

## PREFERRED PARTNER & ENABLER

With a global footprint in more than 20 countries, Keppel is a multi-business company providing robust solutions for sustainable urbanisation to meet the growing need for energy, infrastructure, clean environments, high quality homes and offices, and connectivity.

As one of the world's leading experts in LNG vessel repair, Keppel has built up critical know-how for handling materials at extremely low temperatures below  $-160^{\circ}\text{C}$ . Our deep cryogenic expertise is augmented by a strong performance history with oil and gas projects, including over 110 complex conversions and 400 newbuild vessels.

In 2014, we embarked on converting the world's first of its type FLNG vessel for Golar LNG, after an extensive Front End Engineering Design phase. The following year, we established Gas Technology Development to advance Keppel's technology foresight and R&D efforts in the field. Today, we have a platform for early customer engagement and the development of viable gas solutions.

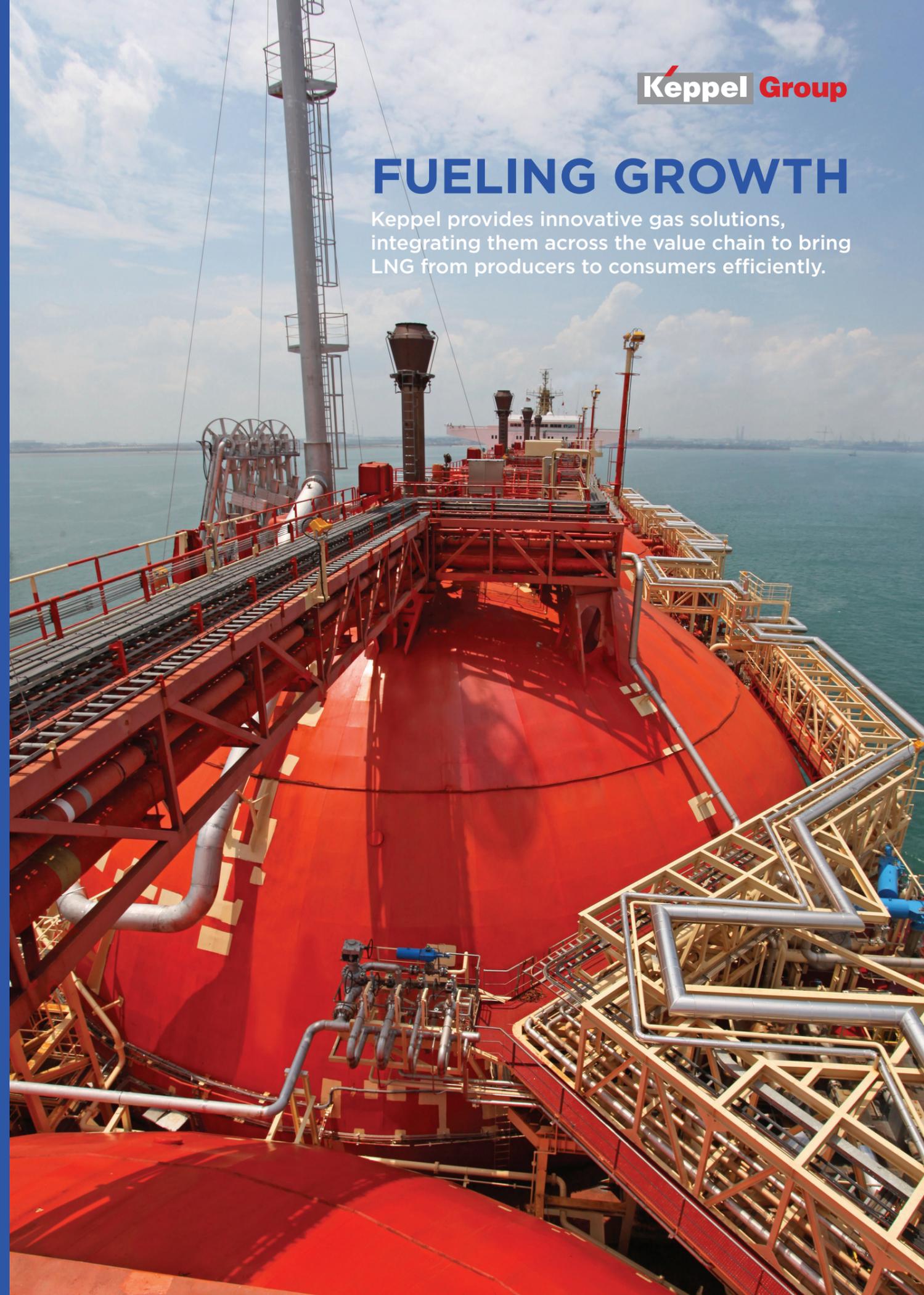
In 2016, Keppel and Shell won a joint licence to supply LNG bunker to vessels in the Port of Singapore. Through this collaboration, we are pushing boundaries to meet growing demand for LNG as a marine fuel in coastal areas, inland waterways and the international maritime sector.

Leveraging our suite of end-to-end gas solutions, we are ready to meet rising demand for small-scale LNG in archipelagic markets across Southeast Asia, the Caribbean and the Mediterranean, regions unserved by pipelines.

With our distinctive ability to design, develop and integrate solutions across the value chain, Keppel is poised to be the gas industry's preferred partner and enabler.

