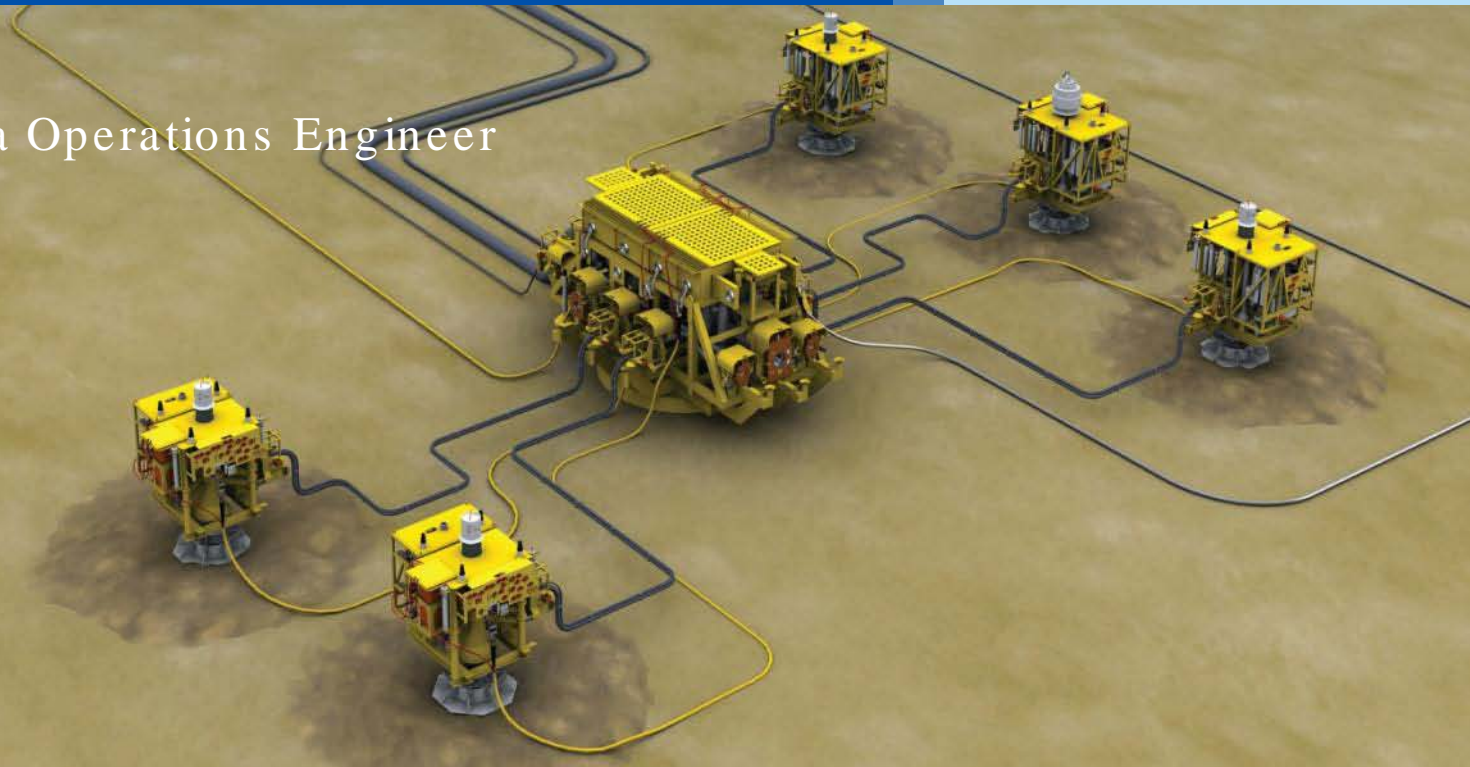


# Gorgon Subsea Operations Overview



Euan Taylor,  
Gorgon Subsea Operations Engineer  
23 Feb 2011



# Agenda



- Project overview
- Subsea specific overview
- Operational Phase

# Gorgon Project overview

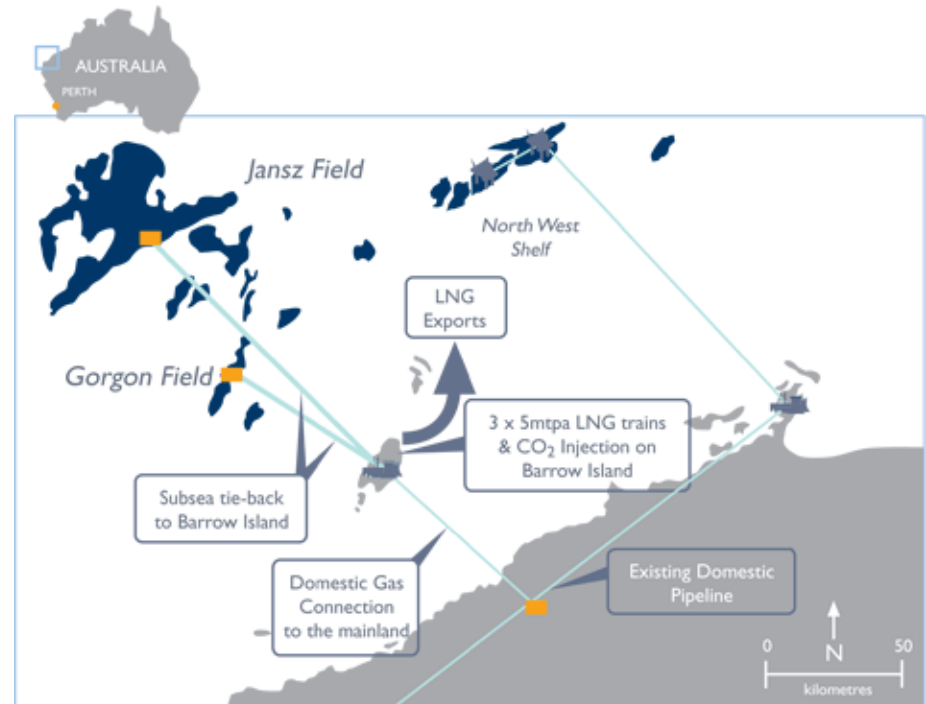


## Joint Venture Participants

- Chevron (~47%)
- ExxonMobil (25%)
- Shell (25%)
- Osaka Gas (1.25%)
- Tokyo Gas (1%)
- Chubu Electric Power (0.417%)

## Project Development Plan

- 3 x 5 MTPA LNG trains
- A domestic gas plant with capacity of 300 terajoules per day
- LNG shipping facilities to transport products to international markets
- Greenhouse gas management via CO<sub>2</sub> injection project



# Current status



- On schedule for first gas in 2014
- Fabrication of PAUs/PARs and modules underway ahead of schedule
- Dredging and Horizontal Directional Drilling programs making significant progress
- Barrow Island and near shore workforce now in excess of 1,400
- Native Title Agreements for domestic gas pipeline signed





