence of Directors

There is a strong and independent element on our Board, with an independent chairman and the majority of our Board comprising independent directors. For FY2015, except for the Board Safety Committee, all board committees comprised entirely independent or non-executive directors, with independent chairmen.

In this aspect, the Nominating Committee ("NC") determines on an annual basis whether or not a director is independent, bearing in mind the 2012 Code's definition of an "independent director" and guidance as to relationships the existence of which would deem a director not to be independent. Such reviews are based on each

director's self-declaration in the Director's Independence Checklist and his actual performance on the Board and board committees.

### Board Competency & Diversity

The competencies and skill sets of the directors and the composition of the Board play a role in the overall effectiveness of the Board. At Keppel, the NC ensures that the Board and board committees comprise directors who, as a group, provide core competencies required to exercise effective oversight and direction.

For FY2015, there were ten directors on our Board, comprising eight independent directors, one non-executive and non-independent director and one executive director\*. To assist the Board in its oversight function, board committees, namely the Audit Committee, Board Risk Committee, Nominating Committee, Remuneration Committee and Board Safety Committee, were formed to focus on key matters such as internal audit, risk management, board composition and performance, succession planning and talent management, remuneration and health, safety and environment (HSE).

Each committee has clearly defined terms of reference. For more details on the terms of reference and composition of the various committees, please refer to pages 106 to 108 of the Company's Report to Shareholders 2015.

For FY2015, the NC is satisfied that the Board and the board committees comprise directors who, as a group, provide an appropriate balance and diversity of skills, experience, gender, knowledge of the Group, core competencies such as accounting or finance, business or management experience, human resources, risk management, technology, mergers and acquisitions, legal, international perspectives, industry knowledge, strategic planning experience and customer-based experience or knowledge, required for the Board

and the board committees to be effective.

The NC recognises the merits of gender diversity in relation to the composition of the Board and, in identifying suitable candidates for new appointment to the Board, would ensure that female candidates are included for consideration. Having said that, gender is but one aspect of diversity and new directors will continue to be selected based on objective criteria set as part of the process for appointment of new directors and Board succession planning. In FY2015, there were two female directors out of a total of ten directors, representing 20% of the entire Board.

### Board Evaluation

Our Board has in place formal processes for assessing the effectiveness of the Board as a whole and of its board committees, the contribution by each individual director to the effectiveness of the Board as well as the effectiveness of the Chairman of the Board.

To ensure that the assessments are done promptly and fairly, the Board has appointed an independent third party co-ordinator to assist in collating and analysing the returns of the Board members. Such assessments help to improve the overall effectiveness of the Board by providing opportunities for the directors to give constructive feedback and helping them to focus on their key responsibilities.

Please refer to pages 109 to 110 of the Company's Report to Shareholders 2015 for details on the Board Evaluation Process.

### Board Composition & Succession Planning

There is a process of refreshing the Board progressively over time so that the experience of longer serving directors can be drawn upon while tapping into new external perspectives and insights of more recent appointees. The Board believes that orderly

succession and renewal is achieved as a result of careful planning, where the appropriate composition of the Board is continually under review.

### Appointment & Re-appointment of Directors

The NC is responsible for reviewing the succession plans for the Board, and has put in place a formal process for the renewal of the Board and the selection of new directors. The NC leads the process and makes recommendations to the Board as follows:

- (1) NC annually reviews the balance and diversity of skills, experience, gender and knowledge required by the Board and the size of the Board which would facilitate decision-making.
- (2) In light of such reviews and in consultation with management, the NC assesses if there is any inadequate representation in respect of any of those attributes and if so, determines the role and the desirable competencies for a particular appointment.
- (3) External help (e.g. Singapore Institute of Directors, search consultants, open advertisement) may be used to source for potential candidates if need be. Directors and management may also make recommendations.
- (4) NC meets with the short-listed candidate(s) to assess suitability and to ensure that the candidate(s) is/are aware of the expectations and the level of commitment required.
- (5) NC makes recommendations to the Board for approval.

All new appointments are subject to the recommendation of the NC based on the following objective criteria:

- (1) Integrity.
- (2) Independent mindedness.
- (3) Diversity – possess core competencies that meet the needs of the Company and complement the skills and competencies of the existing directors on the Board.

\* Mrs Oon Kum Loon stepped down as independent director with effect from 1 May 2016.

## Corporate Governance

- (4) Ability to commit time and effort to carry out duties and responsibilities effectively – proposed director does not have more than six listed company board representations and/or other principal commitments.
- (5) Track record of making good decisions.
- (6) Experience in high-performing companies.
- (7) Financial literacy.

The NC is also responsible for re-nomination having regard to the director's contribution and performance (such as attendance, preparedness, participation and candour), with reference to the results of the assessment of the performance of the individual director by his peers.

The directors submit themselves for re-nomination and re-election at regular intervals of at least once every three years. Pursuant to the Company's constitution, one-third of the directors retire from office at the Company's annual general meeting, and a newly appointed director must submit himself for re-election at the annual general meeting immediately following his appointment.

### Risk Management & Internal Controls

The Board, supported by the Audit Committee ("AC") and Board Risk Committee ("BRC"), oversees the Group's system of internal controls and risk management.

The AC regularly examines the effectiveness of the Group's internal control system to, amongst others, mitigate the risk of fraud. By way of enforcement, the Group's internal auditors assist the AC to ensure that the Company maintains a sound system of internal controls through the regular monitoring of key controls and procedures, and ensuring their effectiveness, undertaking investigations as directed by the AC, and conducting regular in-depth audits of high risk areas.

The Group's internal auditors also conduct annual reviews of the adequacy and effectiveness of the Group's material internal controls, including financial, operational, compliance and information technology controls, and risk management, thereby serving as an active mechanism for the detection and deterrence of fraud.

The BRC reviews and guides management in the formulation of risk policies and processes to effectively identify, evaluate and manage significant risks, to safeguard shareholders' interests and the Company's assets. The BRC reports to the Board on material findings and recommendations in respect of significant risk matters.

In this aspect, the Group is guided by a set of Risk Tolerance Guiding Principles, as disclosed on page 32 of this report. The Company also has a Risk Management Assessment Framework which was established to facilitate the Board's assessment on the adequacy and effectiveness of the Group's risk management system. The framework spells out the governing policies, processes and systems pertaining to each of the key risk areas of the Group, and assessments are made on the adequacy and effectiveness of the Group's risk management system in managing each of these key risk areas.

### System of Management Controls Framework

Keppel's System of Management Controls Framework (the "Framework") outlines the Group's internal control and risk management processes and procedures. The Framework comprises three Lines of Defence towards ensuring the adequacy and effectiveness of the Group's system of internal controls and risk management.

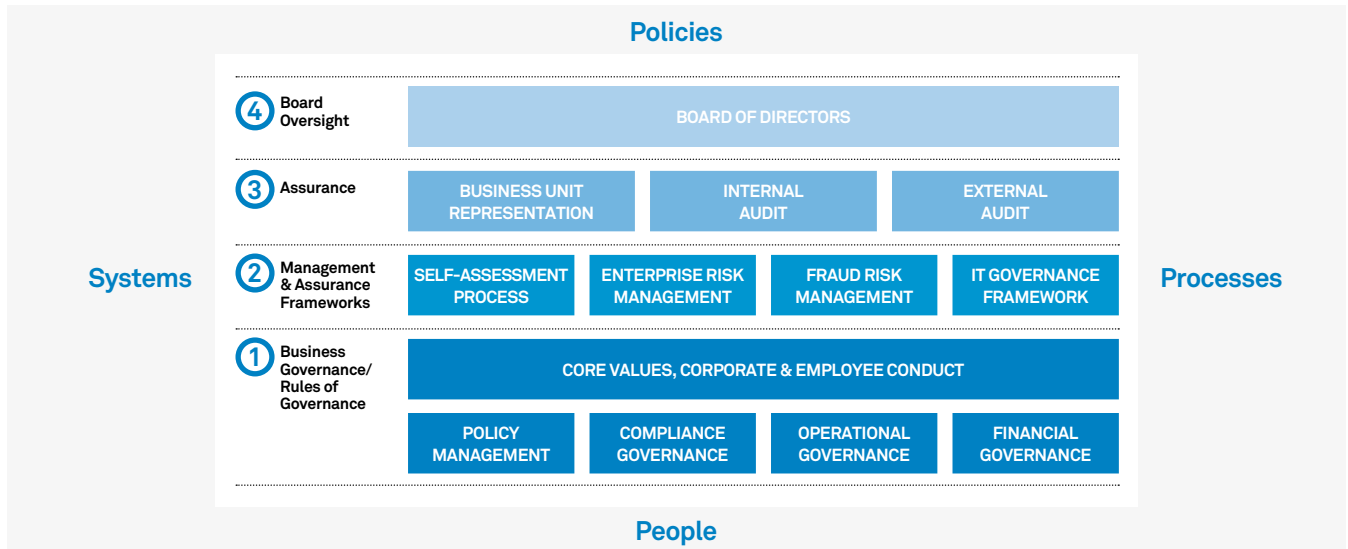
Under the first Line of Defence, management is required to ensure

good corporate governance through the implementation and management of policies and procedures relevant to the Group's business scope and environment. Such policies and procedures govern financial, operational, information technology and regulatory compliance matters and are reviewed and updated periodically. Employees are also guided by the Group's Core Values and expected to comply strictly with the Employee Code of Conduct.

Under the second Line of Defence, significant business units are required to conduct a self-assessment exercise on an annual basis. This exercise requires such business units to assess the status of their respective internal controls and risk management via self-assessment questionnaires. Action plans would then be drawn up to remedy identified control gaps. Under the Group's Enterprise Risk Management Framework, significant risks areas of the Group are also identified and assessed, with systems, policies and processes put in place to manage and mitigate the identified risks. Fraud risk management processes include mandatory conflict of interest declarations by employees in high-risk positions and the implementation of policies such as the Keppel Whistle-Blower Protection Policy and Employee Code of Conduct to establish a clear tone at the top with regard to employees' business and ethical conduct.

Under the third Line of Defence, to assist the Company to ascertain the adequacy and effectiveness of the Group's internal controls, business units are required to provide the Company with written assurances as to the adequacy and effectiveness of their system of internal controls and risk management. Such assurances are also sought from the Company's internal and external auditors based on their independent assessments.

**Keppel's System of Management Controls (KSMC)**



**Internal Policies**

The Group has communicated a comprehensive set of policies to all employees as part of its commitment to maintaining a robust system of risk management and internal controls. These policies are disseminated via email and accessible to all employees. As and when there are updates to the policies, the updated policies are broadcasted and disseminated Group-wide.

**Rules of Conduct**

The Keppel Group considers it important that all employees understand the rules of conduct for which they are accountable, in accordance with the laws and regulations of all the countries in which the Group operates, and our own group policies. Keppel employees must always act with the highest integrity, guided by the Keppel Core Values.

**Awareness & Training**

The Company's Employee Code of Conduct sets out the principles of business conduct expected of all employees. The code was enhanced in FY2015 to set a stronger tone in relation to the Group's anti-bribery stance and position as regards, in particular, gifts and hospitality, facilitation

payments and dealings with associates. The enhanced Employee Code of Conduct was disseminated group-wide to members of the Board and employees within the Group. It also requires all employees and officers of the Group to avoid any conflict between their interests and interests of the Group in dealing with suppliers, customers and other third parties.

To set the tone-from-the top, the Company periodically disseminates Group-wide Keppel Group Anti-Bribery and Corruption Statements, endorsed by Keppel Corporation's CEO, to emphasise the Group's long-standing policy to conduct business with integrity, in an ethical and proper manner, and in compliance with applicable laws and regulations, and require all employees to comply with the code and its values and apply them in all aspects of day-to-day work. All new employees are provided a copy of the Employee Code of Conduct and are required to acknowledge their understanding of its content. In FY2015, close to 2,000 new employees acknowledged that they read and understood the policy.

To mitigate risks of fraud, business units have set in place

their respective operational policies and standard operating procedures, including approval limits for financial commitments and procurement policies.

Training on the Employee Code of Conduct is also conducted regularly, including through an anti-bribery e-training toolkit which is circulated to employees on an annual basis. In FY2015, training courses were conducted for over 500 employees from selected business units to emphasise the Group's approach towards corruption and bribery, and guide the employees in the implementation of the rules and procedures within the Employee Code of Conduct.

Employees are encouraged to seek clarification and guidance if they are unclear on how any aspect of the Employee Code of Conduct applies to their jobs or a particular matter, or the legality or integrity of a particular course of action. Employees who violate the Employee Code of Conduct may face disciplinary action, including suspension or termination of employment.

In addition, the Company has an Insider Trading Policy and Competition Law Compliance



## Corporate Governance

Manual which are available to all employees, to further strengthen corporate governance in these respective areas.

### Reporting and Investigation

The Keppel Whistle-blower Protection Policy has been in place since 1 September 2004 to encourage reporting in good faith of suspected reportable conduct by establishing clearly defined processes through which such reports may be made with confidence that employees and other persons making such reports will be treated fairly and, to the extent possible, protected from reprisal.

Reportable conduct refers to any act or omission by an employee of the Group or contract worker appointed by a company within the Group, which occurred in the course of his or her work (whether or not the act is within the scope of his or her employment) which in the view of a Whistle-Blower acting in good faith, is:

- (a) Dishonest, including but not limited to theft or misuse of resources within the Group;
- (b) Fraudulent;
- (c) Corrupt;
- (d) Illegal;
- (e) Other serious improper conduct;
- (f) An unsafe work practice; or
- (g) Any other conduct which may cause financial or non-financial loss to the Group or damage to the Group's reputation.

The AC reviewed the policy and was satisfied that arrangements are in place for the independent investigation of such matters and for appropriate follow-up action. To facilitate the management of incidences of alleged fraud or other misconduct, the AC is guided by a set of guidelines to ensure proper conduct of investigations and appropriate closure actions following completion of the investigations, including administrative, disciplinary, civil and/or criminal actions, and remediation of control weaknesses that perpetrated the

fraud or misconduct so as to prevent a recurrence.

For more details on the reporting and investigation mechanism under the Keppel Whistle-blower Protection Policy, please refer to pages 110 and 111 of the Company's Report to Shareholders 2015.

### Remuneration Framework & Policy

The Remuneration Committee ("RC") assists the Board to ensure that remuneration policies and practices are sound in that they are able to attract, retain and motivate without being excessive, thereby maximising shareholder value.

Besides recommending to the Board for endorsement a framework of remuneration and the specific remuneration packages for each director and key management personnel, the RC reviews the remuneration of senior management and administers the KCL Share Option Scheme in respect of the outstanding options granted prior to the termination of the KCL Share Option Scheme in 2010, the KCL Restricted Share Plan (the "KCL RSP") and the KCL Performance Share Plan (the "KCL PSP", together with KCL RSP, the "KCL Share Plans").

To enhance objectivity, the RC comprises entirely non-executive directors, a majority of whom (including the Chairman) are independent.

The RC has access to expert advice from external remuneration consultants where required. In FY2015, the RC sought views on market practice and trends from the external remuneration consultants Aon Hewitt. The RC undertook a review of the independence and objectivity of the external remuneration consultants through discussions with them, and confirmed that the external remuneration consultants had no relationships with the Company which would affect their independence and objectivity.

### Executive Director and Other Key Management Personnel

The Company advocates a performance-based remuneration system that is highly flexible and responsive to the market and to the performance of the Company, business unit and individual employee.

In designing the compensation structure, the RC seeks to ensure that the level and mix of remuneration is competitive, relevant and appropriate in finding a balance between current versus long-term compensation and between cash versus equity incentive compensation.

The total remuneration mix comprises three key components; that is, annual fixed cash, annual performance incentive, and the KCL Share Plans.

The annual fixed cash component comprises the annual basic salary plus any other fixed allowances which the Company benchmarks with the relevant industry market median. The annual performance incentive is tied to the Company's, business unit's and individual employee's performance, inclusive of a portion which is tied to Economic Value Added (EVA) performance. The KCL Share Plans are in the form of two share plans approved by shareholders, the KCL RSP and the KCL PSP. The EVA performance incentive plan and the KCL Share Plans are long term incentive plans. Executives who have a greater ability to influence Group outcomes have a greater proportion of overall reward at risk.

The RC exercises broad discretion and independent judgment in ensuring that the amount and mix of compensation are aligned with the interests of shareholders and promote the long-term success of the Company. The mix of fixed and variable reward is considered appropriate for the Group and for each individual role.

The compensation structure is directly linked to corporate and individual performance, both in terms of financial and non-financial performance and the creation of shareholder wealth. This link is achieved in the following ways:

- (a) By placing a significant portion of executives' remuneration at risk ("At Risk component") and in some cases, subject to a vesting schedule;
- (b) By incorporating appropriate key performance indicators ("KPIs") for awarding of annual cash incentives:
  - a. There are four scorecard areas that the Company has identified as key to measuring the performance of the Group – (i) Financial; (ii) Process; (iii) Stakeholders; and (iv) People. Some of the key sub-targets within each of the Scorecard areas include key financial indicators, safety KPIs, enhancing risk management and control measures, corporate social responsibility activities, employee engagement level, talent development and succession planning;
  - b. The four scorecards areas have been chosen because they support how the Group achieves its strategic objectives. The framework provides a link for staff in understanding how they contribute to each area of the scorecard, and therefore to the Company's overall strategic goals. This is designed to achieve a consistent approach and understanding across the Group;
- (c) By selecting performance conditions such as Return on Equity (ROE), Total Shareholder Return and EVA for equity awards that are aligned with shareholder interests;
- (d) By requiring those KPIs or conditions to be met in order for the At Risk components of remuneration to be awarded or to vest; and
- (e) By forfeiting the At Risk components of remuneration when those KPIs or conditions are not met at a satisfactory level.

The RC recognises the need for a reasonable alignment between risk and remuneration to discourage excessive risk taking. Therefore, in determining the compensation structure, the RC took into account the risk policies and risk tolerance of the Group as well as the time horizon of risks, and incorporated risk-adjustments into the compensation structure through several initiatives, including but not limited to:

- (a) Prudent funding of annual cash incentives;
- (b) Bonus deferrals under the EVA performance incentive plan;
- (c) Vesting of contingent share awards under the KCL Share Plans being subject to KPIs and/or performance conditions being met; and
- (d) Potential forfeiture of variable incentives in any year due to misconduct.

The RC is of the view that the overall level of remuneration is not considered to be at a level which is likely to promote behaviours contrary to the Group's risk profile.

In determining the actual quantum of variable component of remuneration, the RC took into account the extent to which the performance conditions have been met. The RC is of the view that remuneration is aligned to performance for FY2015.

In order to align the interests of the executive director and key management personnel with that of shareholders, the executive director and key management personnel are remunerated partially in the form of shares in the Company and are encouraged to hold such shares while they remain in the employment of the Company.

The directors, the CEO and the key management personnel (who are not directors or the CEO) are remunerated on an earned basis and there are no termination, retirement and post-employment benefits that are granted over and above what has been disclosed.

### Non-executive Directors

Each of the non-executive directors (including the Chairman) will receive 70% of his total directors' fees in cash and 30% in the form of KCL shares ("Remuneration Shares") (both amounts subject to adjustment as described below).

The actual number of Remuneration Shares, to be purchased from the market on the first trading day immediately after the date of the annual general meeting ("Trading Day") for delivery to the respective non-executive directors, will be based on the market price of the Company's shares on the Singapore Exchange Securities Trading Limited (the "SGX") on the Trading Day.

The actual number of Remuneration Shares will be rounded down to the nearest thousand and any residual balance will be paid in cash. Such incorporation of an equity component in the total remuneration of the non-executive directors is intended to achieve the objective of aligning the interests of the non-executive directors with those of the shareholders' and the long term interests of the Company.

The aggregate directors' fees for non-executive directors is subject to shareholders' approval at each annual general meeting.

Please refer to pages 96 to 100 of the Company's Report to Shareholders 2015 for details on the remuneration framework.

# Risk Management

*As a Group, we take a balanced approach to risk management, recognising that not all risks can be eliminated. To optimise returns for the Group, we will only undertake appropriate and well-considered risks.*



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**01** As part of the Group's business continuity measures, exercises such as flu pandemic simulations are carried out.

Staying competitive in a complex and dynamic environment requires a continuous, disciplined pursuit of new opportunities and revenue streams. Supported by a risk management system, the Group's combination of strengths will equip us to respond effectively to shifting business demands and seize opportunities to create value for our stakeholders.

## Robust Enterprise Risk Management Framework

Our Board is responsible for governing risks and ensuring that management maintains a sound system of risk management and internal controls. Assisted by the Board Risk Committee (BRC), the Board provides valuable advice to management in formulating the risk management framework, policies and guidelines. Our management surfaces key risk issues for discussion with the BRC and the Board regularly.

The terms of reference for the BRC are disclosed on page 107 of the Company's Report to Shareholders 2015.

The Board has put in place three risk tolerance guiding principles for the Group. These principles serve to determine the nature and extent of the significant risks, which our Board is willing to take in achieving its strategic objectives.

These principles are:

- (1) Risk taken should be carefully evaluated, commensurate with rewards and in line

with the Group's core strengths and strategic objectives.

- (2) No risk arising from a single area of operation, investment or undertaking should be so huge as to endanger the entire Group.
- (3) The Group does not condone safety breaches or lapses, non-compliance with laws and regulations, as well as acts such as fraud, bribery and corruption.