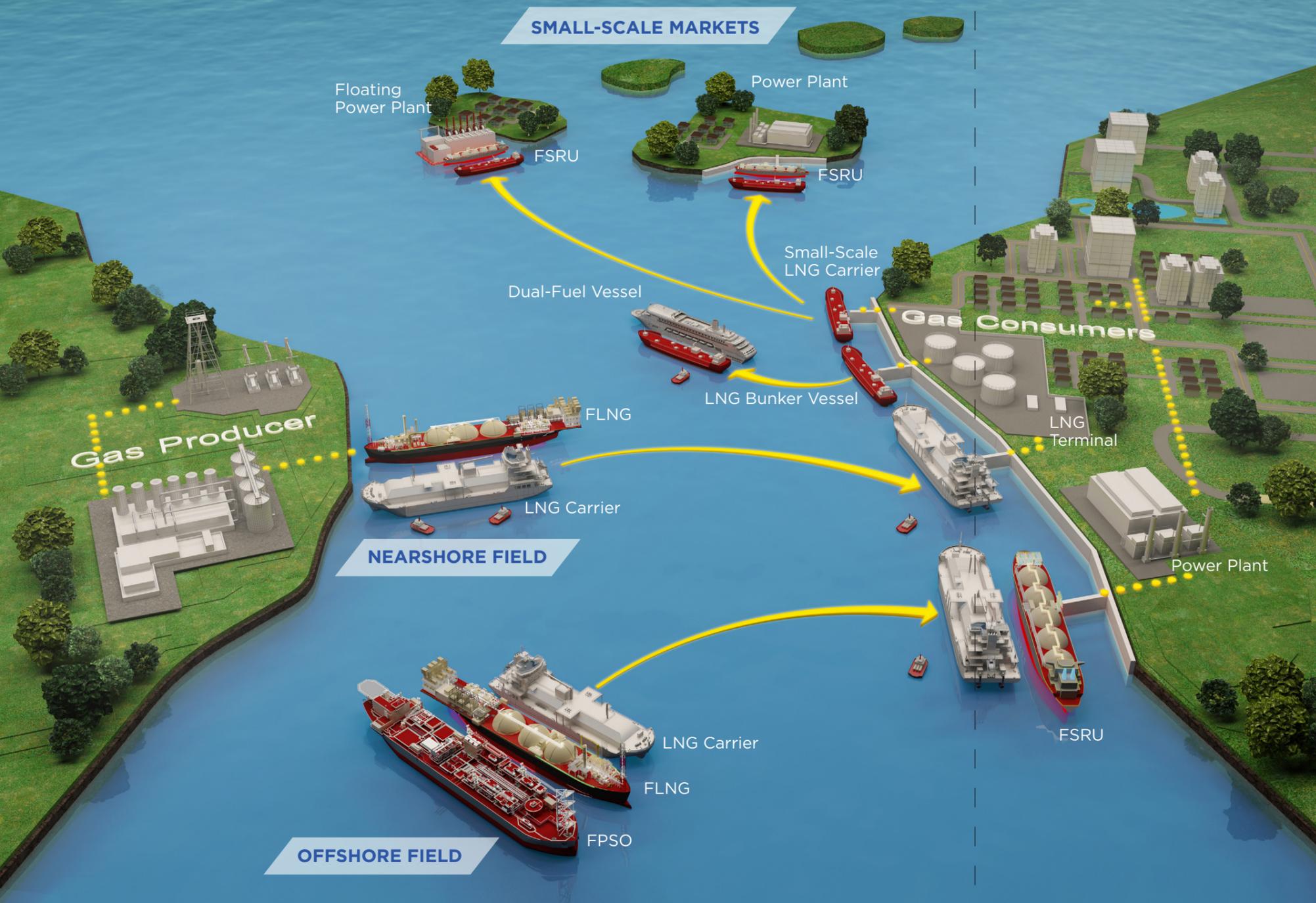
## FUELING GROWTH

Keppel provides innovative gas solutions, integrating them across the value chain to bring LNG from producers to consumers efficiently.



# EMPOWERING DELIVERY

Natural gas occupies 600 times less space when liquefied, making it more cost efficient to transport over long distances, and to smaller markets where pipelines do not exist. Combining over 30 years of vessel conversion and repair expertise with proven cryogenic experience, Keppel offers solutions for the seamless delivery of Liquefied Natural Gas (LNG) from end-to-end.



## UPSTREAM

- Floating Production Storage Offloading (FPSO) vessels produce and process hydrocarbons, as well as store oil offshore.
- Floating LNG (FLNG) vessels produce and convert natural gas into liquid state at  $-160^{\circ}\text{C}$  for transportation by LNG carriers to consumer markets.

## MIDSTREAM

- Floating Storage & Regasification Units (FSRUs) convert LNG back into the gaseous state for delivery to gas grids and power plants.
- Small-scale LNG carriers can redirect LNG cargoes to different parts of the world, as well as perform “milk-runs” within archipelagos.
- LNG bunker vessels, a variant of the small-scale LNG carriers, are designed to refuel ships.

## DOWNSTREAM

- Land-based and floating power plants receive gas from FSRUs to generate and distribute electricity.
- Dual-fuel vessels, ranging from container ships to harbour tugs, have engines that can run on LNG.