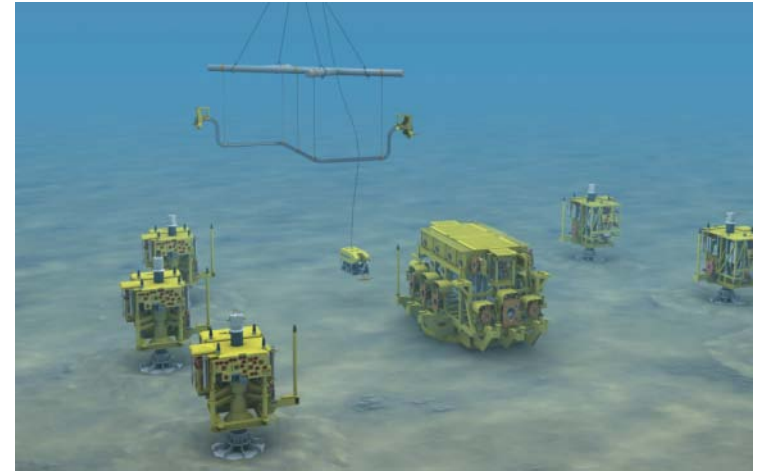
# Initial Phase1 Inventory



- Subsea equipment is being designed and supplied by GE Oil & Gas

## Gorgon

- 8 Subsea Wells - Chevron
- 3 Manifolds
- 3 PTS
- 84km Pipelines and Umbilical



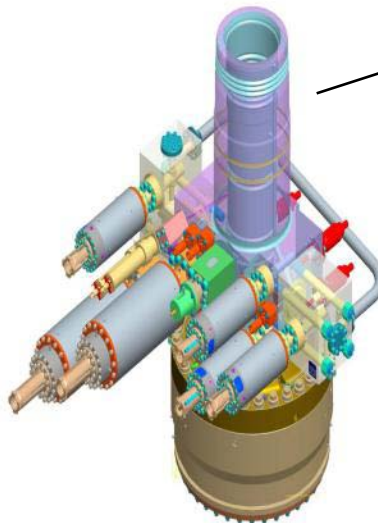
## Jansz

- 10 Subsea Wells - Exxon Mobil
- 2 Manifold/PTS Structure
- 135km of Pipelines and Umbilical

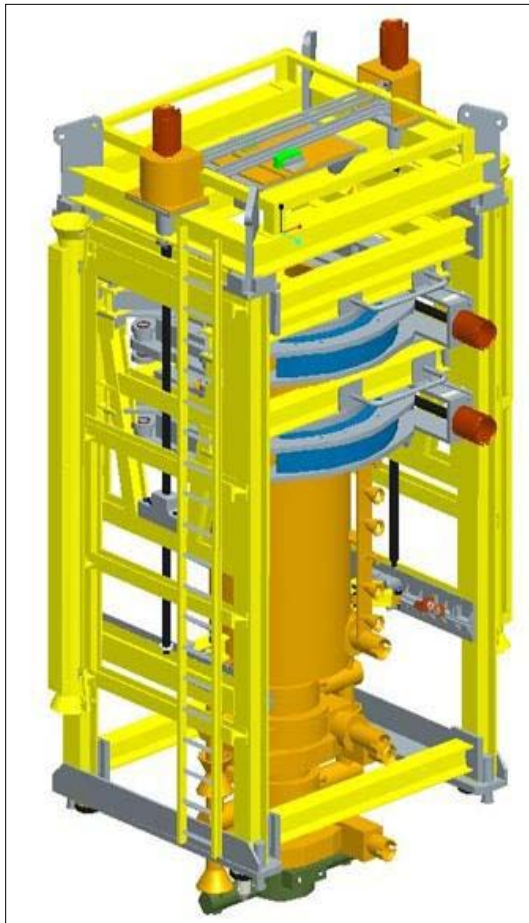
# Manufacture Ongoing



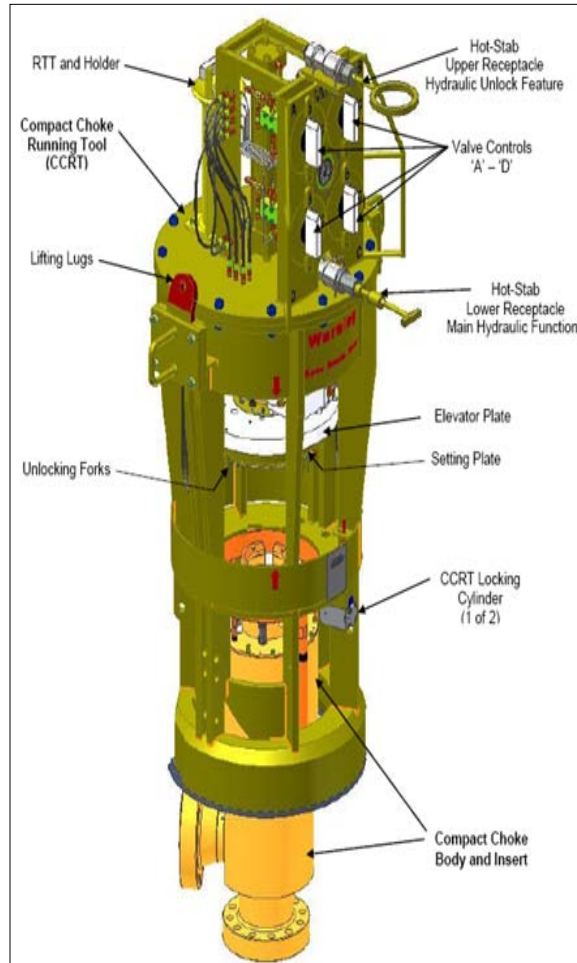
- Trees being assembled in Aberdeen
- Horizontal Tree complete with Choke
- Module estimated at 74 ton
- 20 trees being manufactured to support the project