Our risk governance framework is set out on pages 101 to 104 under Principle 11 (Risk Management and Internal Controls) of the Company's Report to Shareholders 2015. This framework facilitates management and the BRC in determining the adequacy and effectiveness of the Group's risk management system.

Risk management is an integral part of decision-making across the Group. Keppel's holistic approach to identifying and managing risks not only instills ownership but reduces uncertainties associated with executing our strategies.

Keppel's Enterprise Risk Management (ERM) framework, a component of Keppel's System of Management Controls, provides the Group with a holistic and systematic approach in risk management. It outlines the reporting structure, monitoring mechanisms, processes and tools, as well as policies and limits, in addressing the Group's key risks.

Risk Management

Our ERM framework is constantly refined, ensuring relevance in a dynamic operating environment. References are made to the Code of Corporate Governance 2012 issued by the Monetary Authority of Singapore, ISO 31000, ISO 22313 and the 2014 Guidebook for Audit Committees.

We keep abreast of the latest developments and best practices by participating in industry seminars and interacting with risk management practitioners. An ERM Committee, comprising risk champions across the business units, drives and coordinates Group-wide initiatives.

As a Group, we take a balanced approach to risk management, recognising that not all risks can be eliminated. To optimise returns for the Group, we will only undertake appropriate and well-considered risks.

The Group's five-step risk management process consists of identification, assessment, formulation of mitigation measures, communication and implementation, and monitoring and review. The process takes into account both the impact and likelihood of the risks identified.

**Strategic Risk**  
**Market, Competition and Technology**

The strategic risks for Keppel Group includes market, competition and technology risks.

These include market driven forces, evolving competitive landscape, changing customer demands and disruptive innovation. These risks receive constant high-level attention through the year. Strategy meetings are held to review business strategies, formulate strategic responses and take pre-emptive mitigations.

The BRC guides the Group in formulating and reviewing risk policies and limits. These are subject to periodic reviews to ensure relevance in supporting business objectives and alignment to the Group's risk tolerance level. Policies aim to address risks effectively and proactively, taking into consideration the prevailing business climate.

**Investment and Divestment**

The Group has an established process for evaluating investment and divestment proposals. The Investment and Major Project Action Committee (IMPAC), together with the Board, guides the Group to take thoughtful risks to earn the best risk-adjusted returns, while exercising the spirit of enterprise. Financial discipline is exercised with capital allocated to the right projects. This systematic evaluation process requires our investment teams to identify the risks and corresponding mitigating actions in their proposals.

Investment risk assessment involves rigorous due diligence, feasibility studies and sensitivity analyses of key assumptions and variables. Some factors considered in the assessment include alignment to Group strategy, financial viability, country-specific political and regulatory developments, contractual risk implications and lessons learned. The investment portfolio is constantly monitored to ensure that performance is on track to meet the strategic intent and investment returns.

**Human Resource**

To drive the Group's growth, emphasis is placed on attracting the best talent, nurturing employees, maintaining good industrial relations and fostering a conducive work environment. The Group continues to focus on improving succession planning, bench strength and maintaining choice employer status.

Keppel recognises that it is vital for staff to imbibe a risk-centric mindset and have the ability to assess and manage risks at work. Keppel Leadership Institute, established as a global centre to groom leaders and equip them with the capabilities to drive and support Keppel's growth, helps to inculcate this mindset through the embedment of risk management in key leadership courses.

**The Keppel Group's Five-Step Risk Management Process**





## Risk Management

### Operational Risk

#### Project Management

Risk management processes are integrated with project management from the initiation stage through to completion. The Group adopts a systematic assessment and monitoring process to help manage the key risks for each project. Particular attention is given to technically challenging and high-value projects, including greenfield developments, and those that involve new technology or operations in a new country. Projects are managed in accordance to the respective country's environmental laws and labour practices.

At the execution stage, project reviews and quality assurance programmes are carried out to address issues involving cost, schedule and quality. Key Risk Indicators are used as early warning signals. Knowledge sharing workshops are conducted to share best practices across the Group, building lessons learnt into case studies for future reference. All this helps to ensure that projects are completed on time and within budget, while meeting safety and quality standards.

#### Health, Safety & Environment

The Group places great emphasis in maintaining a high level of health, safety and environmental (HSE) standards. A CEO Roundtable group reviews safety efforts and considers ideas to improve safety. There are ongoing efforts to raise HSE awareness and culture at the ground level, and align HSE systems and standards via a global HSE information and management framework. Particular attention is placed on training in identified high risk activities such as lifting and movement of vehicles.

#### Business & Operational Processes

Continuing efforts are placed on streamlining business process with a common shared services

platform that allows the Group to achieve cost-savings, improvement in efficiency and productivity, and enhancement in governance and control at the same time.

ISO standards and certifications were adopted to achieve standardisation of processes and best practices. Procedures relating to defect management, operations, project control and supply chain management were established to improve quality of deliverables. A regular review of policies and authority limits is carried out to ensure that they remain relevant in meeting changing business requirements.

#### Laws & Regulations

The Group monitors closely developments in laws and regulations in the countries that we operate in to ensure that our businesses and operations comply with all relevant laws and regulations. We regularly engage with government authorities and agencies to keep abreast of changes in regulations. Particular emphasis is placed on regulatory compliance in all our operations.

#### Business Continuity

We are committed to enhancing the Group's operational resilience through a robust Business Continuity Management (BCM) Plan. Keppel's BCM Plan enables us to respond effectively to disruptions while continuing with critical business functions.

Crisis management and communication procedures have been embedded into the Group's BCM processes to bolster operational readiness. These procedures are constantly refined to allow us to respond in an orderly and coordinated way, as well as to expedite recovery. Our focus is on building capabilities to respond to crisis effectively while safeguarding our people, assets and the interest of stakeholders.

### Information Technology

The Group has in place an Information Technology (IT) security framework to address evolving IT security threats, such as hacking, malware, mobile threats and data-loss.

The Group's IT security, governance and control have been strengthened through the alignment of IT policies, processes and systems, and the consolidation of servers and storages. Extensive training was carried out on user security education, and assessment exercises were conducted to heighten awareness of threats. Measures and considerations have also been taken to safeguard against loss of information, data security, and prolonged service unavailability of critical IT systems.

### Financial Risk

#### Misstatement of Financial Statements, Fraud and Corruption

Policies such as the Whistle-Blower Protection Policy and the Employee Code of Conduct established a clear tone from the top with regard to business and ethics conduct. The Group adopts a strong anti-corruption stance. The internal control systems and processes are monitored closely.

Keppel's System of Management Control Framework outlines the Group's internal control and risk management processes and procedures. For more details on the framework, please refer to page 29 of this report.

#### Financial and Capital

Financial risk management relates to the Group's ability to meet financial obligations and mitigate credit, liquidity, currency and interest rate risks. Policies and financial authority limits are reviewed regularly to incorporate changes in the operating and control environment.

The Group focuses on financial discipline, deploying its capital

Risk Management

to earn the best risk-adjusted returns and maintaining a strong balance sheet to seize opportunities. This includes the evaluation of counterparties against pre-established guidelines. For more details on financial risk management, please refer to pages 82 to 83 of the Company’s Report to Shareholders.

Impact assessment and stress tests are performed to gauge the Group’s exposure to changing market situations. This allows for informed decision-making and prompt mitigating actions. We regularly monitor the concentration exposure in the countries where we operate.

**Risk-Centric Culture**

Effective risk management hinges not only on systems and processes, but also on mindsets and attitudes. The Group fosters a risk-centric culture through four key areas.

**1. Leadership**

Keppel’s top management is committed to fostering a strong risk-centric culture in the Group, showing strong support for risk management initiatives. Key messages encouraging prudent risk-taking in decision-making and business processes are interwoven into major meetings, speeches and publications.

**2. Risk Management Process**

Management of risks is an integral aspect of strategic and budget review, as well as for investment and project planning. Risk considerations are taken at all levels of the businesses, with tools and risk management methodology applied as part of the process.

**3. Training & Communication**

ERM workshops are conducted regularly to enhance risk management competency across the Group. Training and communication are also carried out through various forums and

in-house publications. This has helped to reinforce discipline and garner greater awareness across the Group.

**4. Performance Evaluation**

Keppel seeks to raise the accountability of its employees for risk management through the performance evaluation process. A Group-wide survey is conducted to assess the level of risk awareness amongst employees.

**Proactive Risk Management**

We remain vigilant against emerging threats that may affect our different businesses. Through close collaboration with stakeholders, we will continue to review our risk management system to ensure that it remains adequate and effective.



# Environmental Performance

*Keppel is committed to operate in an environmentally-conscious manner and comply with environmental rules and regulations.*

## Energy Savings

Over

**140m kWh**

Potential energy savings per annum from 61 BCA Green Mark-certified developments, equivalent to over 60,000 t-CO<sub>2</sub> less emissions.

## Energy Efficiency

**501,650 GJ**

Of energy savings expected through energy efficiency initiatives implemented in 2015, translating to estimated cost savings of about \$30 million\*.

## Water Savings

**232,140 m<sup>3</sup>**

Potential water savings from control optimisation improvements at Keppel Merlimau Cogen Plant, equivalent to approximately 4.4% of the Group's total water consumption.

01



\* The electricity conversion factor used is based on the United Kingdom's Department for Environment, Food and Rural Affairs (DEFRA) 2015 Government GHG Conversion Factors for Company Reporting, whereby 1 kWh = 0.0036 GJ. Estimated monetary savings are calculated based on the average electricity tariff rates in 2015 as published by Singapore Power, whereby 1 kWh = \$0.2173.

## Performance Overview

What we said in 2015	What we did in 2015	What we plan to do
<ul style="list-style-type: none"> <li>Enhance resource efficiency across the Group.</li> <li>Continue to factor in environmental considerations in our businesses.</li> <li>Evaluate opportunities to significantly reduce, avoid or offset carbon emissions.</li> <li>Keppel Land to ensure that all completed commercial buildings in Singapore meet at least the Building and Construction Authority of Singapore (BCA) Green Mark Gold<sup>PLUS</sup> standard in 2015.</li> </ul>	<ul style="list-style-type: none"> <li>All completed commercial buildings by Keppel Land in Singapore* are certified to the BCA Green Mark Platinum standard as of 2015.</li> <li>Initiated the set-up of a Task Force on Climate Change comprising representatives from the respective business units, to explore business opportunities, risks and mitigation strategies associated with climate change.</li> <li>Factored in environmental considerations in building designs.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to enhance operational efficiency across the Group to optimise resources such as water and energy, and to reduce waste generated.</li> <li>Certify more operating facilities to the ISO 14001 environmental management standard.</li> </ul>

### Overview

We firmly believe in operating our businesses responsibly by understanding and managing our environmental impact. We continue to seek out opportunities to further improve our environmental performance, focusing on issues that are material to our businesses and the risks and opportunities associated with these issues.

This environmental performance report includes data from the Group's major subsidiaries in Singapore, as well as overseas operations in which the Group has significant ownership. This includes Keppel Offshore & Marine (Keppel O&M) and its significant subsidiaries, Keppel FELS, Keppel Shipyard and Keppel Singmarine; Keppel Land, Keppel Infrastructure and Keppel Telecommunications & Transportation (Keppel T&T).

Due to commercial sensitivity, direct energy consumption and carbon emissions arising from

Keppel Infrastructure's power generation operations are excluded from this report.

### Management Approach

The Group's risk and sustainability-based strategies are used to assess, avoid, reduce and mitigate environmental risks and impacts. We continue to focus on addressing material issues, including enhancing energy efficiency, meeting green standards, managing resources and reducing waste and emissions.

The Group's business units regularly report their resource consumption and environmental performance to senior management, so that resource use is monitored, and where possible, benchmarked against peers and competitors.

Our key business units are certified to ISO 14001 standards and other certifications including the International Sustainability Rating System and Singapore Standard for National Green Data

Management Systems, demonstrating commitment towards environmental protection. The rigs and ships we build comply with all six annexes of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which is the main international convention covering prevention of pollution of the marine environment by ships.

Carbon management receives oversight by the Group's Energy Efficiency Committee, chaired by Director/Advisor of Keppel Offshore & Marine Technology Centre. The committee members comprise representatives across the business units, many of whom are Singapore Certified Energy Managers (SCEM). The committee works closely with the energy management project teams from the respective business units, headed by senior management and supported by SCEM, Technicians, Operations and Maintenance Management, audit teams and third party verifiers to monitor energy use and prepare

**01** Keppel DHCS is the first and largest district cooling systems developer and service provider in Singapore.

\* Except Keppel Towers, which is scheduled for redevelopment.

## Environmental Performance

business units to meet and exceed the requirements of potential legislation.

### Energy

The Group's energy demand comprises a mix of direct and indirect sources of energy. Direct energy refers to primary sources of energy consumed on site by our operations, whereas indirect energy is electricity purchased from external suppliers.

The Group's primary energy source is diesel. Other direct sources of energy are petrol, furnace oil and Liquefied Petroleum Gas.

In 2015, the Group consumed 1,061,515 gigajoules (GJ) of direct energy and 1,985,171 GJ of indirect energy or electricity.

Our Singapore operations consumed 738,935 GJ of direct energy in 2015, which is on par with our consumption in the previous year. The indirect energy used in Singapore operations declined over 2% from 1,625,457 GJ in 2014 to 1,592,299 GJ in 2015.

### Energy Efficiency Initiatives

In 2015, the Group implemented initiatives which are estimated to have saved 501,650 GJ of energy, equivalent to over 16% of the Group's total energy consumption in 2015. This translates to estimated cost savings of about \$30 million<sup>1</sup> and avoidance of approximately 60,000 tonnes<sup>2</sup> of carbon dioxide (t-CO<sub>2</sub>) emissions.

Savings are expected to be achieved through the optimisation of operations and processes; technological improvements, including the adoption of more sustainable building designs and materials; the use of energy-efficient equipment and devices; as well as process improvements.

Initiatives that contributed to these savings include:

- Keppel O&M upgraded the conventional lights at several yards to LED lights and motion

detector lighting, and installed induction lights as dock yard lights for improved luminance with lower energy consumption.

- Keppel Infrastructure's district cooling division upgraded two sets of chiller systems, implemented a linear programming-based real-time smart control system at its district cooling system (DCS) plant at Changi Business Park. It also upgraded the fan blades at Woodlands Wafer Fab Park DCS plant to highly efficient aerofoil blades.
- At the Keppel Seghers Ulu Pandan NEWater Plant, the cooling load consumption in the motor control centre room was further reduced by redesigning the partition to optimise cooling of electrical equipment.

### Harnessing Renewable Energy

The Group strives to decrease reliance on fossil fuels and increase its use of renewable sources of energy.

Keppel Seghers Ulu Pandan NEWater Plant and the Keppel DHCS plant at Changi Business Park feature 1 megawatt peak (MWp) and 510 kilowatt peak (kWp) photovoltaic cell installations respectively, which are among the largest of such installations in Singapore.

Photovoltaic cell installations are also in operation at Keppel Offshore & Marine Technology Centre's office building, Ocean Financial Centre, Bugis Junction Towers and Keppel T&T's distribution centre in the Sino-Singapore Tianjin Eco-City.

Keppel FELS collaborated with its vendor on a solar leasing programme in 2015 and became the first shipyard in Singapore to use solar panels to harvest energy and convert it into electricity for consumption in its Singapore yard. The pilot installation was completed in 2015 and has achieved annual electricity savings of 91,397 kilowatt hours (kWh).

### Green Technology

Keppel Seghers, the environmental technology arm of Keppel Infrastructure, delivered on several projects in 2015, including the Greater Manchester Energy-from-Waste (EfW) Plant in the United Kingdom and the Bialystok Waste-to-Energy (WTE) combined heat and power project in Poland. The company also achieved a substantial handover of the Doha North Sewage Treatment Works in Qatar. The completed projects address environmental issues such as management of solid waste and wastewater, and contribute towards providing clean living environments in the various communities.

**01** Keppel Seghers Ulu Pandan NEWater Plant features a 1 megawatt peak photovoltaic cell installation, which is one of the largest of such installations in Singapore.

**02** Keppel REIT's commercial building 8 Chifley Square in Sydney, Australia, reduces carbon emissions through an onsite tri-generation plant.



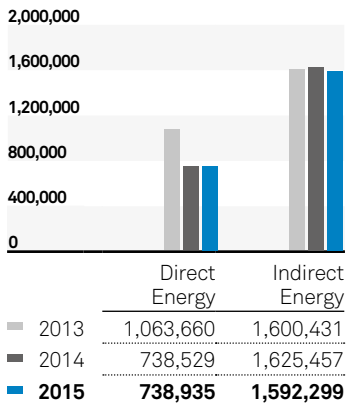
01

<sup>1</sup> The electricity conversion factor used is based on the United Kingdom's Department for Environment, Food and Rural Affairs (DEFRA) 2015 Government GHG Conversion Factors for Company Reporting, whereby 1kWh = 0.0036 GJ. Estimated monetary savings are calculated based on the average electricity tariff rates in 2015 as published by Singapore Power, whereby 1kWh = \$0.2173.

<sup>2</sup> The electricity savings in carbon dioxide equivalent was estimated by multiplying the energy savings in kWh with the Electricity Grid Emission Factor (1 kWh = 0.4322 kg CO<sub>2</sub>) published by Singapore's Energy Market Authority.

Environmental Performance

**Singapore Operations Direct & Indirect Energy Consumption (GJ)**



The Group considers environmental factors during the planning and design of commercial and residential developments, data centres and warehouses as well as during the operation phases.

In 2015, all of Keppel Land's completed commercial properties in Singapore\* have been certified to the BCA Green Mark Platinum standard. In addition, all new projects in Singapore and overseas will achieve at least the BCA Green Mark Gold<sup>Plus</sup> and Gold standards respectively.

All Keppel T&T data centres in Singapore are certified in accordance with the SS 564 – National Green Data Centre Management System. In 2015, Keppel Datahub was awarded the BCA-IDA Green Mark Gold<sup>Plus</sup> for data centres and the Green Mark Gold<sup>Plus</sup> for office interiors. Keppel T&T's first greenfield data centre in Europe, Almere Data Centre 2, is a high quality facility with an environmentally conscious design. Among its features is a chilled-water cooling system that uses ambient air for cooling and Dynamic Rotary Uninterruptible Power Systems, which are more efficient and produce less chemical waste.



02

In Sydney, Australia, Keppel REIT's 8 Chifley Square is a 5-star energy rated property under the National Australian Built Environment Rating System. The commercial building houses an onsite tri-generation plant that generates electricity using a gas engine, which is twice as efficient as coal-fired power stations and reduces carbon emissions. The tri-generation technology is recognised under Australia's Green Star Design as a carbon and demand reduction initiative.

**Water**

Water is a precious resource. The Group continues to focus on conserving the water consumption of its business activities through initiatives such as promoting water-saving practices, adoption of water-efficient technology and equipment, as well as process improvements.

The total water consumption of the Group consists of potable water, NEWater (treated wastewater from sewage), recycled water and water drawn from rivers.

The Group's total water consumption has consistently decreased from 2011 to 2015. In 2015, the Group consumed 5,239,542 cubic metres (m<sup>3</sup>) of water, registering a reduction of approximately 6%, as compared to 5,556,821 m<sup>3</sup> in 2014.

Our operations in Singapore consumed 3,742,386 m<sup>3</sup> of water (potable and NEWater) compared to 3,980,286 m<sup>3</sup> in 2014, marking a nearly 6% decrease in total water consumption from 2014. This was largely due to the significant reduction in water consumption by Keppel Merlimau Cogen Plant following the implementation of an Automatic Blowdown Control System.

\* Except Keppel Towers, which is scheduled for redevelopment.

# Environmental Performance

## Water Efficiency

The Keppel Merlimau Cogen Plant's Automatic Blowdown Control System measures water chemistry and computes the precise amount of water that should be discarded to maintain the quality of water used by the steam turbines to generate steam, which in turn minimises water losses, yields operating cost savings and improves operational efficiency. The plant's total water consumption decreased from 767 m<sup>3</sup> per day to 131 m<sup>3</sup> per day after the implementation, registering a significant reduction of 82.9 % in daily water consumption.

## Water Recycling

During the dry season, treated effluent water from the refuse leachate and waste water at Keppel Infrastructure's Senoko WTE Plant are further treated to be used for ash quenching and fire prevention by wetting of dry refuse in the bunker, reducing the demand for NEWater.

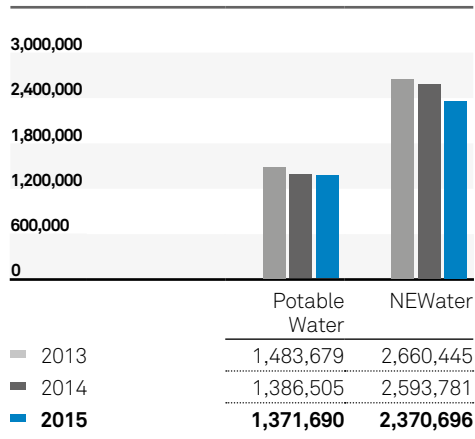
Senoko WTE Plant and Keppel O&M's AmFELS yard recycled a combined total of 66,278 m<sup>3</sup> of water in 2015, which is equivalent to approximately 1.3% of the Group's total water consumption.

