Solutions for Sustainable Urbanisation

Presentation to The Templeton Emerging Markets Group

Delivered by:

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Disclaimer

This release may contain forward-looking statements which are subject to risks and uncertainties that could cause actual results to differ materially from such statements. Such risks and uncertainties include industry and economic conditions, competition, and legal, governmental and regulatory changes. The forward-looking statements reflect the current views of Management on future trends and developments.
Evolving External Environment

- Unprecedented speed and scale of urbanisation
- New demand for energy, clean environments, urban living and connectivity.

Urbanisation Megatrends

- Lower Global Growth
- Climate Change
- Climate Change

SIGNIFICANT SHIFTS

- Low to negative interest rate environment
- Shale oil revolution
- Slowing global growth
- OPEC’s declining influence

- Changes in the market place and workforce

- Unprecedented speed and scale of urbanisation
- New demand for energy, clean environments, urban living and connectivity.

- COP 21 and its impact on countries and businesses
- Increasing focus on renewable energy

- Business models challenged by tech-enabled economy
- Next generation of robotics and artificial intelligence
- Presents both disruptions and opportunities
65% of global population will live in cities by 2040.

2.2 billion tonnes of annual municipal solid waste generated by 2025.

44 trillion gigabytes of data will be created and copied by 2020 - as many stars in the universe.

E-retail revenues will grow to US$ 3.4 trillion by 2019, up from US$ 1.55 trillion in 2015.

Global energy demand will rise 25% from 2014-2040:

- 40% of demand growth will be met by natural gas
- Oil will provide a third of total energy by 2040
- Electricity demand will rise 65%, 2.5x faster than overall energy demand

Sources: ExxonMobil, Dell EMC and Statista Inc.
**Keppel is in the Business of Sustainable Urbanisation**

**Our vision** is to be a global company at the forefront of our chosen industries, shaping the future for the benefit of all our stakeholders.

Keppel meets the world’s sustainable urbanisation needs through key businesses in Offshore & Marine, Property, Infrastructure and Investments.
Keppel Corporation

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

Property
- Property development

Infrastructure
- Energy & related infrastructure
- Logistics & data centres

Investments
- Asset management
- Property & infrastructure trusts
- Private funds
- Investments
Keppel’s Vision 2020

**Financial**
- Net profit target
- Sustainable ROE
- PE ratio target
- Higher recurring income
- Institutional quality balance sheet

**People**
- Strong succession pipeline
- Tapping global talent pool
- High employee satisfaction

**Stakeholders**
- Develop & grow new markets, products & customers
- Focus approach in CSR

**Process**
- Zero fatalities, zero audit failures
- Higher productivity
- Strong risk-management to support enterprise & innovation
Harnessing Strengths

Core Strengths:

Building Strong Verticals + Collaboration:

SYNERGY

Offshore & Marine

Property

Infrastructure

Investments

Townships

Data Centres

Gas Value Chain
Scaling the Value Chain *(moving to the right)*

- The world is changing; business models must also evolve from asset heavy to asset light and high value adding businesses.

*An example from the data centre industry:*
Creating & Capturing Sustainable Value

Capturing value:

**DESIGN & BUILD**
- Offshore & Marine
- Property
- Infrastructure
- Investments

**SALE & SERVICE**
- Newbuilds, repair & upgrading projects
- Residential projects
- WTE technology packages

**OWN & OPERATE**
- Midstream assets
- Commercial properties
- Plants & data centres

**STABILISE & MONETISE**
- Unlocking value
- Recycling & reinvesting capital for higher returns

**TRUSTS & FUNDS**
- Fund management
- Operating & maintenance services
- Facilities & property management

**Earnings streams:**

- Operating income
- Operations fee
- Property mgmt fee
- Facility mgmt fee
- Repair/service fee
- Capital gains
- Asset mgmt fee
- Operations fee
- Property mgmt fee
- Facility mgmt fee
Sector Updates & Outlook
Offshore & Marine