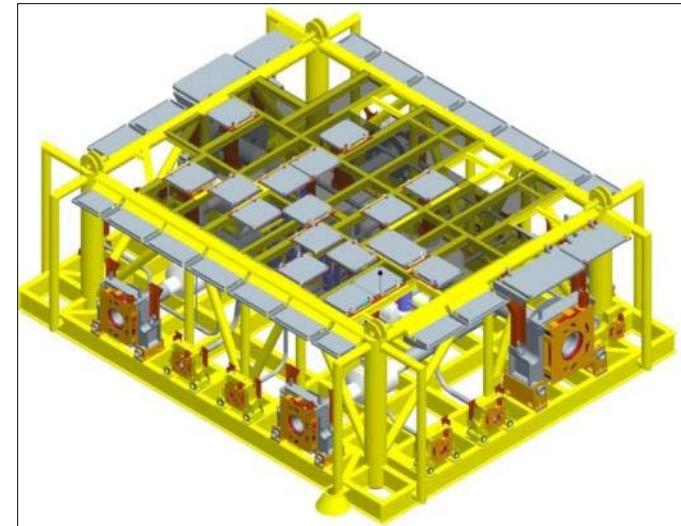
# Special Tooling



Subsea actuator change out tool



RCR Tool for Control Pod

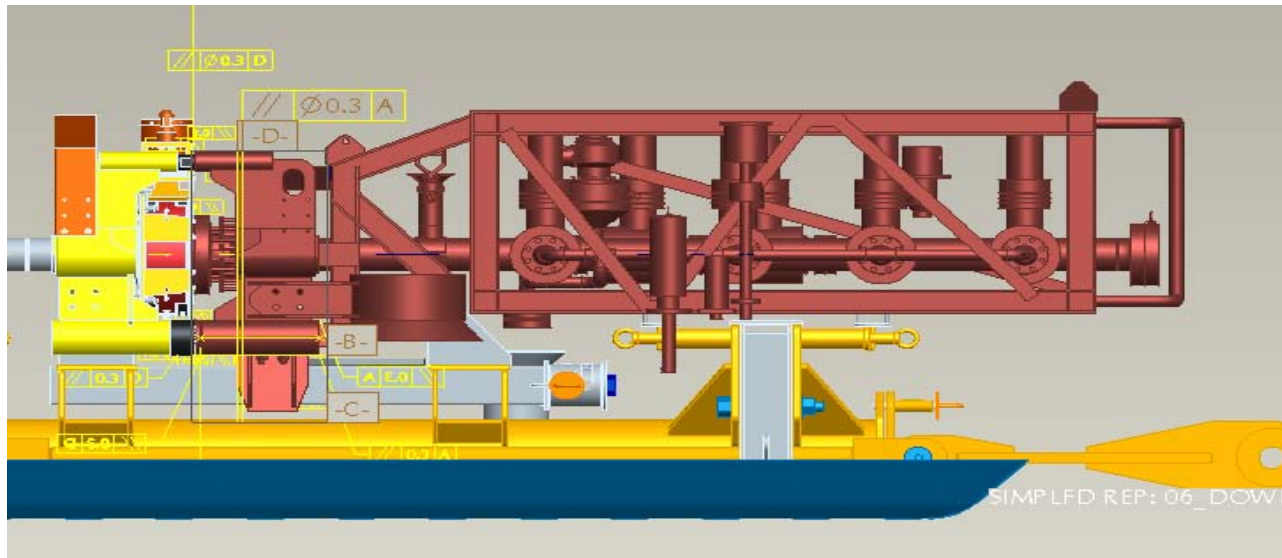


Pipeline Termination Structure

# Special Tooling



- 34" Subsea Pig launcher
- Weight: approx. 115 ton