## Waste

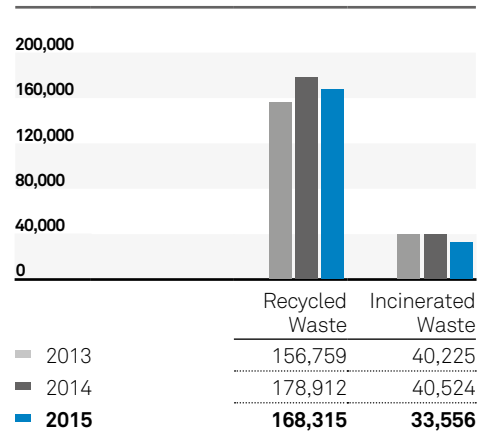
The Group strives to minimise waste generation, increase opportunities for reusing and recycling, as well as treat and dispose of waste responsibly where other options are not practicable. Scrap metals are collected at our shipyards and WTE plants for recycling while used papers are collected and recycled across the Group's businesses.

In 2015, the Group recycled 212,255 tonnes (t) of refuse. Waste recycled included ferrous scrap, grits, plastic stretch wrap, paper and other office consumables. Our Singapore operations recycled 168,315 t of waste in 2015, which is approximately 6 % less than the 178,912 t of waste recycled in

Singapore Operations Potable Water & NEWater Used (m<sup>3</sup>)



Singapore Operations Recycled Waste & Incinerated Waste (t)



2014. As the majority of our recycled waste comprises ferrous scrap and grits from operations, the amount of waste recycled is affected by variations in business activities.

In land-scarce Singapore, refuse is incinerated to reduce the volume of waste and remove harmful substances before disposal at the landfill. A total of 33,556 t of waste was sent for incineration in 2015, registering a 17% decrease compared to 40,524 t in 2014. A total of 33,636 t of waste was sent for incineration from the Group's Singapore and overseas operations in 2015.

As incineration of refuse is prohibited or unavailable in some countries where Keppel O&M operates, a total of 91,676 t of municipal waste was disposed at landfill sites in Azerbaijan, the Philippines and the United States in 2015. The increase in the amount of landfill waste is largely attributable to more comprehensive waste data disclosure by our operations in Azerbaijan.

## Compliance

There were no reports of spillages by Singapore or overseas authorities on the Group in 2015. During the year,

one property development in Singapore was fined a total of \$9,000 for two incidences of mosquito breeding at construction sites. These fines were imposed on Keppel Land's appointed main contractor and mitigating actions have been taken to prevent recurrence of similar incidents.

## Green Practices

The Group continues to implement projects to enhance energy efficiency. Apart from upgrading existing lighting and air-conditioning units to more efficient units, smart controls equipment such as sensors and timers have been installed to optimise utility. To improve motor efficiency, energy-saving devices such as variable speed drives have been installed progressively at plants and facilities. To enhance the eco-friendliness of new facilities, designs that use green building materials and optimise natural lighting and ventilation are considered at the planning stage.

In 2015, Keppel O&M organised its inaugural Energy Saving Initiatives Workshop, and invited staff to contribute energy-saving ideas and pledge their commitment to be eco-conscious.

## Special Focus

## Conserving Water

*The Group conserves water through the adoption of water-efficient technology and equipment.*

### Keppel Merlimau Cogen Plant

The water used to generate steam to power the steam turbines at the Keppel Merlimau Cogen Plant has to be maintained at a high quality. To achieve this, a portion of the water is deliberately discarded under normal operating conditions, a process known as blowdown.

Minimising blowdown rates reduces the consumption of raw water and chemicals, the cost of treating used water, and improves plant efficiency from reduced heat loss in the water-to-steam cycle.

Previously, the blowdown rate was controlled using manual valves and based on daily analyses of the water chemistry by maintenance staff, which may lack precision. To reduce water consumption, Keppel Merlimau Cogen introduced an Automatic Blowdown Control System in 2015. The system measures water chemistry and computes the precise amount of water to be discarded. Since implementation, the innovation has minimised water losses at the plant, yielded savings in operating costs and improved operational efficiency.

The plant's total water consumption has since decreased from 767m<sup>3</sup> per day to 131m<sup>3</sup> per day, which is equivalent to a reduction of 82.9% in daily water consumption.

### Environmental Stewardship

Ocean Financial Centre and Marina Bay Financial Centre (MBFC), properties under Keppel REIT's portfolio, were among six buildings to be awarded the Water Efficient Building Gold certification by PUB, Singapore's national water agency, in 2015. Bugis Junction Towers, also a Keppel REIT property, received the Silver Certification.

Ocean Financial Centre is an eco-icon with a myriad of innovative green features. These include rooftop gardens that harvest rainwater for irrigation, cooling towers that recycle condensate water and water-efficient tap fittings, all of which contribute towards overall savings of 42 million litres of water annually – enough to fill 17 Olympic-sized swimming pools.

MBFC property management ensures efficient water usage with advanced water-leak detection and monitoring systems. Technical staff are trained to monitor water consumption and analyse the data collected. Tenants are also educated on water-saving measures through circulars and seminars conducted by water efficiency consultants.

**01** Keppel Merlimau Cogen introduced an Automatic Blowdown Control System to minimise water losses at the plant, yield savings in operating costs and improve operational efficiency.





## Environmental Performance



01 Keppel supports efforts to raise environmental awareness, such as the Green Corridor Run.

01

### Emissions & Effluents

#### GHG Emissions\*

Keppel aims to achieve a 16% improvement in its greenhouse gas (GHG) emissions from 2020 business-as-usual (BAU) levels.

The main drivers of the Group's carbon management strategy include:

- Reducing environmental impact;
- Safeguarding against potential future legislation; and
- Managing the impact of rising energy costs.

The Group's carbon management strategy is to provide a basis for identifying, implementing, monitoring and tracking the carbon management action plans of our various business units. The key themes of this strategy are:

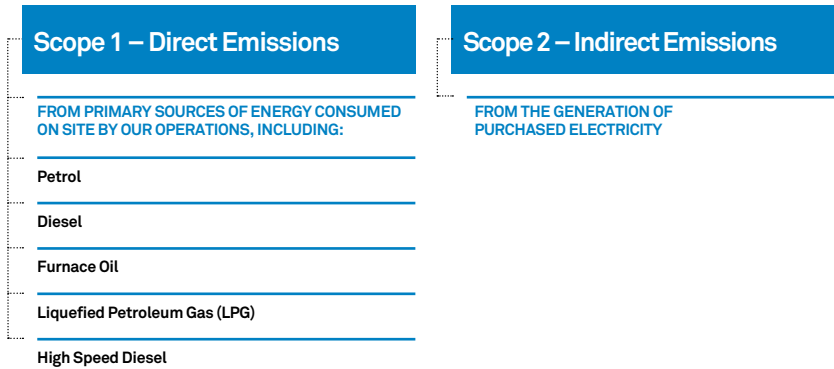
- Optimise energy consumption through information monitoring;
- Improve operational efficiencies through the adoption of smart control systems and more energy-efficient equipment and technology; and
- Imbue an environmentally-conscious mindset in stakeholders.

In 2015, direct emissions from the use of fuels and the incineration of waste at WTE plants amounted to 687,128 t-CO<sub>2</sub> while indirect emissions from electricity use was 233,127 t-CO<sub>2</sub>.

The Group's total direct emissions for Singapore operations increased by 14.6% to 663,557 t-CO<sub>2</sub> in 2015, attributable to the increased amount of waste incinerated by the two WTE plants, under service obligations to the client.

\* The GHG conversion factors used for Scope 1 (direct emissions) are based on the United Kingdom's Department for Environment, Food and Rural Affairs (DEFRA) 2015 Government GHG Conversion Factors for Company Reporting. The GHG conversion factors for Scope 2 (indirect emissions) are based on the "Electricity Grid Emission Factor" for 2015 from the Energy Market Authority. The GHG emission Scopes 1, 2 and 3 are defined by the GHG Protocol, whereby Scope 1 refers to emissions from company owned and operated facilities, machines, vehicles, etc.; Scope 2 refers to emissions from the generation of purchased electricity consumed by the company; Scope 3 emissions are a consequence of the activities of the company, but occur from sources not owned or controlled by the company, such as employee commuting, business travel and the purchase of office supplies. The Group does not report on Scope 3 emissions as the boundaries for such emissions are very broad, and it is presently not feasible to track such data for a credible Scope 3 assessment.

**Classification of GHG emissions from our operations**



Indirect emissions from our Singapore operations decreased by 13.6% to 175,165 t-CO<sub>2</sub> in 2015, largely due to a combination of the implementation of energy efficiency initiatives and a lower electricity grid emission factor.

**Other Emissions and Effluents**

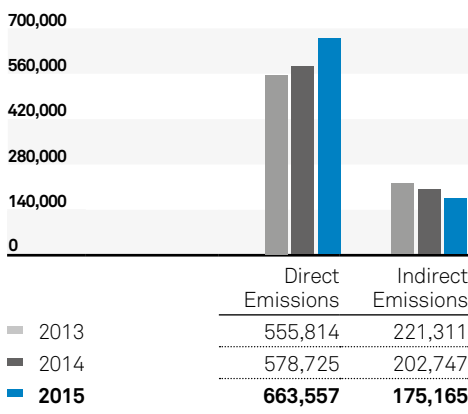
Keppel Infrastructure continues to actively manage the emissions from its operations. Nitrogen oxide and sulphur oxide emitted from the three plants under Keppel Infrastructure remain far below the emission standards of 700 milligrams per normal cubic metre (mg/Nm<sup>3</sup>) and 500 mg/Nm<sup>3</sup> respectively, as stipulated by Singapore’s National Environment Agency’s (NEA) Code of Practice on Pollution Control.

In 2015, dust or particulate matter emitted by Senoko WTE Plant and Keppel Seghers Tuas WTE Plant were 8.75 mg/Nm<sup>3</sup> and 5.36 mg/Nm<sup>3</sup> respectively, which were well below the NEA emission standard of 100 mg/Nm<sup>3</sup>.

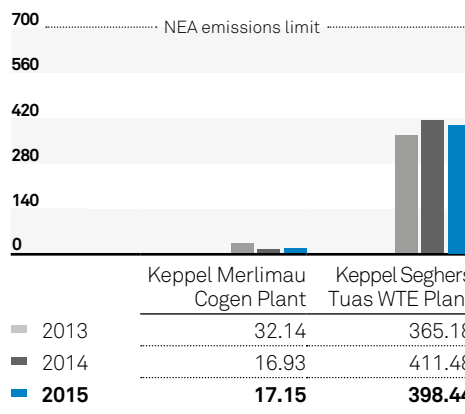
This report includes dust or particulate matter emitted by Keppel O&M business units in Singapore. The average dust or particulate matter emitted by Keppel FELS and Keppel Singmarine in Singapore were 5.23 mg/Nm<sup>3</sup> and 6.01 mg/Nm<sup>3</sup>, respectively. The emissions data covers all of the 23 blasting chambers of Keppel FELS’ and Keppel Singmarine’s operations in Singapore. The emissions data was obtained through an annual sampling performed by a third party at each of the blasting chambers.

All trade effluent from our operations are treated and discharged to water courses or sewer systems in accordance with the environmental discharge limits and effluent standards in the country of operation.

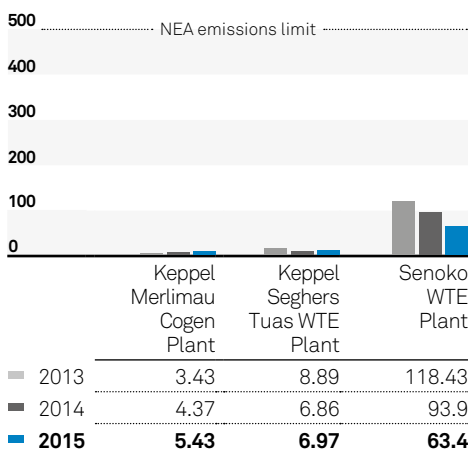
**Singapore Operations Direct Emissions & Indirect Emissions (t-CO<sub>2</sub>)**



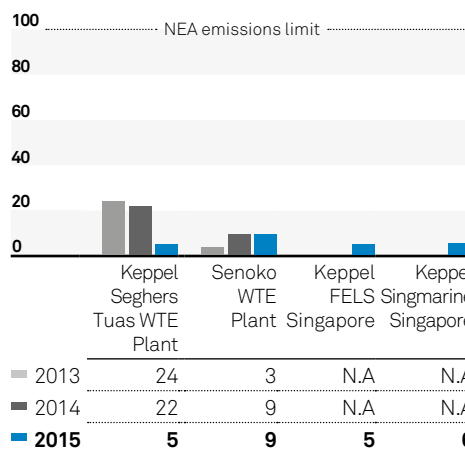
**Nitrogen Oxide for Plants Under Keppel Infrastructure (mg/Nm<sup>3</sup>)**



**Sulphur Oxide for Plants Under Keppel Infrastructure (mg/Nm<sup>3</sup>)**



**Average Particulate Matter Emissions for Keppel’s Facilities (mg/Nm<sup>3</sup>)**



## Special Focus

## Energy-Efficient District Cooling

*The building sector in Singapore consumes more than one-third of Singapore's total end-use electricity.*

As air-conditioning accounts for major energy use in commercial buildings, chiller plant efficiency has attracted considerable attention in the nation's drive to conserve energy and achieve greater energy efficiency.

District Heating and Cooling Systems provide an alternative to conventional heating and air-conditioning systems, and is more cost effective and environmentally friendly. Buildings that tap on district cooling systems achieve energy savings of up to 40% when compared to buildings with conventional in-building chilled water production.

As the first and largest district cooling systems developer and service provider in Singapore, Keppel DHCS provides district cooling services with four plants at major business and industrial parks in Singapore - Changi Business Park, Biopolis@one-north, Mediapolis@one-north and Woodlands Wafer Fab Park. Keppel DHCS works with customers, who are commercial building owners and occupiers, to integrate energy-efficient cooling technology into building designs.

Abroad, the Keppel DHCS plant in Tianjin, China, provides district heating and cooling services at the Eco-Business Park of the Sino-Singapore Tianjin Eco-City. The plant incorporates geothermal technology to support its heating and cooling requirements.

Keppel DHCS is committed to drive energy efficiency in its operations by investing heavily to drive innovation and the adoption of green technology.

In 2010, Keppel DHCS pledged to improve its energy efficiency and reduce its carbon emissions by 16% below 2020 business-as-usual levels. To achieve this goal, the company outlined a 10-year road map to enhance energy efficiency, focusing on three main areas - process optimisation, management of energy use and asset optimisation. Some of the key highlights of its initiatives include putting in resources to test and evaluate energy-efficient technology, as well as implementing smart controls such as realtime forecasting, process simulation and optimisation.

Since 2010, Keppel DHCS has achieved a total energy saving of 24,969MWh. This translates to a reduction of about 10,791 tonnes of carbon dioxide emissions.

For its contribution towards saving energy, the company was recognised at Singapore's Energy Efficiency National Partnership Awards in 2015, in the 'Excellence in Energy Management' category.



## Special Focus

## Low Carbon Achievement

*The Low Carbon Living Lab in the Sino-Singapore Tianjin Eco-City encourages test-bedding and demonstration of green building features, energy-saving building technologies and renewable energy adoption.*



02

**01** Through its District Heating and Cooling Systems division, Keppel provides an environmentally-friendly alternative to conventional heating and air-conditioning.

**02** The Low Carbon Living Lab in Sino-Singapore Tianjin Eco-City harnesses renewable energy through green building features.

The Sino-Singapore Tianjin Eco-City (Sino-Singapore Eco-City) was named the National Green Development Demonstration Zone by the China State Council and selected as a Northern China Green Building Base by the China Green Building Council.

Today, eight years after the groundbreaking of the project, more than 50,000 people are working and living in the Sino-Singapore Eco-City, and close to 3,500 companies have invested in the city.

With its distinct blend of core competencies, the Keppel Group is entrusted to lead the Singapore consortium for the Sino-Singapore Eco-City, and works in close tandem with its Chinese consortium partner to guide the 50-50 joint venture Sino-Singapore Tianjin Eco-City Investment and Development Co., Ltd (SSTEC) in its role as master developer of the Sino-Singapore Eco-City.

The Low Carbon Living Lab (LCLL) in the Sino-Singapore Eco-City is a project developed by SSTEC with support from the Building & Construction Authority of Singapore (BCA), International Enterprise Singapore and the Sino-Singapore Tianjin Eco-City Administrative Committee.

The LCLL encourages test-bedding and demonstration of green building features, energy-saving building technologies and renewable energy adoption. The building, which began

operations in 2013, was officially opened by Singapore President Tony Tan Keng Yam in 2015.

The LCLL consumes 38% less energy compared to similar buildings, reaping annual savings of 700,000 kWh of electricity, equivalent to saving over 200 tonnes of coal and avoiding more than 600 tonnes of carbon dioxide emissions. In addition, 28% of energy used by the building is derived from renewable sources.

SSTEC has also established a professional green facilities management team and formulated green building operation guidelines to ensure smooth and energy-efficient operations.

The LCLL was conferred China's Green Building Design Label 3-Star Award and Green Building Operation Label 3-Star Award. The LCLL is also the first building in a temperate zone and in China to be awarded the Green Mark Platinum Award by the BCA. The LCLL received an incentive grant of RMB 450,000 from China's Ministry of Finance in recognition of its outstanding contributions in protecting the environment, utilising renewable energy and creating a comfortable and healthy indoor environment.

# Product Excellence

*Keppel is committed to uphold execution excellence and foster close relationships with our customers to understand their evolving needs and strengthen our product and service offerings.*

## Green Mark Awards

**61**

Building & Construction Authority of Singapore (BCA) Green Mark Awards achieved by Keppel Land to date.

## Jackup Rigs

**100<sup>th</sup>**

Jackup rig delivered by Keppel FELS in 2015.

01



## Performance Overview

What we said in 2015	What we did in 2015	What we plan to do
<ul style="list-style-type: none"> <li>Continue to invest in Research and Development (R&amp;D) and technology, especially for innovative offshore solutions for areas beyond drilling.</li> <li>Continue to review our processes and strengthen our systems.</li> </ul>	<ul style="list-style-type: none"> <li>Keppel Offshore &amp; Marine (Keppel O&amp;M) handed over seven quality jackups as well as delivered several non-drilling solutions to its customers. These included a Depletion Compression Platform, three Floating Production Storage and Offloading (FPSO) projects, an accommodation semisubmersible and three ice-class vessels.</li> <li>Keppel Land invested \$615 million to strengthen its portfolio with a residential site in West Jakarta, an office building in London, and a joint venture with China Vanke for a prime residential development in Chengdu.</li> <li>Keppel Seghers delivered on the Engineering, Procurement and Construction projects – Greater Manchester Energy-from-Waste (EfW) Plant in the United Kingdom (UK), Doha North Sewage Treatment Works in Qatar and Bialystok Waste-to-Energy (WTE) Combined Heat and Power project in Poland.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to execute our projects well, delivering them safely, on time and on budget.</li> <li>Continue to pursue opportunities in the non-drilling offshore and marine market.</li> <li>Continue to seek new opportunities and expand our services to customers.</li> </ul>

### Overview

Driven by our core values of ‘Customer Focus’ and ‘Agility and Innovation’, Keppel delivers value-added solutions in a timely and safe manner within our customers’ budgets.

Our key business units are certified to ISO 9001, ISO 14001 and OHSAS 18001 standards, demonstrating our commitment to uphold internationally-recognised standards of product quality, environmental protection and occupational health and safety.

We constantly monitor and review our processes and strengthen our systems to improve efficiencies, increase productivity and maintain high standards of quality.

### Developments Offshore & Marine

Keppel O&M handed over seven quality jackups as well as delivered several non-drilling solutions to its customers in 2015. These included a Depletion Compression Platform, three FPSO projects, an accommodation semisubmersible and three ice-class vessels.

Keppel O&M also inked an agreement to acquire the LETOURNEAU™ rig designs and aftermarket business to broaden its suite of jackup rig design solutions and better support its customers through aftersales and aftermarket services.

Keppel O&M’s subsidiary, Keppel FELS, a leading designer, builder and repairer of high-performance mobile offshore rigs, delivered its milestone 100<sup>th</sup> jackup rig during the year.

**01** Keppel is committed to build enduring relationships with our customers and provide a superior customer experience.

## Product Excellence



01

In 2015, Keppel Shipyard garnered the Shipyard of the Year award conferred by Lloyds List. It completed more than 400 vessel repair projects. Most of these repair projects were for repeat customers, an indication of its customers' deep satisfaction with its services.

Keppel Shipyard has a solid track record of completing 118 FPSO/ Floating Storage and Offloading (FSO)/Floating Storage and Re-gasification Units (FSRU)/ Floating Storage Unit (FSU) projects and 75 turrets/mooring systems to-date.

As part of Keppel's commitment to bring innovative and commercially-viable solutions to the market, Keppel Shipyard will be undertaking the world's first conversion of a large Roll-on/ Roll-off cargo vessel to operate on a dual-fuel diesel LNG propulsion system.

Maintaining its leading position in complex conversions, Keppel Shipyard secured a contract for the conversion of a third Moss-type LNG carrier into a Floating Liquefaction (FLNG) vessel. The yard is utilising a construction method that improves productivity and safety. By avoiding the extensive pipelines and land dredging and clearing needed to construct onshore liquefaction facilities, FLNG vessels will minimise environmental disturbance while increasing the speed and efficiency of the delivery of natural gas—the cleanest fossil fuel—to the market.