FLNG conversion project, Golar Hilli
### OIL SUPPLY CURVE TODAY

<table>
<thead>
<tr>
<th>Global oil production supply curve</th>
<th>Breakeven price (per Boe)</th>
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<tbody>
<tr>
<td>August 2014 Brent price</td>
<td>$125</td>
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<tr>
<td>September 2016 Brent price</td>
<td>$75</td>
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### OIL PRICE DYNAMICS

- **Structural changes in oil supply/demand** - flattening supply curve due to:
  1. Emergence of abundant LTO as a mid-price source
  2. Abundant **low-cost conventionals** – will OPEC cut production?
  3. Decreasing **offshore breakevens** from technology advancements

- **Demand growth** not likely to reach same levels as seen in recent past

- **Reasonable sustained price range of $40-80/bbl** - repeat of multi-year highs of last 5 year highs unlikely in near future

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Source: Bain analysis
Meeting Challenges with Agility

Rightsizing and managing costs

- Reduced Keppel O&M’s overheads by 20% year on year
- Reduced direct workforce by close to 13,900 (~40%) and subcontract headcount in Singapore by 9,500 (~30%) since the start of 2015
- Reviewing yard capacity and streamlining operations
Positioning for the Future

Investing prudently in R&D and new capabilities

- Acquired Letourneau rig designs and after market sales/services

Exploring other markets and opportunities

- Repurposing existing solutions for non-oil and gas projects
- Growing presence in markets for LNG, floating production and Jones Act vessels
Providing Diverse Solutions

- Offshore Desalination
- Single/Dual Fuel Floating Power Barge
- PreNEx Liquefaction Technology
- Specialised Vessels
- LNG Transportation & Bunkering
Property

Saigon Centre Phase Two, Ho Chi Minh City
Tapping Strong Urbanisation Trends

Keppel is meeting the needs of urbanisation in Asia

- Core markets: Singapore and China
- Growth markets: Vietnam and Indonesia

Growth strategies

- Scale up in high-growth cities
- Selectively acquire completed assets
- Invest opportunistically in developed markets
Resilient Demand for Homes

Keppel Land sold an average of above 3,600 homes p.a. over the past six years.

Home Sales

Units
- 6,000
- 5,000
- 4,000
- 3,000
- 2,000
- 1,000
- 0


China Singapore Others

~2,600 overseas homes slated for launch in 4Q 2016
Quality Homes

Pipeline of above 70,000 homes across Asia; >16,000 units slated for launch from now till 2018.

Waterfront Lifestyle Developments

City Centre Homes

Mixed-use Developments and Integrated Townships
Distinctive Commercial Developments

Above 1 million sm of commercial GFA being developed overseas.

- Keppel Land is Singapore’s largest developer of Grade A office buildings

- Growing commercial portfolio overseas in cities such as Ho Chi Minh City, Jakarta, Beijing, Shanghai and Tianjin
A model for sustainable urbanisation in China

- Transforming 30-sq km of non-arable water-scarce land
- Collaboration between Keppel’s Property, Logistics and Infrastructure businesses
- Home to 60,000 residents and 4,000 registered companies
- Sold about 24,400 residential units to-date
Focused on Returns

Keppel Land aims to be developer with highest return in Asia

- ROE was 18.9% per annum over past 10 years

Proactive capital recycling for best risk-adjusted returns

- Eg. Divestment of Lifehub@Jinqiao in Shanghai

Rightsize property book in response to market opportunities
Infrastructure
Energy-related Infrastructure & Services

Gas-to-Power
- Developer of power plants
- Imports and retails gas
- Generates and retails electricity

Waste-to-Energy
- Developer of WTE plants and provider of technology packages
- Implemented more than 100 WTE projects to-date

X-to-Energy
- Developer and operator of district cooling systems in Singapore and China

Infrastructure Services
- Provides operating and maintenance services for Keppel-developed plants, including
  - Keppel Merlimau Cogen power plant in Singapore
  - Doha North Sewage Treatment Works
  - Domestic Solid Waste Management Center in Qatar
Established Logistics Network

Keppel T&T is meeting the growing demand for quality logistics services in Asia Pacific.

