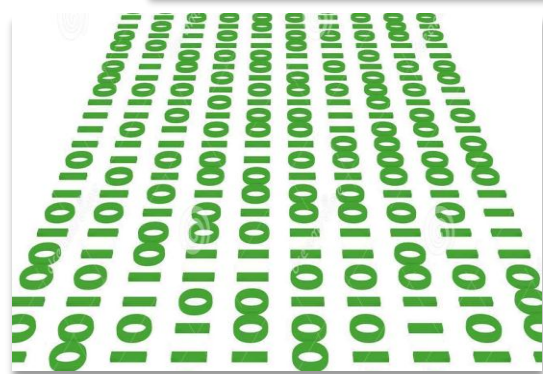


DIGITALISATION

SENSORS & APPLICATIONS



MAKING IT SIMPLE

Keppel

**Offshore Technology
Development**



OTD rides on the waves of the Fourth Industrial Revolution (4IR) and taps on the technological advances of Automation and Instrumentation towards Industry 4.0 and the Internet of Things (IoT).

Through the 3 pillars of thought - Digitisation, Sensorisation, and Optimisation - OTD integrates reliable technologies from established industrial key players to provide commercially viable and feasible solutions to our customers.



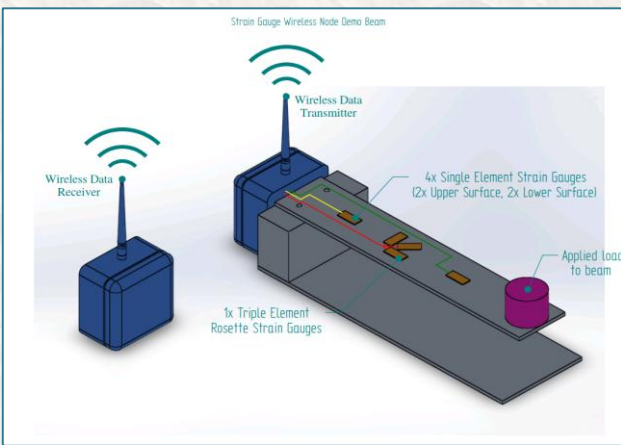
- **Digitisation** of existing operations provides end users with the real time visibility and allows detection of faults with immediate alerts and notification to optimise operations.
- **Sensorisation** embeds sensors within a system or an equipment to capture informative data for analysis and evaluation. It is used to monitor the system's or equipment's health and critical parameters for maintenance to minimise operation downtime.
- **Optimisation** of the captured data comes through the analytics, simulation, predictive and preventive maintenance to reduce costs and improve quality.



OTD is a one-stop solution provider that understands customers' needs by consolidating and integrating established technologies from key players in Automation, Sensors, and Instrumentation to provide the best solutions.

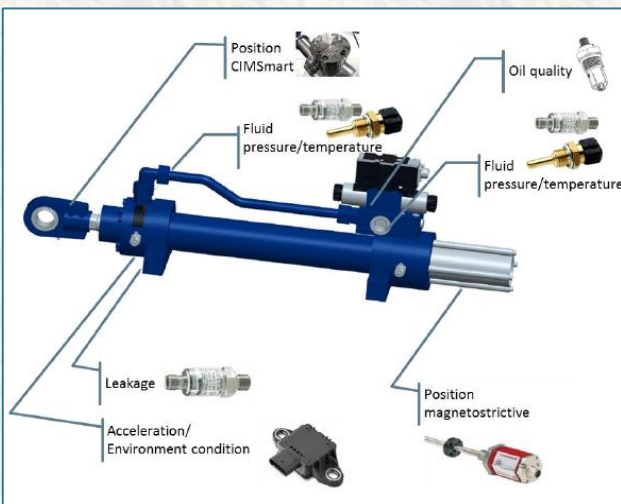
Type of Sensors:

- Accelerometer
- Vibration
- Inclination
- Temperature
- Humidity
- Gyroscope
- GPS
- Stress



Applications:

- Remote Monitoring and Troubleshooting
- Remote Data Collection
- Video Surveillance and Analytics



All solutions are custom designed and built with consideration to the following core principles:

- Safety
- Innovation
- Reliability
- Economical

With a proven track record of delivering monitoring systems, OTD has demonstrated in-depth technical capabilities for Automation and Instrumentation. In addition, OTD has forged close working relationships with key players to put together optimal solutions that are highly adaptable to the customers' needs.



OTD 2.0 PRD 14.09.2018

Keppel

Offshore Technology Development



55 Gul Road, Singapore 629353

Tel: (65) 6863 7409

Fax: (65) 6862 3465

Enquiry: enquiry@keppelotd.com

Support: support.otd@keppelotd.com

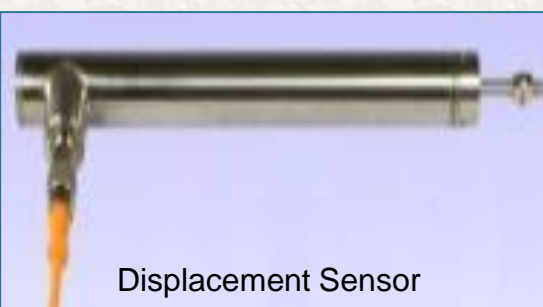
Web: www.keppelom.com/otd

DIGITALISATION SENSORS & APPLICATIONS IN STRUCTURAL MONITORING

Working with specialists in structural monitoring in the offshore and marine sector, OTD aims to provide structural health monitoring solutions for a wide range of offshore structures.

The measurement technologies include, but not limited to the following :

- Electrical Resistance Strain Gauges
- Vibrating Wire SGs and Transducers
- Fibre Optic SGs and Transducers
- Cameras, ATS, GPS, and Electronic Sensors
- Acoustic Emission
- Load Cells



With the established technologies, the following capabilities can be achieved:

- Design Verification of Structures
- Crack Investigation
- Structural Monitoring
- Subsea Crack Monitoring
- Offshore Platform Motion Monitoring
- Offshore Turbine Monitoring

Specially developed data management systems can be integrated with these sensors for real-time data handling with online analytical processing tools.