With an extensive suite of offshore and marine solutions and continuous investment in R&D, Keppel O&M serves a wide spectrum of customers in both drilling and non-drilling markets, who continue to require various solutions for oil production, subsea construction, or offshore liquefaction, amongst others.

### Property

The Keppel Group received eight awards at the BCA Awards 2015, in recognition of the environmentally-friendly design and construction of its buildings and facilities.

Keppel Land aims for its new projects in Singapore to achieve at least the BCA Green Mark Gold<sup>PLUS</sup> rating, and for new developments overseas to attain at least the BCA Green Mark Gold certification or its equivalent. For all completed commercial buildings in Singapore, the company has achieved its goal of meeting at least the BCA Green Mark Gold<sup>PLUS</sup> standard. To date, the company has garnered 61 BCA Green Mark awards. For its excellence in shaping a sustainable built environment in Singapore, Keppel Land was conferred the BCA Built Environment Leadership (Gold Class) and the BCA Quality Excellence Award (Gold) in 2015.

**Infrastructure**

Keppel Seghers, a Keppel Infrastructure subsidiary, remains one of the largest providers of imported WTE solutions in China, with 22 plants in operation or under construction. With its proven technologies, Keppel Seghers is able to provide solutions that adhere to stringent emission standards. The company handed over the Runcorn EfW facility in the UK and the Bialystok WTE combined heat and power project in Poland to clients in 2015. It also completed a substantial handover of the Doha North Sewage Treatment Works

in Qatar to its client. The Runcorn EfW facility is able to process up to 850,000 tonnes of refuse-derived fuel per annum, making it one of the largest and most efficient Combined Heat and Power facilities in the world. These solutions for waste management and wastewater help communities address their environmental challenges and achieve sustainable living goals.

Keppel Logistics, a subsidiary of Keppel Telecommunications & Transportation (Keppel T&T), received the ASEAN Transport and Logistics Awards 2015

for being the Best Land Freight Forwarder in Singapore, as a testament of its operational and service excellence. Its operations are equipped with industry-leading technologies to smoothen process flow, improve data accuracy and ensure goods security.

Keppel Logistics achieved the SS590: 2013 Hazard Analysis and Critical Control Point-based Food Safety Management Systems certification, which further enhanced the food safety robustness of its end-to-end supply chain management.

**01** The Keppel Group swept a total of eight Building and Construction Authority of Singapore (BCA) Awards and was recognised for its environmentally-friendly buildings and facilities.

**02** The combined first and second phases of the Runcorn Energy from Waste facility is able to process up to 850,000 tonnes of refuse-derived fuel per annum, making it one of the largest and most efficient Combined Heat and Power facilities in the world.





## Product Excellence



**01** As a testament of its operational and service excellence, Keppel Logistics received the ASEAN Transport and Logistics Awards 2015 for being the Best Land Freight Forwarder in Singapore.

**02** The Keppel-NUS Corporate Laboratory pursues three major research thrusts: (clockwise from left) Future Systems (Deepwater Technology and Arctic Technology), Future Resources, (Deepsea Mining, including research on polymetallic nodules) and Future Yards (Robotics and Automation).

01

In addition, Keppel Logistics also embarked on the Good Distribution Practice certification for the storage and distribution of medicinal products. Since April 2015, it has also taken over the weighing and Lanshi Port main gate supervision work from the customs authorities in China, which increases the speed of cargo releasing and weighing work.

Keppel Data Centres, a Keppel T&T subsidiary, continued to operate its data centres at near full occupancy in 2015, helping companies ensure business and IT operations with highly resilient and energy-efficient data centres.

In 2015, Keppel Digihub successfully obtained the ISO 27001 Information Security Management certificate, as part of efforts to strengthen internal control of IT and security matters. The unit's high renewal rate of over 90% for its data centre facilities affirms the enduring relationships it has with customers and its excellent service standards.

### Geographic Diversification

We continue to strengthen our capabilities in markets where we have an established presence and tap growth opportunities globally.

Keppel Land invested \$615 million to strengthen its portfolio with a residential site in West Jakarta, an office building in London, and a joint venture with China Vanke for a prime residential development in Chengdu.

Keppel T&T embarked on its fourth data centre development in Singapore and opened Almere Data Centre 2, its first greenfield data centre in Europe. In the logistics business, Keppel T&T commenced operations at its Tampines Logistics Hub in Singapore and a distribution centre in Vietnam.

Keppel REIT completed its acquisition of three prime retail units at 8 Exhibition Street in Melbourne, Australia, while Keppel DC REIT acquired Intellicentre 2 in Australia and made a forward purchase of maincubes Data Centre in Germany.

### Fostering Innovation

Despite the challenging environment, we continue to invest prudently in R&D.

Group-wide, the inaugural Keppel Innovation Convention was launched in 2015 as a platform to foster an innovative culture and recognise outstanding innovations across the Group.

Having engaged in R&D since its establishment in 2007, Keppel Offshore & Marine Technology Centre (KOMtech) was recognised for its achievements in developing innovative solutions for the marine sector at the biennial Singapore International Maritime Awards 2015 by the Maritime and Port Authority of Singapore (MPA). KOMtech was awarded the Outstanding Maritime R&D and Technology Award for its innovative design of a Dual Fuel (DF) ASD tug with a 65-tonne bollard pull capacity which can run on both LNG and diesel fuel. The development of the design comes at a time when natural gas is rising in importance as an

*Despite the challenging operating environment, Keppel continues to invest prudently in R&D.*

energy resource and alternative marine fuel. KOMtech's focus on developing a natural gas solutions suite, with technology for both onshore and offshore liquefaction, LNG transportation and regasification solutions, is in line with MPA's objective of establishing Singapore as an LNG bunkering port by 2020.

**Innovation Through Partnerships**

Keppel and the National University of Singapore (NUS) set up the Keppel-NUS Corporate Laboratory in 2013 to create a synergistic industry-university partnership to pursue three major research thrusts to address future challenges of the offshore industry: Future Systems, Future Yards and Future Resources.

**Future Systems**

The research focus under the Future Systems thrust looks at two main themes: deepwater technology and arctic technology. Under deepwater technology, the Corporate Laboratory is conducting research on semisubmersible hull optimisation to enhance the design and construction of the next-generation deepwater platforms. The results have then been introduced in Keppel O&M's semisubmersible designs.

**Future Yards**

This research thrust focuses on productivity enhancements for yard operations to reduce reliance on manual labour in the yards. With the shortage of highly-skilled welders who are willing to work in a shipyard environment, another research focus is the study of high-value steel work fabrication in the offshore industry, such as brace-to-chord joints of jackup leg structures commonly used in offshore rigs.

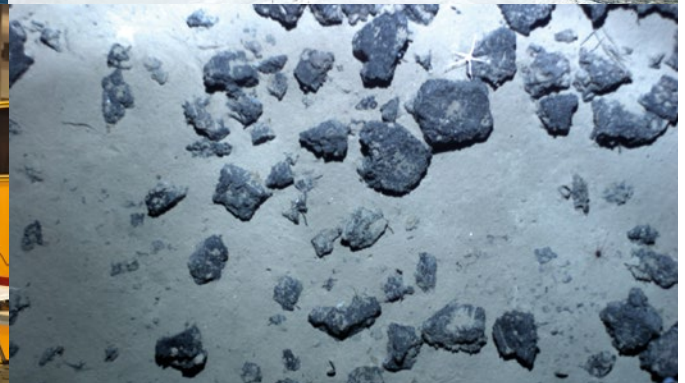
**Future Resources**

The research thrust under Future Resources focuses on Deepsea Nodule Collection to develop core competencies in environmentally-benign exploration and exploitation of mineral resources in the deep ocean.

Separately, at our Property Division, Keppel Land and M1 commenced a pilot of the Smart Lives programme at The Luxurie residential development, where selected residents can enjoy a suite of smart healthcare and home solutions.

**Customer Health & Safety**

The health and safety of our customers in the provision and use of our products and services are of utmost importance to us.



## Product Excellence



01

*We actively seek our customers' feedback and suggestions to help us understand their pressing needs and translate them into improvements at the ground level.*

We exercise due care and diligence in the design, construction, and operation of our products and services to ensure that they do not pose hazards to customers.

We adhere to policies, procedures and guidelines on environment, health and safety to ensure that health and safety are not compromised in any way. Health and safety impacts are assessed for improvement in all our significant product and service categories, and throughout products' life cycles.

We consider proper design, handling, storage and disposal of materials as early as the planning stage and review product operation and service performances for improvements in customers' health and safety.

Keppel Land has adopted the Guidelines on Design for Safety in Buildings and Structure for all its new projects in Singapore since 2008, in line with Singapore's Workplace Safety and Health Council's Design for Safety Regulations which are slated to come into effect on 1 August 2016. The guidelines require safety and health risks to be incorporated into the early conceptual and planning phases of a project, enabling designers and consultants to reduce these risks through good design and effective project planning.

### **Customer Engagement**

We believe that customer engagement is essential for sustainable growth and long-term success. We actively seek our customers' feedback and suggestions to

Product Excellence

**01** Keppel Land's Customer Focus and Property Management teams foster strong long-term customer relationships with homeowners and tenants.

**02** Keppel Shipyard completed more than 400 vessel repair projects in 2015. Most of these repair projects were for repeat customers, an indication of its customers' deep satisfaction with its services.

help us understand their pressing needs and translate them into improvements at the ground level.

Every four months, Keppel FELS conducts surveys with customers using questionnaires and face-to-face interviews. The overall average score for the company in 2015 was 4.8 on a scale of 1 to 6, which is in the 'good' to 'very good' range. Keppel Verolme, Keppel AmFELS and BrasFELS conducted similar customer surveys in 2015 with positive results.

Prior to the awarding of projects, Keppel Shipyard conducts client relations meetings to ensure that expectations are clearly understood. Upon the conclusion of a project, post project reviews are in place to identify success points and improvement areas.

Keppel Shipyard received an overall score of 5.6 out of 6 for the customer satisfaction feedback for the year 2015 while Keppel Singmarine received a 96% rating of 'good' or better based on its customer feedback forms for 2015.

Keppel Land's Customer Focus and Property Management teams foster and sustain

long-term customer relationships. Feedback from homeowners and tenants is taken into consideration in the reviews of upcoming projects and existing developments.

In 2015, service quality surveys were conducted for 16 completed projects. Over 94% of the respondents indicated their satisfaction with the services rendered in the management and operations of the developments.

At Keppel Logistics, a subsidiary of Keppel T&T, customer satisfaction remained strong with 92% of respondents rating its services as 'good' or better.

**Compliance**

Keppel subscribes to best practices and complies with all applicable legislations and requirements. Keppel's business units abide by the Singapore Code of Advertising Practice (SCAP) by the Advertising Standards Authority of Singapore.

In 2015, the Group did not identify any non-compliance with laws, regulations and voluntary codes concerning the provision, use, and customer health and safety of its products and services.



## Special Focus

## Green Data Centre

*Meeting the demand for green data centres, Keppel Telecommunications & Transportation (Keppel T&T) unveiled Almere Data Centre 2, its first greenfield data centre in Europe, on 30 October 2015.*

Strategically located next to Almere Data Centre 1, Keppel's existing data centre in the Netherlands, Almere Data Centre 2 is a high quality colocation data centre with a lettable area of approximately 118,000 square feet.

Fitted out to Tier III standards that ensure service availability of up to 99.98%, it features full redundancy for power and cooling and is designed to deliver power density of more than 1.5 kW per square metre to customers, with the opportunity to scale up to 2.0 kW per square metre.

Amsterdam is a first-tier data centre market in Europe with strong demand due to its proximity to major European trading hubs, excellent telecommunications infrastructure and government support. Data centre utilisation rates in Amsterdam are predicted by BroadGroup research to surpass 90% by 2018.

Almere Data Centre 2's energy-efficient features include a chilled-water cooling system that utilises free ambient air during

colder months and Dynamic Rotary Uninterruptible Power Systems (DRUPs) that replace traditional battery-run uninterruptible power systems and reduce chemical waste.

Keppel plans to work with the local municipality to integrate the existing data centres and potential future developments into an Almere Data Centre Campus that will draw on nearby green energy from Flevoland Wind Valley, use water for cooling from Hoge Vaart canal and recycle waste heat for a secondary district heating network.

Speaking at the opening ceremony, Mr Thomas Pang, CEO of Keppel T&T, said, "As we grow our presence in Europe, we seek to do so sustainably. Across Europe and Asia Pacific, Keppel T&T's best-in-class colocation data centres feature environmentally conscious designs that maximise energy efficiency while meeting stringent customer requirements."

01



## Special Focus

## Innovating LNG Solutions

*In the shipping industry, the use of Liquefied Natural Gas (LNG) as an alternative marine fuel is on the rise due to emissions reduction requirements set by the International Maritime Organisation in Emission Control Areas that came into force in January 2015.*



02

**01** Almere Data Centre 2 is Keppel Telecommunications & Transportation's first greenfield data centre in Europe.

**02** Keppel Shipyard has secured three contracts from Golar LNG for the conversion of Moss-type LNG carriers into FLNG vessels.

Recognising the impact of shipping emissions on air quality, the adoption of LNG through subsidies for LNG-fuelled vessels and the development of LNG bunkering facilities is being encouraged in North America, including most of the US and Canadian coast, and key countries in northwest Europe, the Baltic Sea area and Asia.

The first universal agreement to cut greenhouse gas emissions, which was reached at the Paris Climate Conference in December, will also help to support the shift towards gas as a cleaner alternative to oil and coal.

To capture opportunities in this growing gas market, Keppel has brought together research and development (R&D) capabilities of its design and technology units, Keppel Offshore & Marine Technology Centre (KOMtech) and Marine Technology Development (MTD), and the marine conversion and shipbuilding expertise of our yards to develop a suite of gas solutions.

Keppel Shipyard is currently leveraging its expertise in conversion to undertake the world's first-of-its-type Floating Liquefaction vessel conversion. Our specialised shipbuilding unit, Keppel Singmarine, and MTD have developed proprietary designs for LNG carriers, barges and tugs which can meet the downstream needs of delivering LNG efficiently to the end markets.

Keppel's proprietary natural gas liquefaction technology, PreNEx (Pre-cooled Nitrogen Expansion), offers a simple, safe and reliable alternative to other nitrogen expansion processes, and can be employed for offshore and onshore purposes, such as Floating Liquefaction (FLNG) and land-based liquefaction facilities.

Keppel's strong track record in the conversion of Floating Storage and Re-gasification Units (FSRU) enables our customers to bring their gas to markets in a fast and cost effective manner without relying on land-based terminals.

Keppel has also designed robust carriers with capacities ranging from 3,000m<sup>3</sup> to 30,000 m<sup>3</sup> with non-propelled or self-propelled designs that can deliver LNG along shallow water rivers, coastal areas and inter-islands. We are working with BG Group (now part of Shell) to provide bunkering services in the Port of Singapore commencing in 2017.

Bringing power to users, our LNG-fuelled power barges are designed with enhanced efficiency and can be installed quickly and economically.

For its design of an Azimuth Stern Drive (ASD) tug with a 65-tonne bollard pull capacity which can run on both LNG and diesel fuel, KOMtech was awarded the Outstanding Maritime R&D and Technology Award in 2015 by the Maritime Port Authority of Singapore.

## Safety & Health

*Safety is one of our core values. We are committed to create an incident-free workplace for all our stakeholders.*

### Investment

**\$46m**

Invested to improve safety systems and training.

### Awards

**35 Awards**

Conferred on the Keppel Group at the Workplace Safety and Health (WSH) Awards by Singapore's WSH Council and Ministry of Manpower in 2015.

01



## Performance Overview

What we said in 2015	What we did in 2015	What we plan to do
<ul style="list-style-type: none"> <li>○ Strive for zero fatalities and reduce Accident Severity Rate (ASR) by 50%.</li> <li>○ Improve communication networks to share safety best practices across the Keppel Group.</li> <li>○ Refine efforts in mitigating serious high potential and reportable incidents.</li> </ul>	<ul style="list-style-type: none"> <li>○ Achieved 40% reduction in Accident Frequency Rate (AFR).</li> <li>○ Established Group Health, Safety and Environment (HSE) Alerts system to better disseminate lessons learnt across our global operations and ensure preventive measures are taken promptly.</li> <li>○ Organised inaugural Global HSE Workshop to encourage collaboration across business units and share best practices.</li> <li>○ Engaged over 60 senior-level personnel across the Group in a roundtable brainstorming session to review strategies to improve safety performance.</li> <li>○ Strengthened risk management controls in key areas such as road safety and pallet racking integrity in our logistics business.</li> <li>○ Refreshed and publicised Keppel's five Key Safety Principles to ingrain safety consciousness.</li> </ul>	<ul style="list-style-type: none"> <li>○ Refine strategies to prevent fatalities and reduce injuries.</li> <li>○ Continue to review safety standards, incident investigation processes and management of high impact risk activities (HIRA) to align with global standards.</li> <li>○ Continue to develop capabilities of senior managers and line managers to equip them with the skillsets to become more effective safety leaders.</li> </ul>

### Overview

Safety is a core value at Keppel, and we view a strong commitment to Health, Safety and Environment (HSE) as an integral part of our business.

Our approach to safety management is guided by the Keppel Group's Safety and Health strategy, and is focused on four aspects across our global operations - having an integrated HSE framework, implementing effective management systems, promoting safety ownership and enhancing partnerships across our operations.

### Management Approach

We comply with laws and regulations applicable to the countries in which we operate, and our safety management system is routinely audited internally as well as by independent consultants.

All employees and third-party suppliers and contractors are expected to abide by the Keppel Corporation HSE Policy which places the highest priority on the health and safety of people and the protection of assets and the environment.

Our business units strive to achieve HSE certifications to align with global best practices.

Keppel FELS, Keppel Shipyard and Keppel Singmarine are certified to be compliant with the Singapore Standard for Occupational Safety and Health management system (SS506), while our yards in Azerbaijan, Brazil, China, Qatar, the Netherlands, United Arab Emirates and the United States are certified to meet both internationally-recognised OHSAS 18001 and ISO 14001 standards.

**01** *The well-being and safety of all our stakeholders are among our top priorities. Ayyaperumal Tamizharasan, (second from right), a Hull and Steel Outfitting Supervisor at Keppel Singmarine, was awarded a WSH Award for improving the safety and health performance of his team.*



## Safety & Health

### The Keppel Safety & Health Strategy

#### ○ Vision

A safe and healthy workplace where everyone goes home safe every day

#### ○ Mission

To execute our business activities profitably, safely and responsibly, placing the highest priority on the safety and health of all stakeholders

#### ○ Strategic Thrusts

- |  |   |  |  |
|--|---|--|--|
| <ul style="list-style-type: none"> <li>• <b>Framework</b><br/>Integrated safety framework for businesses worldwide, with common goals across the Keppel Group</li> </ul> | <ul style="list-style-type: none"> <li>• <b>System</b><br/>Adopting best practices, systems, standards and processes</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Ownership</b><br/>Strong safety ownership at all levels</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Partnerships</b><br/>Engagement across all stakeholder groups</li> </ul> |
|--|---|--|--|

#### ○ Outcomes

- Strong safety culture
- Safety – an integral part of business
- Reduction in incidents

*“To deliver real and sustained safety performance improvements, we need to work as a team, in partnership with all our stakeholders. We will continue to examine how we can fully harness our strengths, resources and expertise as a Group to strengthen our safety culture and attain our goal of zero accidents, zero incidents.”*

**Mr R K Jaggi,**  
General Manager,  
Group HSE,  
Keppel Corporation

The Keppel Offshore & Marine (Keppel O&M) Cross Business Unit Audit aligns HSE practices amongst Keppel O&M's global yards. Work processes are reviewed to ensure that policies and management systems are adhered to. A series of cross audits at the yards focusing on implementation of HSE improvement plans were completed in 2015.

HSE personnel in Singapore are regularly assigned to overseas yards to provide guidance and support, and to align safety standards. Such deployments are in place at Baku Shipyard, Keppel Subic Shipyard, Keppel Nantong Shipyard and Bintan Offshore.

Keppel Land's Singapore, China and Vietnam units are OHSAS 18001 and ISO 14001 certified, while Keppel Infrastructure and its key subsidiaries including Keppel Seghers Engineering and Keppel DHCS have their management systems certified to OHSAS 18001 and ISO 14001.

Keppel Logistics is certified to be compliant with the Hazard Analysis and Critical Control Point (HACCP) management system. HACCP addresses food safety through the assessment of hazards and the establishment of controls that focus on prevention. In 2015, risk management controls in key areas such as road safety and pallet racking integrity were strengthened. Keppel Datahub and Keppel Digihub received certification for SS 507, the Singapore Standard for Business Continuity and Disaster Recovery for Information Technology service providers.

#### **Board and Management Oversight**

Keppel Corporation is the first publicly-listed company in Singapore to establish a Board Safety Committee (BSC) in 2006. Chaired by Mr Tan Ek Kia, a non-executive and independent director of Keppel Corporation, the BSC adopts a hands-on approach in setting strategic directions to ensure consistently high safety standards across the Group.

Safety & Health

The BSC leads efforts to implement initiatives and improve performance with the support of the Inter-Strategic Business Unit Safety Committee.

To engage operational staff and understand challenges they face on the ground, the BSC conducts regular site visits, while the BSCs of the various business units

spearhead initiatives to strengthen HSE management and performance.