- 3PL operations spanning 6 countries
- Present in 7 cities across China with 3PL and integrated river port logistics services
- Acquired stake in e-commerce fulfillment company, Courex to tap the growth of e-commerce sector
Quality Data Centre Assets

Portfolio of 15 quality data centres across Asia Pacific & Europe.

Asia-Pacific
- Keppel DC Singapore 1*
- Keppel DC Singapore 2* & 3** &4**
- Cyberjaya*, Malaysia
- iSeek*, Brisbane
- Gore Hill Data Centre*
- Intellicentre 2*, Australia

European
- GV7*, London
- Keppel DC Dublin1*
- Almere 1* & 2**, Netherlands
- maincubes Data Centre*, Germany
- Data centre in Milan*
- Data centre in Cardiff*

* Assets owned by Keppel DC REIT, of which Keppel T&T holds a 30.1% stake through Keppel DC Investment Holdings.

** 70:30 JV between Keppel T&T and Keppel Land.
Investments

Ocean Financial Centre, Singapore
Established Track Record for Asset Management

AUM of Keppel-managed funds and trusts grew at a CAGR of ~30% over the past ten years.

AUM

- Alpha Investment Partners
- Keppel Infrastructure Trust
- Keppel REIT
- Keppel DC REIT

Fueling Growth through Asset Management

**Boosting the Group’s capital recycling platform and expanding its capital base with co-investors.**

- **Képpel REIT**
  - Among SGX’s largest Pan-Asian commercial REITs

- **Képpel Capital**
  - Total AUM: S$26 billion

- **Képpel Infrastructure Trust**
  - Largest Singapore infrastructure trust on SGX

- **Képpel DC REIT**
  - Asia’s first data centre REIT on SGX

- **Private Funds**
  - Manages 6 property funds*

- **Harnessing synergies to:**
  - increase recurring fee income
  - improve returns through asset turns
  - seize opportunities through private funds
  - create pull-through projects for business verticals
  - maintain institutional quality balance sheet

*Excludes the newly-launched Alpha Data Centre Fund and Alpha Asia Macro Trends Fund III, which will add another US$3.5 billion to AUM when fully invested.*
Driving Collaboration

The Alpha Data Centre Fund harnesses synergies across the Group’s business verticals to create sustainable value with capital efficiency.

Keppel Capital
Keppel T&T
Keppel Land
Keppel Infrastructure

Alpha Data Centre Fund
Target Size: US$500m

Data Centre Asset

Keppel DC REIT

Fund management services
Development & operational services
Power & cooling solutions
Data centre project acquired/developed
Asset stabilised & divested
Seed capital
Capital
Co-investors
## Creating Synergies

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<thead>
<tr>
<th>Keppel Land</th>
<th>Keppel Infrastructure</th>
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<tr>
<td><strong>Inter-BU Sales &amp; Services</strong></td>
<td></td>
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<tr>
<td>▪ Keppel Land’s office is powered by solar energy from Keppel Infrastructure</td>
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<tr>
<td>▪ Opportunities to offer similar schemes to other office tenants</td>
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<th>Keppel Land</th>
<th>Keppel Capital</th>
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<tr>
<td><strong>Life Hub @ Jinqiao</strong></td>
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<tr>
<td>▪ Monetised at US$517m</td>
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<td>▪ Achieved IRR of over 20% through active management</td>
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<th>Keppel Capital</th>
<th>Keppel T&amp;T</th>
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<tr>
<td><strong>Alpha Data Centre Fund</strong> (Target size: US$500m)</td>
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<tr>
<td>▪ Expanding capital base with co-investors to seize opportunities</td>
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<tr>
<td>▪ Creating pull-through for other business units</td>
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<th>Keppel O&amp;M</th>
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<td><strong>Offshore Desalination Plant</strong></td>
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<tr>
<td>▪ Harnessing Keppel’s capabilities to pursue opportunities</td>
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Keppel is in the business of sustainable urbanisation. We drive collaboration across business verticals to create and capture value from all parts of the Group.