To further strengthen the coordination of safety efforts across the Group, Keppel Corporation appointed a dedicated General Manager of Group Health, Safety and Environment (HSE) in January 2015, with a direct line of reporting to CEO of Keppel Corporation.

Director of HSE & Special Projects at Keppel O&M works closely with all Keppel O&M yards to ensure that safety messages, programmes and best practices are shared in a timely manner.

Keppel Land BSC visited the worksites of Sedona Hotel Yangon's Inya Wing in Myanmar, International Financial Centre Jakarta Tower 2 in Indonesia and Corals at Keppel Bay in Singapore, to reinforce the importance of safety at workplaces.

Keppel Infrastructure CEO and senior management conducted site visits to Senoko Waste-to-Energy Plant and Keppel DHCS plant at Changi Business Park, to engage the frontline workforce.

Keppel Telecommunications & Transportation (Keppel T&T) CEO and senior management attended a safety briefing at Keppel Logistics' warehouse and engaged workers to strengthen onsite safety culture.



### Health, Safety and Environment (HSE) Policy


It is the policy of Keppel Corporation Ltd (KCL) to place the highest priority on the health and safety of people and the protection of assets and the environment, in the pursuit of its business objectives and activities.

This policy is founded on the following principles:

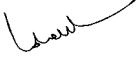
- HSE is a core value and an integral part of business
- Every HSE incident is preventable
- HSE is a line responsibility
- A healthy worker is a safer worker
- Every employee has a personal responsibility to work safely and follow safe work practices and procedures
- Third parties who work on our premises are to follow this policy

To fulfill this policy, the Group is committed to:

- Make adequate resources available
- Promote a strong HSE culture
- Adopt this policy in all its business premises where it has a controlling influence
- Set improvement targets and monitor progress through performance management, audits and periodic reviews
- Comply with the requirements of statutory legislation of the countries in which it operates as a minimum
- Promote wellbeing and maintain a safe and healthy working environment for all stakeholders
- Provide adequate HSE training and ensure workforce is competent
- Adopt a systematic approach in HSE management system that enables continuous performance improvement
- Report and investigate all accidents, incidents and near misses and ensure lessons learned are disseminated to prevent recurrence

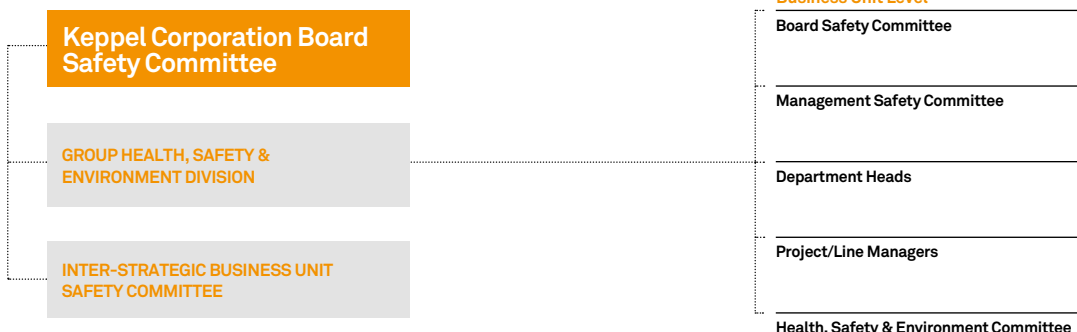


DR LEE BOON YANG  
Chairman  
Keppel Corporation Limited  
Date: 16 April 2015



MR LOH CHIN HUA  
Chief Executive Officer  
Keppel Corporation Limited  
Date: 16 April 2015

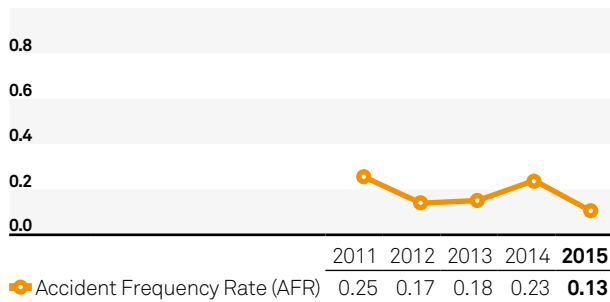
## Group Safety Structure



## Safety & Health

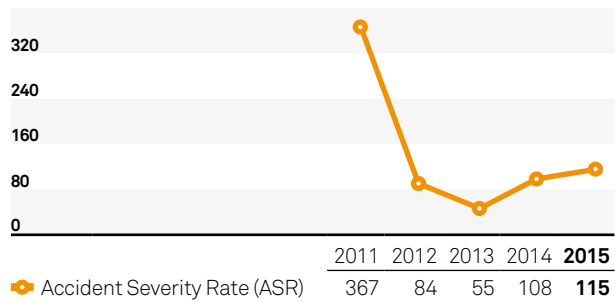
### Keppel Group (Global) Accident Frequency Rate (2011 – 2015)

reportable accidents per million man-hours



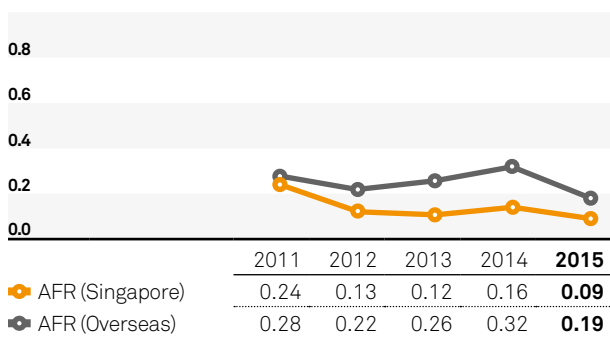
### Keppel Group (Global) Accident Severity Rate (2011 – 2015)

man-days lost per million man-hours



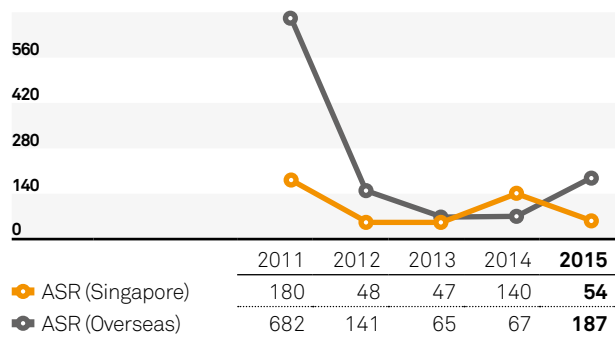
### Keppel Group (Singapore & Overseas) Accident Frequency Rate (2011 – 2015)

reportable accidents per million man-hours



### Keppel Group (Singapore & Overseas) Accident Severity Rate (2011 – 2015)

man-days lost per million man-hours



### Performance and Compliance

While we achieved a 40% decrease in our Accident Frequency Rate (AFR), our Accident Severity Rate (ASR) went up by 6% as we suffered four fatalities globally. We deeply regret the loss of these lives and have thoroughly investigated the causes, which were related to working at height or with heavy equipment. We determined the contributing factors and identified steps to prevent similar events in the future. The lessons learnt were shared across the Group.

Keppel FELS paid a monetary fine of \$50,000 in 2015 for a fatal incident which occurred in 2012, for failure to provide reasonably practicable measures to ensure that the workplace was without safety risks for everyone in the premises\*.

### Awards

The Group was conferred 35 WSH Awards in 2015 by the Singapore's WSH Council

and Ministry of Manpower (MOM). This is the largest number of awards won by a single organisation in Singapore. The Awards recognise WSH excellence.

Of the 35 awards, Keppel O&M bagged 31 awards under the Safety and Health Award Recognition for Projects (SHARP) category. Keppel Shipyard was conferred the WSH Innovation Award for developing a Coupler Servicing Workbench. The winning project team developed a jig to help lock a coupler in place, reducing workers' physical contact with the coupler and impact wrench, thereby improving ergonomics and minimising risks of injury.

For their strong WSH management systems, Keppel Singmarine and Keppel DHCS clinched the WSH Performance (Silver) awards. This is the ninth and fifth consecutive year respectively that both companies have received this accolade.

\* Information on compliance in relation to GRI indicators G4-EN29 and G4-PR9 are covered in the sections on Environmental Performance and Product Excellence respectively.

Safety & Health

Ayyaperumal Tamizharasan, a Hull and Steel Outfitting Supervisor at Keppel Singmarine, was awarded an individual WSH Award for Supervisors for improving the safety and health performance of his team.

In conjunction with World Day for Safety and Health at Work, Caspian Shipyard Company emerged as one of the winners in a safety and health competition organised by the Azerbaijan Trade Unions Confederation.

Keppel Nantong Shipyard received an award for being a model enterprise in occupational health and safety. The award recognises the shipyard's efforts in the development and effective implementation of an occupational health and safety management system and the continuous strengthening of workplace safety training. Keppel Nantong is the first shipyard in the Gangzha district of Nantong to set up a safety-focused training centre.

Keppel Land achieved the International Safety Award by the British Safety Council for its

contribution and commitment to the health, safety and well-being of its workforce in 2015.

**Building Skillsets**

We empower and train our stakeholders to ensure that all personnel are kept updated on safety measures and best practices.

In 2015, we invested approximately \$46 million in enhancing infrastructure, upgrading systems and building knowledge and skillsets across the Group. Over 60 senior-level personnel across the Group were engaged in a roundtable brainstorming session to review strategies to improve performance, and an inaugural Global HSE Workshop was organised for HSE officers across the Group to encourage collaboration across business units.

Our commitment to innovation extends to our efforts to improve the safety of work habits. At the ninth annual Keppel Group Safety Convention, 48 Safety Innovation Projects were submitted, paving the way for solutions to be further developed into actual products used in daily work. Some of the entries went on to compete at a

national level and have since garnered awards.

Over 65,000 personnel have received training at the Keppel Safety Training Centre and Safety Awareness Centres since 2010. The Keppel Safety Training Centre at Keppel Shipyard in Singapore offers a complete range of safety training and certification courses in both trade-specific and broad-based skills for all levels of the workforce. The Centre comprises a three-storey building equipped with classrooms, an e-learning zone, and a hall with multimedia and interactive training stations. It also features a life-size replica of the mid-section of a tanker with various technical training areas. Core competency and safety leadership development programmes, as well as Workforce Skills Qualifications (WSQ) courses certified by the Singapore Workforce Development Agency, are some of the key training modules conducted by qualified, full-time instructors at the Centre.

Keppel Land's Safety Awareness Centres in Ho Chi Minh City,



01

*01 To inculcate a strong safety mindset among our employees and subcontractors, regular safety workshops are conducted by HSE teams.*

## Safety & Health

# 5 KEY SAFETY PRINCIPLES

1. Every incident is preventable
2. Health, Safety & Environment (HSE) is an integral part of our business
3. HSE is a line responsibility
4. Everyone is empowered to stop any unsafe work
5. A strong safety culture is achieved through teamwork





In 2015, the Group Health, Safety and Environment (HSE) Alerts system was established to better disseminate lessons learnt globally and ensure preventive measures are taken promptly.

**01** Keppel's five Key Safety Principles were refreshed and widely publicised to ingrain safety consciousness.

Group Corporate Communications produces a quarterly newsletter, HSE Matters, which is disseminated electronically to employees and other stakeholders of the Keppel Group. The newsletter shares new developments and best practices.

**02** HSE Matters is disseminated electronically to employees and other stakeholders of the Keppel Group. The newsletter shares new safety developments and best practices.

Keppel O&M HSE team disseminated important information on Fire and Smouldering as well as Dropped Objects across its yards via electronic communication. To engage a diverse workforce, an animation and pamphlets on six key High Impact Risk Activities (HIRA) were produced in nine working languages and shared with all yards.

During the year, Keppel FELS organised a HSE campaign themed, 'Stay Safe, Avoid Line of Fire', to remind staff to identify potential hazards before commencing work. Keppel Singmarine organised a HSE Day 2015 with the theme of 'Back to Basics', to reinforce the fundamentals of safe work practices. Keppel Shipyard conducted a 'Hand and Fingers Safety' Campaign to reinforce the importance of safe manual work.

Keppel Infrastructure's 'Gear Up for Safety' programme, has gained momentum over the years. New activities were introduced in 2015 at various sites and plants.

To promote safety and health awareness, Keppel Logistics organised quizzes and talks, while Keppel Logistics China organised a safety campaign to reward safe behaviours.

Vietnam, and Johor Bahru, Malaysia, provide mandatory training for contractors' employees and foster a culture of safety in Keppel Land's supply chain.

Relevant cases at Keppel O&M are discussed at quarterly BSC meetings, and key lessons learnt are shared with all yards. Workshops were conducted for Keppel Nantong Shipyard's management and subcontractors to facilitate the review of existing processes and highlight learning points from past incidents.

Keppel Land's Behavioural Management of Safety programme is in place for projects in Singapore, China and Myanmar. The programme uses behavioural

strategies to improve work processes. The programme was satisfactorily concluded in Myanmar as the construction project was completed. Meanwhile, the China sites are gearing themselves up to sustain the programme throughout the projects' lifecycles.

The Keppel Infrastructure Global HSE Excellence Workshop convened management and HSE practitioners to discuss key HSE challenges and trends, initiate new ideas and share best practices.

**Enhancing Communication**  
Keppel's five Key Safety Principles were refreshed and widely publicised so as to ingrain safety consciousness.

01

**Partnerships**  
**Memberships in Associations**  
We support national and industry-related initiatives to raise safety standards.

Safety & Health

Mr Chow Yew Yuen, CEO of Keppel O&M, was appointed to Singapore's WSH Council on 1 April 2014. Mr Chow also chairs the WSH Council National Work at Heights Safety Taskforce which aims to reduce fatal and serious fall-from-height incidents.

A number of Keppel's management sit on committees of the WSH Council and the Association of Singapore Marine Industries (ASMI). Mr Wong Kok Seng, Managing Director of Keppel O&M (Offshore) and Keppel FELS, and Mr Chor How Jat, Managing Director of Keppel Shipyard, are members of the WSH Council (Marine Industries) Committee.

Mr Yong Chee Min, Director of HSE & Special Projects at Keppel O&M, is the Chairman of the ASMI WSH Committee and a member of the WSH National Work at Heights Safety Taskforce and WSH Council (Marine Industries) Committee. Mr Tan Swee Yiow, President (Singapore) of Keppel Land, is a member of the WSH Council (Construction and Landscape) Committee.

Keppel's HSE professionals also contribute towards upholding the industry's safety standards. Derek Sim, Senior HSE Manager of Keppel FELS, represents ASMI and is on the Singapore Standards Council's General Engineering and Safety Standards Committee.

**Influencing our Supply Chain**

We work closely with all stakeholders, including our contractors and subcontractors, to maintain high safety standards throughout our workforce. Our subcontract workers undergo the same safety training as direct employees.

To raise industry standards, we work closely with Singapore's Ministry of Manpower (MOM) and the WSH Council to roll out safety initiatives and to encourage our subcontractors to equip themselves with relevant safety certifications from the WSH Council. As a Group, Keppel has also been a regular sponsor of annual national safety events, including the 2015 editions of the WSH Conference, National WSH Campaign and bizSAFE Convention.

At Keppel FELS, members of the Subcontractors Executive Council Safety Committee, comprising representatives of different trade sections including HSE, meet regularly to discuss safety initiatives and share best practices.

Keppel FELS and Keppel Shipyard, as bizSAFE partners, actively encourage contractors to progress through the various levels of the bizSAFE programme. Since 2013, Keppel Shipyard has imposed a bizSAFE Level 4 certification requirement for resident contractors before work can be undertaken.

To ensure that safety messages are understood by our multinational and multicultural workforce, including subcontractors, Keppel Shipyard trained experienced foreign workers as mentors to discuss WSH issues with fellow workers in their native languages.

As a bizSAFE Mentor, Keppel Land encourages contractors to develop and implement safety initiatives at their workplaces.

02

**Keppel Group**

# HSE MATTERS

A Keppel Group Health, Safety & Environment publication

Issue 4 2015

## Hallmarks of safe execution



The project teams from Keppel AmFELS and Perforadora Central celebrate another winning partnership for docking two million man-hours without lost-time incidents

Keppel Offshore & Marine (Keppel O&M) has built its reputation as a trusted partner with excellent safety standards. In 4Q 2015, its yards around the world celebrated several project milestones with impressive safety achievements.

**Singapore**  
In recognition of Keppel FELS' excellent safety performance during the construction of its two KFELS B Class jackup rigs, rig owner Fecon International Corp (Fecon) awarded the yard a bonus cheque of US\$10,000 for each project on 25 November 2015. Projects B371 and B372 both achieved safety milestones of one million safe

man-hours and two million safe man-hours respectively.

Separately, on 26 October 2015, TS Offshore Limited's (TS Offshore) KFELS N Plus jackup rig B370 had a keel-laying ceremony at Keppel FELS Pioneer Yard 1. During the ceremony, TS Offshore presented Keppel FELS with a bonus cheque of US\$10,000 dollars for achieving two million safe man-hours without lost-time incidents.

Over the years, Keppel FELS has built its reputation as an offshore yard with excellent safety standards. During this year's Workplace Safety and Health

(WSH) Awards, the yard bagged 18 awards under the Safety and Health Award Recognition for Projects (SHARP) category for its exemplary safety performance, as well as good safety and health management systems.

**Brownsville**  
The fifth jackup rig that Keppel AmFELS is constructing for Perforadora Central, Uxpanapa, reached a double milestone on 22 September 2015. Its hull was successfully launched into the sea and it also celebrated two million

Continues on page 3...  
MG (P) 1403/2015

## Safety & Health

Before they are appointed, Keppel Land’s main contractors must be confirmed as bizSAFE partners, ensuring that the contractors meet the safety standards set by the WSH Council. Keppel Land held its eighth Annual Consultants and Contractors Health and Safety Meeting in 2015. Safety Recognition Awards were presented to project teams and contractors who had contributed towards the company’s safety journey.

Keppel T&T invited transportation partners to join a fund-raising dinner organised by the Singapore Road Safety Council. Management engaged with contractors to exchange ideas and share expectations.

### Industry Sharing

Keppel O&M actively participates in HSE-related seminars and forums. At an ASMI seminar for the marine industry in 2015, Keppel O&M shared about its safety practices for work in confined spaces, as well as its emergency response preparations.

We see cross-industry sharing as a useful opportunity to shape our safety journey from different perspectives. In 2015, Director of

HSE & Special Projects at Keppel O&M hosted a delegation from SIA Engineering Company who wanted to know more about Keppel O&M’s multi-pronged approach to safety. Separately, the Keppel O&M HSE team was invited by Republic of Singapore Air Force to share on its safety management system during the annual Air Defence and Operations Command (ADOC) Safety Forum. In 2015, Keppel O&M hosted a visit by Shell Singapore and discussed safety initiatives. The Shell delegation was taken on a tour of the Keppel Safety Training Centre, and was introduced to the Keppel O&M’s training programmes for a multinational workforce.

Keppel Infrastructure’s Senoko Waste-to-Energy Plant hosted delegates of bizSAFE Convention. Visitors learnt about various HSE initiatives at the plant and how these were monitored through a comprehensive safety management system.

### Health & Wellness

Exercise programmes, distribution of fruits and healthy lifestyle campaigns are in place across the Keppel Group to

encourage employees to live active, balanced lifestyles.

Keppel O&M’s HSE personnel organise dormitory visits on a regular basis to reach out to workers on health and safety matters. Keppel Shipyard’s Well-Being and Support Centre is equipped with facilities such as a pharmacy, counselling rooms and designated rest areas, and offers holistic health and medical services. The yard is developing a Keppel Wellness Gallery to educate and empower staff, customers and visitors with healthcare knowledge. To provide workers with a conducive environment to rest during breaks, Keppel Shipyard built three 4-storey rest areas. Each rest area accommodates up to 2,000 workers. A fourth rest area is being planned.

Keppel T&T signed the Singapore Health Promotion Board’s Helping Employees Achieve Life-time Health (HEALTH) Charter, pledging to develop, execute and enhance an integrated Workplace Health Promotion programme. Staff also benefited from lunchtime talks on health, mental wellness and stress management.

**01** The Board Safety Committees of Keppel’s business units, such as that of Keppel Land (pictured), conduct regular site visits.

**02** The Keppel Group Safety Convention is an annual platform for stakeholders to reaffirm their commitment to safety.

01



## Special Focus

## Safety, a collective responsibility

*Keppel's stakeholders, including employees, partners, contractors and subcontractors, reaffirmed their commitment to upholding the Group's core value of safety at the ninth annual Keppel Group Safety Convention.*



02

The Keppel Group Safety Convention on 23 November 2015 brought close to 900 employees, partners, contractors and subcontractors together to reaffirm a commitment to safety.

Gracing the event was Mdm Halimah Yacob, Speaker of Parliament of Singapore. Addressing Keppel as a "global industry leader and an avid workplace safety proponent," Mdm Halimah noted that the company sets the gold standard for local companies looking to make their mark not just in Singapore but overseas as well.

Themed 'Our Safety & Wellbeing: Let's Do Our Part', the event included a dialogue with heads of the various business units, and recognised winners of the Safety Innovation Awards, Safety Awards and Safety Photography Competition.

A total of 48 Safety Innovation Teams submitted Safety Innovation Projects - practical solutions to address safety challenges on the ground.

Fifteen Gold, 13 Silver and 20 Bronze Awards were presented to the project teams. The coveted Chairman Safety Challenge Trophy was awarded to Keppel Infrastructure.

Mr Tan Ek Kia, Chairman of Keppel Corporation's Board Safety Committee, emphasised that safety is both an individual and a collective responsibility and urged award winners to continue inspiring others.

Keppel Corporation CEO Mr Loh Chin Hua stressed that a robust safety framework does not happen by chance, and highlighted the importance of teamwork and partnership amongst stakeholders. Mr Loh recognised business units that have rolled out various safety initiatives and programmes over the course of 2015 and applauded individuals who took the lead to innovate solutions to improve work processes and enhance safety in their daily jobs.



# Labour Practices & Human Rights

*Our people are our most valuable resource. We adhere to fair employment practices, respect and uphold human rights principles, and invest in developing and training our workforce. In doing so, we attract and retain the best talent and grow the capabilities of our people.*

### Employee Engagement

**89%**

Of employees surveyed are proud to work for Keppel.

### Local Hires

**60.3%**

Of senior management are hired from local communities.

01



## Performance Overview

What we said in 2015	What we did in 2015	What we plan to do
<ul style="list-style-type: none"> <li>Conduct an engagement survey among employees based in Singapore and overseas.</li> <li>Maintain a target of 30 hours of training per employee per year, on average, globally.</li> </ul>	<ul style="list-style-type: none"> <li>Conducted the Global Keppel Employee Engagement Survey.</li> <li>Launched the Global Keppelites Forum, a Group-wide town hall meeting.</li> <li>Recorded an average of 23 hours of training per employee per year, globally.</li> </ul>	<ul style="list-style-type: none"> <li>Raise the level of employee engagement.</li> <li>Hold more regular communication sessions with employees.</li> </ul>

### Overview

Our total workforce, comprising full and part-time permanent employees and excluding our contractor workforce, was 37,295 in close to 30 countries\*. The reduction in the size of our workforce is largely due to the rightsizing of our operations in the Offshore & Marine Division as a result of the challenging business environment. Women represented 12.9% of our global workforce.

The age profile of our workforce is largely young, with 35.2% of employees under the age of 30 and 35.4% between the ages of 30 and 39. During the year, 4,101 people were hired and the overall turnover rate was 10% in Singapore and 8.9% globally.

### Human Rights

Keppel Corporation and our Group of Companies uphold and respect the fundamental principles set out in the United Nations Universal Declaration of Human Rights and the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work. Our approach to human rights is informed and guided by general concepts from the United Nations Guiding Principles on Business and Human Rights.

We do not tolerate unethical labour practices such as child labour, forced labour, slavery and human trafficking in any of our operations. We support the elimination of such exploitive labour. Through our policies, planning and administration of our employment practices,

we are confident that our operations are not exposed to issues such as child or forced labour.

Our commitment to human rights is supported by our Employee Code of Conduct, which sets the tone in relation to the Group's stance against discrimination on any basis, inclusive of any bias on the basis of ethnicity, gender, religious beliefs, nationality, age or any physical disability. The rules of conduct apply to all employees of Keppel Corporation and its subsidiary companies. Our stance on human rights is articulated in our Corporate Statement on Human Rights which is publicly available online.

We adhere to the practices spelt out by Singapore's Tripartite Alliance for Fair Employment Practices (TAFEP) and endorse its Employers' Pledge of Fair Employment Practices. We comply with local labour regulations across our global operations and with minimum wage laws, where such laws exist.

Unions are our strategic partners so we place great emphasis on maintaining a harmonious relationship with them. Approximately 42.7% of our global workforce are bargainable employees covered by Collective Agreements (CA).

Guidelines are in place for the appropriate management of grievance cases. For unionised companies, employee grievances are resolved according to the grievance handling protocol spelt out in the respective CA. All registered

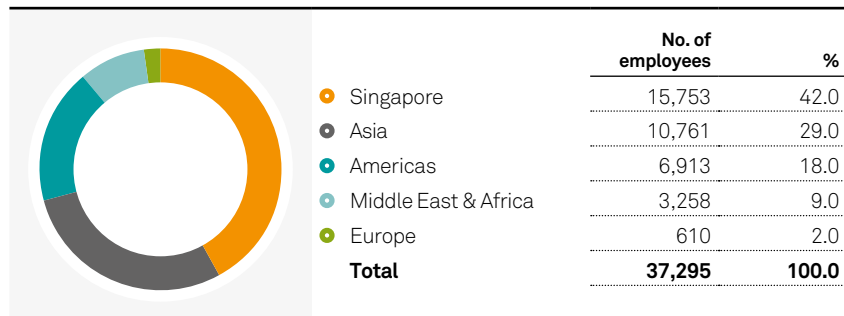
**01** Keppel leverages platforms, such as Singapore's National Day events, to create opportunities for employees to build camaraderie and forge stronger bonds.

\* The data reported in this section takes into account significant subsidiaries and associated companies where Keppel has management control.

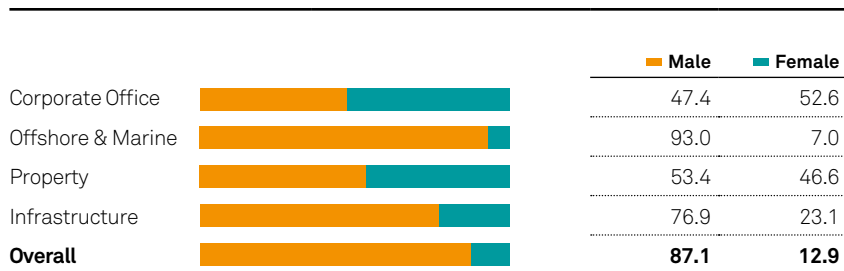
## Labour Practices & Human Rights

### Global Workforce\*

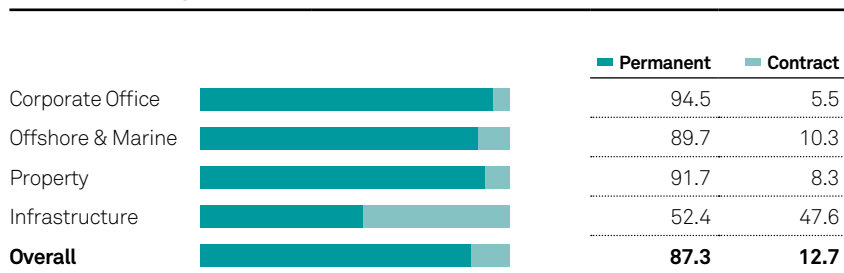
#### Distribution By Regions (%)



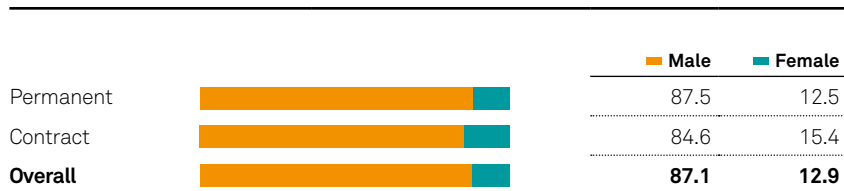
#### Distribution By Segment & Gender (%)



#### Distribution By Segment & Employment Type (%)



#### Distribution By Employment Type & Gender (%)



grievances are investigated and tracked through to final closure. In the case of a grievance, our management and the union will undertake every reasonable effort to resolve the employee's grievance promptly.

Worldwide, there were 7 grievance cases reported in 2015, 3 of which are pending resolution at the time of the printing of this report.

#### Diversity & Inclusion

We respect the values and cultures of the communities in which we operate, and embrace workforce diversity.

In our operations worldwide, we adopt merit-based recruitment practices and emphasise diversity and inclusiveness.

All new hires are considered based on individual competencies as well as organisational and job fit. Our hiring policies ensure equal employment opportunities for all, regardless of race, religion, gender, marital status or age. Our employment statistics, reviewed regularly, illustrate the diversity of our workforce. Nonetheless, we recognise that there are sectors in our businesses, such as in the Offshore & Marine Division, which are male-dominated globally.

Opportunities for advancement, promotion, recognition of achievements, compensation, training and other conditions of employment are provided based on merit. Performance reviews are conducted for all employees. The process, undertaken jointly by the employee and supervisor, entails the setting of targets and a career developmental roadmap detailing work plans, training and measurable performance targets.

There were no reported incidences of discrimination raised by our employees in 2015.

#### Fair Employment Policies & Practices

Keppel upholds fair employment

\* The headcount figures reported in this section takes into account significant subsidiaries and associated companies where Keppel has management control.

Labour Practices & Human Rights

practices and adheres to the practices spelt out by the TAFEP.

We endorse the Employers' Pledge of Fair Employment Practices, which are guided by the following five principles:

1. Recruit and select employees on the basis of merit.
2. Treat employees fairly and with respect and implement progressive HR management systems.
3. Provide employees with equal opportunity to be considered for training and development.
4. Reward employees fairly.
5. Abide by labour laws and adopt Tripartite Guidelines which promote fair employment practices.

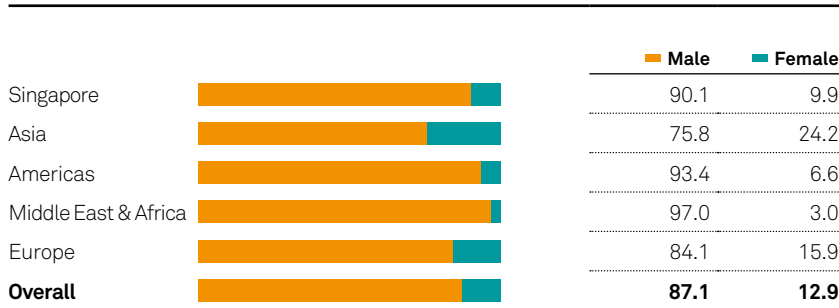
We believe that hiring from local communities<sup>1</sup> enhance our ability to understand local needs and strengthen our capabilities on the ground. In ensuring that the majority of our senior management<sup>2</sup> are drawn from the local community, we provide economic benefit to the communities in which we operate, and enhance human capital. Across our business units, 60.3% of senior management and 60.0% of our employees are citizens or permanent residents of the countries in which they work.

**Provision of Benefits**

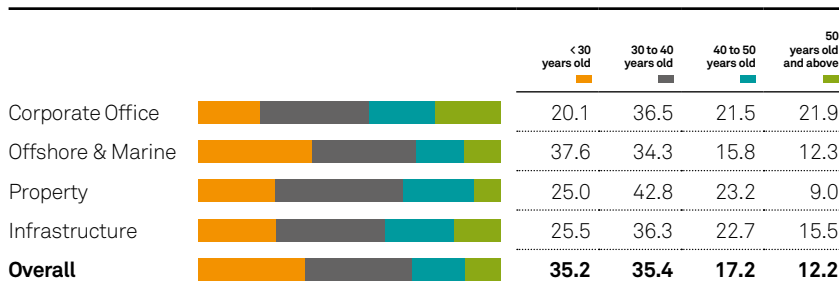
We provide our employees with a comprehensive range of benefits such as leave entitlements, medical benefits and group insurance plans. Part-time employees are entitled to similar benefits on a pro-rata basis.

Keppel subscribes to a pay-for-performance philosophy. We believe this drives ownership of collective goals and leads to a high-performance culture that creates long-term shareholder value. Our robust performance management system ensures that all permanent employees receive regular performance and career development reviews.

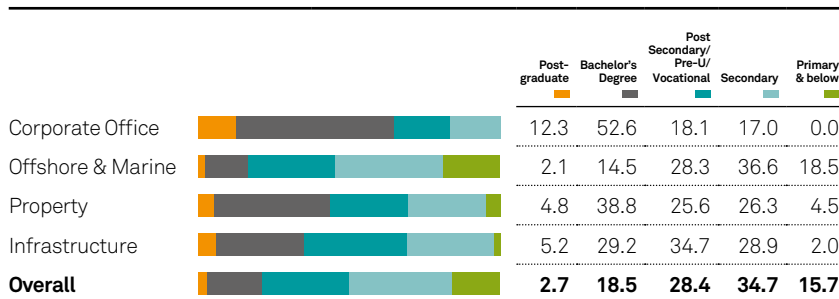
**Distribution By Region & Gender (%)**



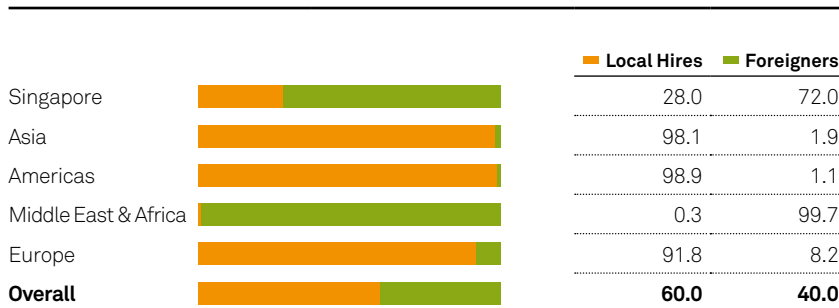
**Distribution By Segment & Age Group (%)**



**Distribution By Segment & Educational Qualification (%)**



**Distribution By Region & Local/Non-Local Hires (%)**



<sup>1</sup> Locals are defined as citizens or permanent residents of the country in which they work.

<sup>2</sup> Senior management is defined as the top three individuals within each operating business unit with the highest levels of executive management.

## Labour Practices & Human Rights

### Global Workforce\*

#### Senior Management Distribution By Region & Local/Non-Local Hires (%)

	Local Hires	Foreigners
Singapore	85.1	14.9
Asia	49.2	50.8
Americas	33.3	66.7
Middle East & Africa	7.7	92.3
Europe	93.8	6.3
<b>Overall</b>	<b>60.3</b>	<b>39.7</b>

#### New Hires By Segment & Age Group (Executive & Above) (%)

	< 30 years old	30 to 39 years old	40 to 49 years old	50 years old and above
Corporate Office	19.2	38.5	30.8	11.5
Offshore & Marine	46.7	33.2	12.3	7.9
Property	28.0	54.0	16.3	1.7
Infrastructure	39.3	41.8	13.3	5.6
<b>Overall</b>	<b>38.3</b>	<b>41.9</b>	<b>14.3</b>	<b>5.5</b>

#### New Hires By Segment & Gender (Executive & Above) (%)

	Male	Female
Corporate Office	42.3	57.7
Offshore & Marine	82.3	17.7
Property	51.7	48.3
Infrastructure	66.8	33.2
<b>Overall</b>	<b>68.0</b>	<b>32.0</b>

#### New Hires By Region (%)

	No. of employees	%
Singapore	1,052	25.6
Asia	2,329	56.8
Americas	393	9.6
Middle East & Africa	304	7.4
Europe	23	0.6
<b>Total</b>	<b>4,101</b>	<b>100.0</b>

\* The headcount figures reported in this section takes into account significant subsidiaries and associated companies where Keppel has management control.

Eligible female employees in Singapore are entitled to a maximum of 16 weeks of paid maternity leave, while eligible male employees in Singapore are entitled to a maximum of two weeks of paid paternity leave, in accordance with Singapore Ministry of Manpower's legislation. In 2015, all of our 66 female employees in Singapore who went on maternity leave returned to work.

The Keppel Group adheres to the respective social security contribution or pension plan obligations of the countries in which we operate.

In Singapore, the Central Provident Fund (CPF) is a comprehensive social security savings plan that enables salaried Singapore Citizens and Permanent Residents to set aside funds to work towards a secure retirement. Under the CPF scheme, Keppel and its employees make monthly contributions to the employees' CPF accounts in accordance with the prevailing regulations.

#### Nurturing Human Capital

We encourage and enable employees to pursue professional development opportunities. The overall average training hours per employee for our key operations in Singapore was approximately 27.2 hours. Globally, the overall average training hours per employee was approximately 23.2 hours, with an average of 23.0 hours for females and 23.2 hours for males.

The Group drives the talent management process in their respective geographies, with programmes for leadership and executive development centralised at the corporate level. Keppel Corporation's Group Human Resources coordinates information across the business units to ensure that the review of talent is undertaken with consistent data.

Labour Practices & Human Rights

To enable employees to develop and refine their skills and competencies, we customise learning and development programmes across the Group to cater to different career stages and industry needs.

**Industry Programmes**






Underscoring our commitment to nurture human capital, the Group makes significant investments to equip employees with up-to-date operational skills and certifications.

To enhance the skills and career development of students in the offshore and marine engineering sector, Keppel Offshore & Marine (Keppel O&M) signed a Memorandum of Understanding (MOU) with the Institute of Technical Education (ITE), Ngee Ann Polytechnic and Singapore Polytechnic in 2015 to support and provide career guidance to students and fresh graduates of these educational institutions who are keen to join the offshore and marine industry.






The Keppel O&M Technical Associate Scheme retains existing apprentices and attracts graduates from ITE in Singapore to join Keppel O&M. The scheme provides Technical Associates with a defined academic and career development path. Technical Associates are also given the opportunity to develop interpersonal and soft skills through the Technical Associate Discovery Programme.

Keppel Logistics participated in the Supply Chain Challenge Networking and Career Fair organised by Singapore Logistics Association. The fair was open to students from ITE and polytechnics to provide them with opportunities to gain a better understanding of internship and career opportunities available in the logistics industry.






**Average Training Hours By Employee Category (hours)**

Senior Management		26.7
Managerial		29.7
Executive		33.4
Non-Executive		20.6
Industrial/General		20.0


**Annual Employee Turnover<sup>1</sup> and Turnover Rate<sup>2</sup>**

		Turnover (No. of employees)	Turnover Rate (%)
<b>2015</b>		<b>3,303</b>	<b>8.9</b>
2014			8.8
2013			8.6
2012			9.9
2011			10.9

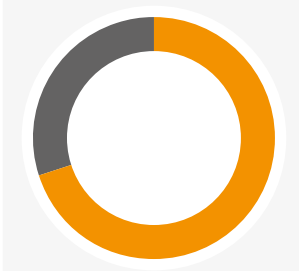
**Employee Turnover<sup>1</sup> and Turnover Rate<sup>2</sup> By Region**

		Turnover (No. of employees)	Turnover Rate (%)
Singapore		1,579	10.0
Asia		1,207	11.2
Americas		166	2.4
Middle East & Africa		333	10.2
Europe		18	3.0
<b>Total</b>		<b>3,303</b>	<b>8.9</b>

**Employee Turnover<sup>1</sup> By Age Group (Executive & Above)**

		Turnover (No. of employees)	% of Total Turnover
 <ul style="list-style-type: none"> <li><span style="color: orange;">●</span> &lt; 30 years old</li> <li><span style="color: grey;">●</span> 30 to 39 years old</li> <li><span style="color: teal;">●</span> 40 to 49 years old</li> <li><span style="color: green;">●</span> 50 years old &amp; above</li> </ul>	<b>Total</b>	<b>856</b>	<b>100.0</b>
		257	30.0
		407	47.5
		125	14.7
		67	7.8

**Employee Turnover<sup>1</sup> By Gender (Executive & Above)**

		Turnover (No. of employees)	% of Total Turnover
 <ul style="list-style-type: none"> <li><span style="color: orange;">●</span> Male</li> <li><span style="color: grey;">●</span> Female</li> </ul>	<b>Total</b>	<b>856</b>	<b>100.0</b>
		599	70.0
		257	30.0

<sup>1</sup> Turnover is defined as the total number of employees who leave the organisation voluntarily. It does not take into account employees who leave due to completion of contracts, dismissal, retirement or death in service.

<sup>2</sup> The turnover rate is defined as the percentage of employees who leave the organisation voluntarily. It does not take into account turnover due to completion of contracts, dismissal, retirement or death in service.

## Labour Practices & Human Rights

**01** Keppel's Emerging Leaders Programme aims to develop the leadership skills of participants.

**02** Keppel hosted a visit by Mr Chan Chun Sing (left), Minister, Prime Minister's Office and Secretary-General of National Trades Union Congress, to meet with Keppel FELS Employees Union as part of efforts to actively engage unions.

### Grooming Leaders

We groom scholars for roles across the Group according to their aspirations and qualifications. The Group also offers internships to promising tertiary students for them to gain work experience before entering the workplace.

To encourage employees to pursue further studies, Keppel provides employees in Singapore seven days of examination leave annually. In 2015, the Group sponsored 44 employees to pursue further studies.

The Group's business units offer two-year management trainee or associate programmes to nurture fresh graduates with the potential to take on management positions.

Keppel O&M Management Trainees undergo comprehensive training through job rotations and professional development training to expose them to the wide spectrum of Keppel O&M's operations. Similarly, Keppel Land offers its Management Associates hands-on and in-depth learning opportunities during a 24-month attachment at various business units.

Keppel Infrastructure's Management Trainees build a strong foundation through hands-on roles at Keppel Infrastructure plants while honing their leadership skills and business intuition. Keppel T&T Management Trainees go through a series of corporate and operational attachments to gain a holistic view of the entire business.

### Keppel Leadership Institute

In 2015, we established the Keppel Leadership Institute, headquartered in Singapore, to groom global Keppel Leaders who imbibe our core values and are guided by our operating principles. The Institute exemplifies the Group's commitment towards developing leaders and equipping them with capabilities to drive our businesses into the future. It also serves to strengthen the One Keppel culture by forging global bonds between employees.

The Institute presents a diverse range of leadership and professional development programmes delivered in modular and blended approaches. The programmes are sponsored by senior management, driven by demand, and contextualised to suit the Group's needs.





02

Thirty two promising employees from across the Group participated in the inaugural Emerging Leaders Programme, which aimed to strengthen core leadership skills in areas such as self awareness.

#### Keppel Young Leaders

Keppel Young Leaders is a centralised platform for high potential employees across the Group to cultivate a global mindset and an innovative and entrepreneurial spirit. Through initiatives such as annual symposiums, case studies and strategic reviews, Keppel Young Leaders benefit from taking on projects beyond their regular job scope. They receive opportunities to build networks with peers in other business units and also engage with senior management. This in turn helps Keppel to harness collective strengths and leverage synergies across the various business units.

#### Retaining Experience

Keppel supports re-employability beyond the statutory retirement age. Retirees are offered post-retirement employment opportunities in Keppel, in line with the Singapore Tripartite Guidelines on the re-employment of older employees.

In 2015, 130 retirees were re-employed across the Group. As at 31 December 2015, there were 462 re-engaged staff within the Group. To prepare older employees for a smooth transition to retirement, we organised programmes such as 'Career Coaching for Mature Employees.'

Through initiatives such as the Keppel O&M Alumni, employees past and present have been able to stay connected and build meaningful networks with one another.

#### Engaging Employees

##### Employee Engagement Survey

We launched the Keppel Global Employee Engagement Survey in 2015, which was administered in 7 languages to employees in 15 countries. The survey achieved an overall response rate of 96%, with participation from a sample size of over 7,000 employees.

The results showed that the Group has an overall employee engagement score of 80%, with 89% of employees surveyed proud to be working for Keppel. Engagement was defined as the extent to which employees are proud of the company, would recommend it as a place to work and will commit their time and energy to make the company a success.

##### Enhancing Communication

The inaugural Global Keppelites Forum, a Group-wide town hall meeting, was held in 2015.



## Labour Practices & Human Rights

Close to 3,000 employees from 70 locations globally tuned in to the session, which was also broadcast live via an interactive online portal. During the session, Mr Loh Chin Hua, CEO of Keppel Corporation, shared the Group's vision and priorities and fielded questions from employees (See page 75).

Separately, the various business units also organise town hall meetings that facilitate communication between management and employees.

On-boarding programmes are conducted to help new hires adapt. Orientation sessions in 2015 included panel sessions which allowed participants from across the Group to interact with management. New hires are also guided in their professional development by colleagues who are assigned as mentors.

### Building Strong Teams

We believe that cohesive teams make for a productive workforce. To promote friendly competition, ignite team spirit and encourage healthy lifestyles, Keppelite Recreation Club organises the annual Keppel Games,

a series of sports competitions open to all employees.

### Workforce Welfare

We are committed to look after the well-being of our entire workforce, including foreign workers who are living and working abroad, away from their families. Keppel O&M was the first company in Singapore to provide highly subsidised dormitories for our directly-employed foreign workers.

These dormitories offer a range of amenities and recreational facilities, and we organise activities, such as talent search competitions, to promote harmonious living and bonding. Keppel Housing, which houses our yards' direct workers, provides counselling services, including a 24-hour emergency helpline, to look after our workers' mental and emotional wellbeing.

Other welfare initiatives by our business units include lunchtime talks, health screening exercises and fitness classes.

**01** Keppel conducts regular activities to engage employees and enhance their welfare. Results of the Keppel Global Employee Engagement Survey in 2015 showed that 89% of employees surveyed are proud to be working for Keppel.

**02** Mr Loh Chin Hua, CEO of Keppel Corporation, addressed employees from across the world at the inaugural Global Keppelites Forum in 2015.



## Special Focus

## Connecting people, shaping the future

*The Global Keppelites Forum is an annual Group-wide virtual townhall meeting that brings together employees across the globe to hear Keppel Corporation CEO Mr Loh Chin Hua share on the company's vision, mission, operating principles and progress towards its goals.*



02

The Global Keppelites Forum is an annual Group-wide virtual townhall meeting that brings together employees across the globe to hear Keppel Corporation CEO Mr Loh Chin Hua share on the company's vision, mission, operating principles and progress towards its goals.

Over 3,000 employees gathered in more than 70 locations for the inaugural edition held on 26 January 2015.

Besides outlining the Group's refreshed vision, mission and operating principles, Mr Loh also unveiled Vision 2020, the Group's holistic development roadmap to become one of the top well-run, best-in-class conglomerates worldwide by 2020.

The Vision 2020 roadmap includes four broad areas for sustainable growth:

- (1) Business: Setting the overarching strategies, targets, and key actions to be undertaken by the business units;
- (2) People: Building a robust succession pipeline and continued strong employee satisfaction;
- (3) Process: Pursuing excellence in safety, productivity and innovation; and
- (4) Corporate Citizenry: Formalising and further organising community outreach

efforts to positively impact communities in which the Group operates.

Highlighting the importance of human capital as an engine of growth, Mr Loh shared plans for key initiatives under the theme of 'people', including the establishment of Keppel Leadership Institute to groom leaders for Keppel's global operations. The Institute is envisioned as an incubator for Keppel leaders of today and tomorrow, and offers transformative learning experiences to support talents in their growth as effective leaders and managers. To bridge business units and form a stronger global team, the Institute will also engage leaders from different units in exchanging views and learning from one another's experiences (see page 72).

Mr Loh shared, "Beyond being a centre for learning, the Institute will evolve with the needs of our business units. As we tackle the uncertainties and challenges of the future, our businesses will need leaders who will not only build sustainable businesses, but also exemplify our core values and touch lives."

Mr Loh also fielded questions from employees, many of whom were tuned in via an interactive portal.

# Our Community

*We strive to create positive economic and social impacts in the communities where we operate.*

## Social Causes

**\$6.27m**

Invested in social causes in 2015.

## Voluntary Community Work

**5,000 hours**

Of community work achieved by Keppel Volunteers in Singapore.

01



## Performance Overview

What we said in 2015	What we did in 2015	What we plan to do
<ul style="list-style-type: none"> <li>Continue to build long-lasting relationships with our beneficiaries by organising worthwhile activities on a regular basis.</li> <li>Continue to work closely with our partner organisations to achieve meaningful community impact through programmes such as Keppel Nights, Water for Life, Words on Wheels and major sponsorships such as the Keppel Centre for Art Education.</li> </ul>	<ul style="list-style-type: none"> <li>Keppel Volunteers began initiatives in skills-based volunteerism.</li> <li>Sponsored and participated in a wide range of community initiatives, investing \$6.27 million in social causes.</li> <li>Celebrated the launch of Keppel Centre for Art Education at National Gallery Singapore and renewed partnership with Esplanade – Theatres on the Bay for Keppel Nights.</li> </ul>	<ul style="list-style-type: none"> <li>Build on sustainable programmes with beneficiaries and track impact.</li> <li>Keppel Volunteers to further efforts in skills-based volunteering and establish overseas chapters.</li> <li>Continue to work closely with our partner organisations to achieve meaningful impact.</li> </ul>

### Overview

Keppel strives to operate in a socially responsible manner that generates economic and social capital, creating long-term, holistic value for the communities in which we operate.

We engage and nurture communities wherever we are, with the aim of achieving a sustainable future together.

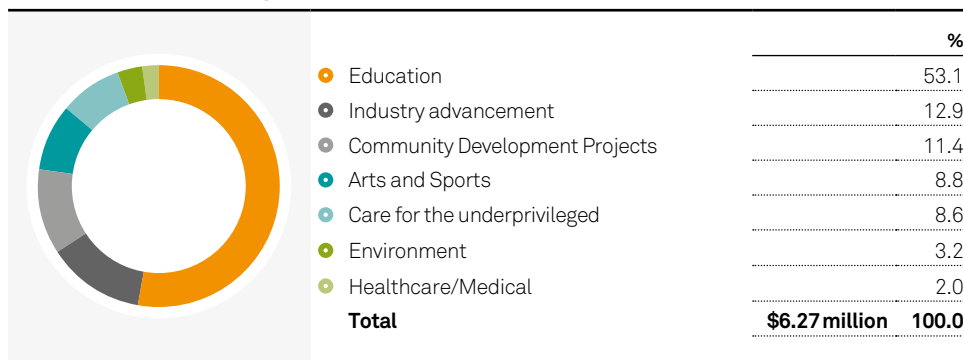
As leaders in our businesses, we support industry initiatives and encourage open dialogue to promote growth.

### Management Approach

In partnership with organisations that share our values, we commit up to 1% of the Group’s annual net profits to worthy social causes. Such causes fall into the broad categories of education, industry advancement, arts and sports, care for the underprivileged, community development projects, environmental initiatives and healthcare or medical initiatives.

In 2015, the Group’s total social investment spend was \$6.27 million.

### Social Investment Spending By Project Type, 2015 (%)



**01** Keppel contributes to promoting the arts through programmes such as Keppel Nights, which exposes students from heartland schools to diverse arts and cultures.

## Our Community

### Promoting Education

In Vietnam, Keppel Land sponsors Words on Wheels, a mobile library programme in partnership with Singapore International Foundation that promotes child literacy in the rural outskirts of Ho Chi Minh City. To date, over 50 employees have made seven volunteer trips under the programme, conducting English lessons and other learning activities.

In Tianjin, China, volunteers from Keppel Land China have been actively contributing to the community since 2013, dedicating their time to regularly engage students of Xiangyu Autism Mutual Aid Association.

In Brazil, BrasFELS engineers started Teach-It-Forward, a programme to benefit public school youth in Angra dos Reis. Besides conducting Portuguese and mathematics classes for students in need of extra academic help, the volunteers give talks at high schools, sharing their academic and professional journeys to inspire the students.

Keppel also provides educational support through scholarships and bursaries. For example, Keppel AmFELS contributes to a

scholarship fund for local state universities in Texas, USA, while Caspian Shipyard Company contributes to an endowment fund of the Azerbaijan Diplomatic Academy.

### Advancing Industries Thought Leadership

The Keppel Group continued its support of Singapore International Energy Week (SIEW) in 2015, organised by Singapore's Energy Market Authority to facilitate the exchange of ideas and discussions on pertinent energy issues. Over 28,000 energy professionals, policymakers and commentators from 60 countries exchanged insights at SIEW 2015.

To strengthen partnerships between corporates and non-profits, Keppel sponsored, hosted and participated as a panellist at a Corporate Giving Practitioner Networking Session at Keppel Leadership Institute in September 2015. Organised by Singapore's National Volunteer and Philanthropy Centre, National Council of Social Service and Community Chest, the session brought together professionals in the corporate giving field to discuss how corporate social responsibility strategies can be optimised for positive impact.

*01 Volunteers from Keppel Land China (Tianjin) have been organising regular activities for students at Xiangyu Autism Mutual Aid Association.*

*02 Keppel Land sponsored the International Green Building Council 2015, which included activities such as tree planting.*





02

To foster thought leadership on green buildings, Keppel Land continued its support of the International Green Building Conference in 2015. Organised by the Building & Construction Authority of Singapore, the event brought together over 1,000 thought leaders, real estate developers, urban planners, architects, engineers and builders to discuss and put into action green building solutions.

### Workforce Development

In October 2015, Keppel Offshore & Marine (Keppel O&M) signed a Memorandum of Understanding (MOU) with the Institute of Technical Education (ITE), Ngee Ann Polytechnic and Singapore Polytechnic to enhance the skills development of students in the offshore and marine engineering sector.

The MOU aims to help current students and fresh graduates of polytechnics and ITE who are keen on joining the industry to better navigate their career paths. The initiatives include the SkillsFuture Earn and Learn programme, a work and study programme that offers career placements and on-the-job training.

In the Philippines, Keppel Batangas Shipyard offers out-of-school youth full scholarships in structural welding at the Keppel Batangas Training Centre. Upon completion of the apprenticeship programme, the youth are offered employment opportunities with the shipyard or its subcontractors. To date, 36 scholarships have been awarded.

To support the skills development of Myanmar's hospitality workforce, Sedona Hotel Yangon signed an MOU with the Singapore-Myanmar Vocational Training Institute in November 2015 to provide on-the-job training opportunities for the institute's students. Through the partnership, Sedona Hotel Yangon will sponsor book prizes for each intake of students in the housekeeping, front office and food and beverage courses, as well as offer Management Trainee positions to the top three students of each cohort upon graduation.

### Arts Advocate

Singapore's National Arts Council awarded Keppel Corporation its eighth consecutive Distinguished Patron of

## Our Community



01

**01** Staff across the Group took part in a blood donation drive organised in support of the Singapore Red Cross Society.

**02** Helping to raise money for Community Chest beneficiaries, Keppel staff took part in a 'Race to the Sky' Vertical Marathon.

the Arts award in for its contributions to Singapore's arts scene. Keppel also received a special SG50 Arts Patron Award in recognition of its longstanding support of local arts.

Besides supporting homegrown arts groups such as Singapore Chinese Orchestra, Singapore Dance Theatre, Singapore Lyric Opera and Singapore Symphony Orchestra, Keppel contributed to National Gallery Singapore to establish the region's first dedicated art education facility, the Keppel Centre for Art Education (see story on page 86).

### Engaging Through Arts

In 2015, Keppel renewed its sponsorship of Keppel Nights, a partnership with Esplanade – Theatres on the Bay to give students from heartland schools access to world-class performances presented by Esplanade. The programme has benefited over 16,000 students since 2013.

Besides enjoying diverse arts and cultural performances, students also benefit from productions commissioned by Esplanade

for its 'Feed Your Imagination' (F.Y.I.) series. The series offers age-appropriate and interactive arts experiences for primary and secondary students in line with their school curricula.

For example, the F.Y.I. show 'Samsui Women: One Brick at a Time' by local theatre company The Finger Players was a vivid portrayal of the Samsui Women's contributions to building Singapore, allowing students to learn about an important chapter in Singapore's history through an engaging fusion of music, theatre and puppetry.

The scope of Keppel Nights was expanded in 2015 to include workshops, bolstering the programme with an element of experiential learning. The workshops give students a chance to try out various art and cultural forms and get a taste of performing.

### Community Care

Keppel supports Community Chest in its fund-raising efforts. Community Chest funds a wide range of charities that reach out to the disadvantaged in society. Business units including Keppel FELS, Keppel Shipyard,

Our Community

Keppel Singmarine and Keppel Logistics are strong partners of Community Chest's SHARE, a workplace donation programme.

Across its global operations, Keppel O&M lends a helping hand to those in need. Caspian Shipyard Company and Keppel Nantong Shipyard contributed supplies and organised activities to support old folks homes in Baku, Azerbaijan, and Nantong, China, respectively. In the Philippines, Keppel Subic Shipyard and Keppel Batangas Shipyard cleaned, painted and repaired facilities at various educational institutions as part of National School Maintenance Week.

Since 2013, Keppel Land Vietnam has been supporting Vinh Son School, located in the outskirts of Ho Chi Minh City, Vietnam. In April 2015, Keppel Land Vietnam officially adopted the school,

which enrolls students, most of whom come from low-income migrant families, in the first through fifth grades.

Besides sponsoring the school's utility bills from April to December 2015, Keppel Land Vietnam pledged to provide milk, uniforms, backpacks, electronic equipment, textbooks and books donated by staff to the school.

In Angra dos Reis, Brazil, engineers from BrasFELS repaired a bridge connecting the neighbourhoods of Jacuecanga and Vila da Petrobras, correcting the structure of the guard rail and giving the bridge a fresh coat of paint. Through this infrastructural improvement, residents enjoy a higher level of convenience and safety in their daily commutes.

In support of the Singapore Red Cross Society, over 100 staff

across the Group took part in a blood donation drive. In China, Keppel Nantong organised a second blood donation drive to continue its support for the Nantong Blood Transfusion Centre. The shipyard held its first blood drive in 2014 in aid of victims of a manufacturing plant explosion in Kunshan, Jiangsu Province.

**Sports for Causes**

Keppel's employees have been enthusiastic participants of charity sports events that support worthy causes while promoting healthy lifestyles.

Employees from across the Group joined over 6,000 participants from the finance industry and SGX-listed companies in the SGX Bull Charge Run 2015 to raise money for four charities in Singapore, with a team from Keppel Shipyard clinching first place in the race.

02





## Our Community

Putting their fitness to the test to raise money for Community Chest beneficiaries at the 'Race to the Sky' Vertical Marathon 2015, runners from Keppel came in first and second in the individual and corporate categories respectively.

In support of Singapore Disability Sports Council's efforts to promote an active and healthy lifestyle among both the able and non-ablebodied, Keppel Land sponsored the Reindeer Walk-A-Wheelathon 2015. Over 60 employees from Keppel Land, Keppel Telecommunications & Transportation and Keppelite Recreation Club participated in the charity walk.

### Spurring Excellence

Keppel extended its support of the Singapore Table Tennis Association (STTA) in 2015, committing to sponsor the Keppel-STTA Awards from 2015 till 2017. The awards honour and encourage Singapore's national table tennis players who have achieved outstanding performances over the year.

To groom future national table tennis talents, Keppel has supported the Keppel-Clementi

Zone Training Centre, a training venue to groom players from as young as age five, since 2011. Our sponsorship goes towards funding quality coaching staff, equipment and administrative costs, and enables STTA to maintain affordable training fees.

### Eco-friendly Ethos

In support of Earth Hour, non-essential lights at Keppel's yards, plants and buildings were turned off for an hour on 28 March 2015. Educational materials on energy conservation were circulated in various business units, while external stakeholders such as Keppel Land's tenants and residents of Sino-Singapore Tianjin Eco-City were also encouraged to participate.

Keppel's other environmental initiatives in 2015 included beach clean-ups by Nakilat-Keppel Offshore & Marine in Qatar, Keppel Batangas Shipyard's support of the International Coastal Clean-up to educate the public on marine pollution and the protection of aquatic resources, and Keppel Subic Shipyard's participation in a coastal clean-up at Barangay Calapandayan, Subic, in the Philippines.





02

**01** Keppel supports the Singapore Table Tennis Association through sponsorship of its annual awards night and training venue.

**02** Volunteers from Keppel Subic Shipyard in the Philippines participated in a coastal clean-up in support of environmental conservation.

**Disaster Relief**

To help victims of a major earthquake in Nepal in April 2015, Keppel O&M organised a charity drive that raised over \$35,000 for the Red Cross Society’s Nepal Earthquake Relief Fund.

In aid of relief efforts following explosions that occurred at the Port of Tianjin, China, in August 2015, Sino-Singapore Tianjin Eco-City Investment and Development Co., Ltd. (SSTEC) donated RMB 150,000 to the Sino-Singapore Tianjin Eco-City’s Fire Department and Public Security Bureau.

In Myanmar, Sedona Hotel Mandalay held a donation drive for villagers of Htein Taw, in Sagaing Region, which was severely affected by floods in July 2015. Volunteers collected donations of food supplies, clothing and daily necessities and delivered them to the rural village located outside Mandalay city.

Keppel employees in Qatar from the Domestic Solid Waste Management Centre, Doha North Sewage Treatment Works and Keppel Seghers’ Doha Office also raised funds for the flood victims, channelling the aid through Myanmar Red Cross Society.

## Special Focus

## Keppel Care Foundation: Doing Well by Doing Good

*Keppel Care Foundation is the Group's philanthropic arm. Established in 2012, the Foundation is a qualifying grantmaker that aims to sharpen, coordinate and sustain the Group's community efforts and contributions.*



01

The Foundation supports initiatives to protect the environment, promote education and care for the underprivileged.

The Foundation's beneficiaries in 2015 included:

- Ren Ci Hospital, a charity healthcare institution that provides affordable medical, nursing and rehabilitative care services for the community.
- Dover Park Hospice, a non-profit organisation providing palliative and hospice care for terminally-ill patients.
- Yayasan MENDAKI, a self-help group that helps the bottom 30% of the Malay/Muslim population in Singapore.
- SR Nathan Education Upliftment Fund, which provides financial assistance to needy Institute of Technical Education graduates who are pursuing diploma programmes at Republic Polytechnic.

### Creating Meaningful Impact

In 2015, the Foundation committed \$150,000 to the KK Women's and Children's Hospital (KKH) Health Endowment Fund, which provides financial assistance to needy patients for their medical treatment. The fund also supports

education, research and disease prevention programmes targeted at women's and children's health.

To further the impact of Keppel's contribution to KKH, the Foundation collaborated with Keppel Volunteers to hold outreach activities that benefit underprivileged young patients and their families. Their efforts in 2015 included lending support to a children's carnival at KKH, where over 200 young patients and their families enjoyed games and even a football session led by ex-national Singapore footballer Aleksandar Duric.

At the carnival, which took place on 13 June 2015, Mr Robert Chong, CEO of Keppel Care Foundation and Director, Group Human Resources, Keppel Corporation, shared, "It was meaningful that our volunteers were able to engage the children on interesting facts and figures about Singapore in celebration of our nation's jubilee year. Building on ongoing initiatives by Keppel Volunteers with KKH, we will strengthen the partnership through developing sustainable programmes that will benefit more children in need."

**Special Focus**

## Keppel Volunteers: Making a Difference

*Keppel’s community initiatives are bolstered by a robust culture of volunteerism. Our Group-wide volunteer movement, Keppel Volunteers, spearheads regular community outreach activities.*

Our employees are given two days of paid volunteer leave annually. In 2015, Keppel Volunteers achieved close to 5,000 hours of community service in Singapore.

Keppel Volunteers organise regular and diverse activities with beneficiaries such as students of Association for Persons with Special Needs, senior citizens of Thye Hua Kwan Senior Activity Centres and Ren Ci Hospital as well as children from KK Women’s and Children’s Hospital.

**Leveraging Skills**

To equip low-income families with information and skills to build financial stability, a team of finance officers supported Keppel Volunteers in partnership with the non-profit Care Corner Family Service Centre (Admiralty) to develop a series of financial literacy workshops. Launched in June 2015, the project was Keppel Volunteers’ first skills-based volunteering initiative.

Through the programme, participants learnt good saving habits and budgeting skills. By breaking down daunting topics such as healthcare costs, the volunteers helped participants to better understand the simple steps that can be taken to improve financial resilience.

Heartened by the positive response to the workshops, Keppel Volunteers organised a family carnival in November 2015 where beneficiaries from Care Corner enjoyed innovative games designed to reinforce the financial management tips taught in the workshops.

“This experiential learning approach was not only engaging and fun, but it also equipped our beneficiaries with important life skills, which will be helpful to them when making important financial decisions in the future,” said Mr Ian Peterson, Assistant Director, Care Corner Family Service Centre (Admiralty).

**01** Keppel Care Foundation’s support of the KKH Health Endowment Fund is complemented by outreach activities organised by Keppel Volunteers.

**02** Keppel Volunteers has developed its first skills-based initiative, a series of financial literacy workshops for low-income families.

02



## Special Focus

## Keppel Centre for Art Education: Inspiring through art

*Based on the belief that every person is born creative, the Keppel Centre for Art Education, a dedicated facility in the National Gallery Singapore, offers an exciting line-up of arts programmes and activities for the young and their families.*

The National Gallery Singapore (the Gallery) is Singapore's newest visual arts institution housed in the refurbished former Supreme Court and City Hall buildings.

As a Founding Partner of the Gallery, Keppel committed \$12 million to establish the Keppel Centre for Art Education (the Centre), which is the first of its kind in the region. Admission to the Centre is free for Singaporeans and permanent residents.

During his first official visit to the Gallery in November 2015, Singapore's Prime Minister Mr Lee Hsien Loong said, "The Gallery will not just be for art aficionados, but for everyone, including families and children. The Keppel Centre for Art Education is designed to engage our young visitors

and their families. I had a quick walk through and I highly recommend it. You will enjoy it twice as much with your grandchildren but you will also enjoy it a lot even by yourself."

During Keppel's preview of the Centre in October 2015, Keppel Corporation Chairman Dr Lee Boon Yang shared, "Keppel's vision is to shape the future for the benefit of all our stakeholders. The National Gallery Singapore and Keppel are therefore united in our goal of engaging the young through the Keppel Centre for Art Education. By stimulating imagination and encouraging the exchange of ideas, the Centre will nurture and inspire generations of creative and critical thinkers."

**01** Prime Minister of Singapore Mr Lee Hsien Loong (centre, seated), visited the Keppel Centre for Art Education as part of the National Gallery Singapore's opening celebrations. Accompanying him were (standing, from right to left) Ms Chong Siak Ching, CEO of National Gallery Singapore; Mr Lawrence Wong, Minister for National Development; Mr Loh Chin Hua, CEO of Keppel Corporation; Dr Lee Boon Yang, Chairman of Keppel Corporation; Ms Grace Fu, Minister for Culture, Community and Youth; Ms Sandra Lee (seated), artist; and students.

**02** Keppel Volunteers and students at the Art Playscape, one of the key spaces of the Keppel Centre for Art Education.



01

A commitment of

# \$12m

to establish the Keppel Centre for Art Education, which is the first of its kind in the region.



02

In support of the Centre's programmes, a group of Keppel Volunteers has been trained under the 'Best Friends of the Gallery' programme, and has helped to facilitate activities for its young visitors.

### Room for Imagination

The Centre comprises four key spaces, each featuring art commissions that are purposefully designed to stimulate the imagination of younger audiences. For the inaugural 2015 to 2016 instalment, the Gallery invited four artists to develop thought-provoking interpretations of the theme of 'home'.

### Art Corridor

'Voyage' by Twardzik-Ching Chor Leng is a large-scale, colourful puzzle artwork inspired by Singapore's waterways. By sliding acrylic chips along the maze of pathways, visitors learn about the interplay of colours, patterns and rhythms.

### Art Playscape

'The Enchanted Treehouse' is a fantastical world created by Sandra Lee, where visitors explore a beautiful forest with a magical tree house and labyrinth. Through adventure trails, visitors uncover hidden stories, mysteries and surprises.

Lee drew inspiration from the flora, fauna and motifs in Southeast Asian art.

### Project Gallery

Through a variety of hands-on activities, Tan Wee Lit's 'Home-Sapiens' inspires visitors to imagine and design their own homes of the future while considering the innovative adaptations that can be made to our living arrangements to protect our natural environment.

### Children's Museum

Milenko Prvacki's 'Visual Dictionary' recreates his own studio environment, allowing visitors to gain insight into the Cultural Medallion winner's creative process. Through experiential learning and role-play, visitors learn to select artworks, write labels and can even correspond directly with the artist by leaving a postcard in a special mailbox.

### Special Displays

On special display are a panoramic cityscape of Singapore by world-renowned British artist and autistic savant Stephen Wiltshire, and a landscape of Singapore's Woodlands neighbourhood recreated with clay, plasticine and sticky foam by 13-year-old Singaporean Xandyr Quek.

# About the Report

This report focuses on the sustainability strategy and practices of Keppel Corporation and its subsidiaries, namely the environmental, social and governance aspects of our business operations.

This report provides an overview of our approach, priorities, targets and performance reviews in key areas. The content was defined by identifying and prioritising material issues through materiality analysis and stakeholder engagement exercises (please refer to pages 8 to 9 and pages 16 to 17). We printed limited copies of this report to minimise environmental impact. A PDF version is available at [www.keppcorp.com](http://www.keppcorp.com).

Our stakeholders are advised to read Keppel Corporation's Report to Shareholders 2015, available at [www.keppcorp.com/annualreport2015/](http://www.keppcorp.com/annualreport2015/), for a complete view of the Group's businesses, strategy, performance and prospects.

## Reporting Period & Standards

This report is published annually and covers the same period as the financial year of the Company (January to December 2015). Where possible, we shared three-year historical information to provide a meaningful basis for comparison.

This report was prepared in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines G4 'Core' requirements and Singapore Exchange's Guide to Sustainability Reporting for Listed Companies.

The GRI Materiality Disclosures Service organisational mark is located on page 92 and is a formal confirmation that this report has undergone and successfully completed the GRI Materiality Disclosures Service in June 2016.

We used standard units of measurement. Conversion factors may be found in the relevant sections. All dollar values expressed are Singapore dollars.

## Independent Assurance

Keppel Corporation appointed an independent third party, DNV GL, to provide assurance on this report.

The content was reviewed and the accuracy and reliability of the statements were validated in accordance with the DNV GL Verification Protocol for Sustainability Reporting V5.0 (VeriSustain™). Principles and concepts in this protocol are aligned with GRI guidelines, the AA1000 Assurance Standard 2008 by AccountAbility and the International Standard on Assurance Engagements 3000 (ISAE 3000) by the International Federation of Accountants.

All underlying systems and process that support the Company's sustainability framework were reviewed in adherence to the AA1000 AccountAbility Principles of Inclusivity, Materiality, Responsiveness and Completeness, as well as GRI guidelines. The Assurance Statement is published on pages 89 to 91.

## Feedback

This report demonstrates our commitment to keep our stakeholders abreast of Keppel's sustainability performance. We welcome feedback.

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# Independent Assurance Statement

## Introduction

DNV GL Business Assurance Pte Ltd, part of DNV GL Group, has been engaged by Keppel Corporation Ltd (Keppel) to provide independent assurance over the Sustainability Report 2015 (the Report) which is available to stakeholders from Keppel's website and in print.

Keppel is responsible for the collection, analysis, aggregation, preparation and presentation of the printed version of the Report. The responsibility of DNV GL is to provide independent assurance to the management of Keppel on the reliability of the information contained in the Report and to express overall opinion as per the scope of assurance engagement as defined in this statement.

Our responsibility is in accordance with the terms of reference agreed on with Keppel. The assurance engagement is based on the assumption that the data and information provided are complete and true.

The intended recipients of the Assurance Statement are the stakeholders of Keppel.

The Report covers the sustainability performances from the global operations and all subsidiaries and associated companies over which the Keppel Group has management control. The boundary of the report for each area is defined in the respective chapters and unless otherwise stated, will include those subsidiaries that Keppel has management control.

## Scope of Assurance

The scope of work included a review of sustainability activities and performance data over the reporting period 1 January to 31 December 2015. This included:

- Evaluation of the reporting principles for defining the sustainability report content and the quality in the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines G4;
- Evaluation of adherence to Accountability principles provided in AA1000 Accountability Principles Standard:2008;
- Statement, information and performance data contained within the Report;
- Keppel's process for determining material aspects for reporting and the management approach to material issues; and

- Keppel's process for generating, gathering and managing the quantitative and qualitative data in the Report.

## Verification Methodology

The assurance engagement was conducted in line with the requirements of the AA1000 Assurance Standard:2008, Type 2 Assurance as well as the DNV GL Verification Protocol for Sustainability Reporting V5.0\* (VeriSustain™). A specific evaluation of the information and data on sustainability performance was related to Keppel's selected core indicators set forth in the GRI G4, as indicated in the GRI Content Index included in the Report. We applied a moderate level of assurance. The audit was carried out in April and May 2016 at the Keppel Corporation head office in Singapore. As part of the verification, we performed sample-based audits and undertook the following activities:

- Challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls;
- Interviewed representatives from the corporate headquarters as well as those from the various business units;
- Conducted document reviews, data sampling and interrogation of supporting databases and associated reporting system as they relate to selected content and performance data;
- Reviewed the actions taken based on outcomes of the stakeholder consultation report in 2013 and 2014; and
- Reviewed the actions taken based on the materiality analysis carried out in 2015.

## Limitation

The engagement excludes the sustainability management, performance and reporting practices of Keppel's suppliers, contractors and any third-parties mentioned in the Report. DNV GL did not interview external stakeholders as part of this assurance engagement.

Any financial information from Keppel's annual report and company reporting on operations in 2015 or other sources are not included in the scope of the assurance. Economic performances based on the

\* The principles and concepts of the VeriSustain™ protocol are aligned with GRI guidelines and the Assurance Standard AA1000AS. The protocol is available upon request at [www.dnvgl.com/assurance/reporting/verification.html](http://www.dnvgl.com/assurance/reporting/verification.html)

## Independent Assurance Statement

financial data were cross-checked with internal documents and the audited financial statements. The aggregation and calculation processes for building economic performances were reviewed and tested by the verification team.

Limited depth of evidence gathering was applied to inquiry and analytical procedures, as well as limited sampling at lower levels in the organisation. The baseline data for environmental and social performance are not verified, while the aggregated data are used for the verification. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

### Conclusion

In DNV GL's opinion, and based on the scope of this assurance engagement, nothing has come to our attention to suggest that the Report does not properly describe Keppel's adherence to the Principles for Defining Report Content in GRI G4.

DNV GL believes that the report is in line with the 'Core' requirements of the GRI G4 Guidelines. Further opinions with regard to the following Principles are made below:

### Inclusivity

Keppel has identified six internal and external stakeholder groups such as Customers, Employees, Governments, Shareholders, Local Communities and Suppliers. Keppel's stakeholder engagement activities occurred at the Group and business unit level through various platforms. In our opinion, the stakeholder group could include more overseas representations of where Keppel has significant impact or operations.

### Materiality

The internal review of businesses was combined with a review of external stakeholder issues to identify the issues that are significant to the stakeholders so that the report content remains relevant to the stakeholders' concerns and expectations. At the Group level, Keppel collected and reviewed materiality analysis conducted by individual business units so as to enable a more accurate identification of material issues at the Group level. One of the material aspects identified was safety and health. The reporting of this indicator could be improved by providing a more detailed report of this indicator.

### Responsiveness

The Report provides a comprehensive overview of the Group's activities; it keeps stakeholders informed of corporate decisions in terms of achievements and performance in relation to the sustainability material arguments. Keppel's stakeholder dialogues and materiality review were used to determine the type of information that is material to stakeholders. The information is considered in the preparation of the Report.

### Completeness

The Report has adequately covered the sustainability strategy, management approach and sustainability performances against the GRI G4 selected indicators. The boundary of the Report covers the sustainability performances from the global operations and all subsidiaries and associated companies over which the Keppel Group has management control. A sustainability report should include within its boundary all entities that generate significant sustainability impacts (actual and potential) rather than solely on its management influence.

### Accuracy and Reliability

The document allows the reader to examine both the positive and the negative trends of Keppel's performance in 2015. Keppel has selected, compiled and reported information in a relatively consistent manner. The stakeholder can analyse changes in sustainability performance over time. Any errors or misstatements identified during the engagement were corrected prior to the Report being published. Data owners were able to demonstrate the origin and interpretation of the data in a reliable manner. The data was identifiable and traceable. DNV GL concludes that the level at which the Report adheres to the principle of Accuracy and the Reliability of the information on sustainability performance has improved as compared to the previous year.

### Report Quality: Balance & Neutrality

The Report reflects Keppel's desire to present a balanced account of the activities and results relevant to the reporting year, which is consistent with the corporate strategies. We consider the Report to be an impartial description of Keppel's sustainability impact.



### Findings in Relation to Specific Sustainability Performance Information:

The Report covers global operations and all subsidiaries and associated companies for which Keppel has management control, unless otherwise indicated. The reporting of the sustainability performance presented in the Report is collected centrally by a dedicated function in the Group from the operating companies and consolidated for reporting, which is a common approach used by large conglomerates.

DNV GL has evaluated the reliability of data and information with regard to energy consumption, waste generation, greenhouse gas emissions, and safety and health performance indices at the Group level and at operating companies' level for Type 2 Assurance.

Keppel uses a system called 'CR360' to gather sustainability performance data globally. The data used for the Report this year is based on a combination of manual collection and collated information from CR360. The data owners interviewed are able to demonstrate that the trace to the origin and the data source of the specific data and information are identifiable.

### Opportunities for Improvement

The following is an excerpt from the observations and opportunities reported to Keppel's management. However, these do not affect our conclusions on the Report and are provided to encourage continual improvement. Without qualifying our conclusion above, DNV GL makes the following recommendations:

- To develop the stakeholder inventory both at the Group and business unit levels so as to include more representations from overseas locations where Keppel may have significant operations;
- To have more coverage on aspects which are identified as material for the organisation (e.g. consider including data from subcontractors for the various material indicators); and
- To consider including in the boundaries of the report all entities that generate significant sustainability impacts and those over which it exercises significant influence.

### Statement of Competence & Independence

DNV GL is a leading provider of sustainability services, including the verification of sustainability reports. Our environmental and social assurance specialists operate in over 100 countries. DNV GL was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement. DNV GL maintains complete impartiality toward stakeholders interviewed during the verification process.



**Grace Cheah**  
Lead Verifier



**Antonio Astone**  
Assurance Reviewer

DNV GL Business Assurance Pte Ltd.  
1 June 2016  
Singapore



# Global Reporting Initiative (GRI) Content Index



## GRI G4 In Accordance – Core

GRI Indicator	General Standard Disclosure	Page Reference*
	<b>Strategy and Analysis</b>	
G4-1	Statement from the most senior decision-maker of the organisation	1
G4-2	Description of key impacts, risks, and opportunities	15, 32-35
	<b>Organisational Profile</b>	
G4-3	Name of the organisation	Cover
G4-4	Primary brands, products, and services	2-3
G4-5	Location of the organisation's headquarters	Back Cover
G4-6	Number of countries where the organisation operates, and names of countries where either the organisation has significant operations or that are specifically relevant to the sustainability topics covered in the report	2-3
G4-7	Nature of ownership and legal form	4, AR 2015 (198-209)
G4-8	Markets served	2-3
G4-9	Scale of the organisation	2-4, 20-23, AR 2015 (6-7, 162, 231)
G4-10	Profile of employees	67-69
G4-11	Percentage of total employees covered by collective bargaining agreements	67
G4-12	Organisation's supply chain	18-19
G4-13	Significant changes during the reporting period	9
G4-14	Whether and how the precautionary approach or principle is addressed by the organisation	28-35, AR 2015 (116-117)
G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organisation subscribes or which it endorses	5, 10-11
G4-16	Memberships in associations	16, 62-63
	<b>Identified Material Aspects and Boundaries</b>	
G4-17	List entities included in the organisation's consolidated financial statements or equivalent documents	4, AR 2015 (198-208)
G4-18	Process for defining the report content and the Aspect Boundaries and how the organisation has implemented the Reporting Principles for Defining Report Content	8-9
G4-19	List all the material Aspects identified in the process for defining report content	8-9
G4-20	For each material Aspect, report the Aspect Boundary within the organisation	8-9
G4-21	Report the Aspect Boundary outside the organisation	8-9
G4-22	Explanation effect of any restatements of information provided in previous reports, and the reasons for such restatements	9
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries	9
	<b>Stakeholder Engagement</b>	
G4-24	List of stakeholder groups engaged by the organisation	16-17
G4-25	Basis for identification and selection of stakeholders with whom to engage	16-17
G4-26	Approach to stakeholder engagement	16-17
G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded	16-17

\* References to Keppel Corporation's Report to Shareholders 2015 are expressed as 'AR 2015 (page number)'. Keppel Corporation's Report to Shareholders 2015 is available at [www.keppcorp.com/annualreport2015](http://www.keppcorp.com/annualreport2015)

GRI Indicator	General Standard Disclosure	Page Reference*
<b>Report Profile</b>		
G4-28	Reporting period for information provided	88
G4-29	Date of most recent previous report	88
G4-30	Reporting cycle	88
G4-31	Contact point for questions regarding the report or its contents	88
G4-32	Report on 'in accordance' option, GRI Content Index, reference to the External Assurance	88-95
G4-33	Policy and current practice with regard to seeking external assurance for the report	88
G4-34	Governance structure of the organisation	6-7, 25-28
G4-35	Process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees	6-7
G4-36	Whether organisation has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body	6-7
G4-37	Processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics	6-7, AR 2015 (104-106, 117)
G4-38	Composition of the highest governance body and its committees	6-7, 26-27, AR 2015 (27-33)
G4-39	Whether the Chair of the highest governance body is also an executive officer	26, AR 2015 (92)
G4-40	Nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members	26-28, AR 2015 (109-110)
G4-41	Processes in place for the highest governance body to ensure conflicts of interest are avoided	26-28, AR 2015 (109-110)
G4-42	Highest governance body's and senior executives' roles in the development, approval, and updating of the organisation's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts	6-7, 25
G4-43	Measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics	26, AR 2015 (113)
G4-46	Highest governance body's role in reviewing the effectiveness of the organisation's risk management processes for economic, environmental and social topics	6-7, AR 2015 (106-108)
G4-48	Highest committee or position that formally reviews and approves the organisation's sustainability report and ensures that all material Aspects are covered	6-7
G4-49	Process for communicating critical concerns to the highest governance body	26, AR 2015 (116)
G4-51	Remuneration policies for the highest governance body and senior executives	30-31, AR 2015 (95-100)
G4-52	Process for determining remuneration	30-31, AR 2015 (95-100)
<b>Ethics and Integrity</b>		
G4-56	Organisation's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	5, 7, 29
G4-58	Internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organisational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines	AR 2015 (110-111)
<b>Category: Economic</b>		
<b>Aspect: Economic Performance</b>		
G4-DMA	Generic Disclosures on Management Approach (DMA)	6-11, 17, 20-21, AR 2015 (16-22)
G4-EC1	Direct economic value generated and distributed	20-23, AR 2015 (14-17)
G4-EC4	Financial assistance received from government	23
<b>Aspect: Market Presence</b>		
G4-DMA	DMA	6-11, 17, 20-21
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation	70
<b>Aspect: Indirect Economic Impacts</b>		
G4-DMA	DMA	6-11, 17, 20-21
G4-EC8	Significant indirect economic impacts, including the extent of impacts	70-74, 76-87

## Global Reporting Initiative (GRI) Content Index

GRI Indicator	General Standard Disclosure	Page Reference*
	<b>Category: Environmental</b>	
	<b>Aspect: Energy</b>	
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G4-EN6	Reduction of energy consumption	38-39
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G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	42-43
G4-EN16	Energy indirect GHG emissions (Scope 2)	42-43
G4-EN19	Reduction of GHG emissions	38-39
G4-EN21	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions	43
	<b>Aspect: Effluents and Waste</b>	
G4-DMA	DMA	6-11, 17, 36-38
G4-EN23	Total weight of waste by type and disposal method	40
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	<b>Aspect: Products and Services</b>	
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	<b>Aspect: Compliance</b>	
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G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	40
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G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	69-70
G4-LA3	Return to work and retention rates after parental leave, by gender	70
	<b>Aspect: Occupational Health and Safety</b>	
G4-DMA	DMA	6-11, 17, 56-59
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G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	69
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	<b>Aspect: Labor Practices Grievance Mechanisms</b>	
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GRI Indicator	General Standard Disclosure	Page Reference*
	<b>Category: Social</b>	
	<b>Sub-Category: Human Rights</b>	
	<b>Aspect: Non-Discrimination</b>	
G4-DMA	DMA	6-11, 68
G4-HR3	Total number of incidents of discrimination and corrective actions taken	68
	<b>Aspect: Human Rights Grievance Mechanisms</b>	
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G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	60
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