# Drilling the Wells



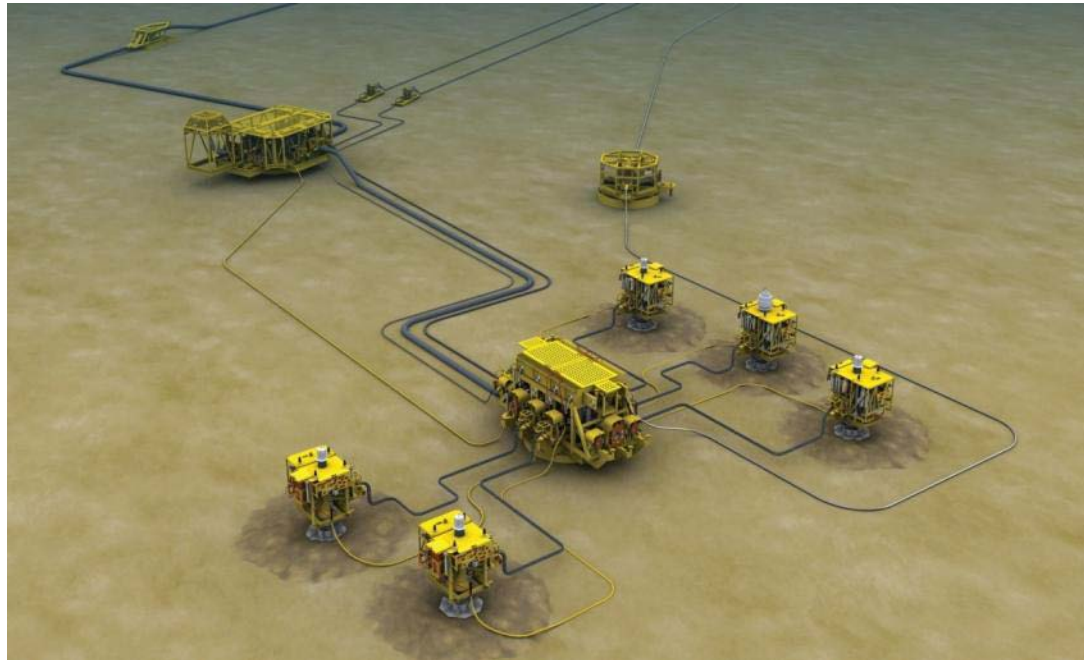
- Gorgon: Drilling using the Atwood Osprey
- Jansz: Drilling using the Deepwater Frontier



# Subsea Infrastructure



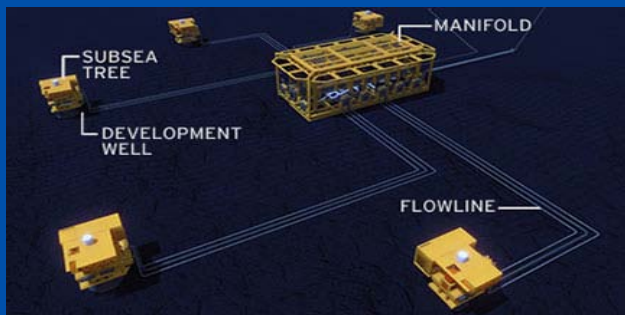
- All the processes are in place to deliver an operational Subsea field



# Supporting Gorgon Operations

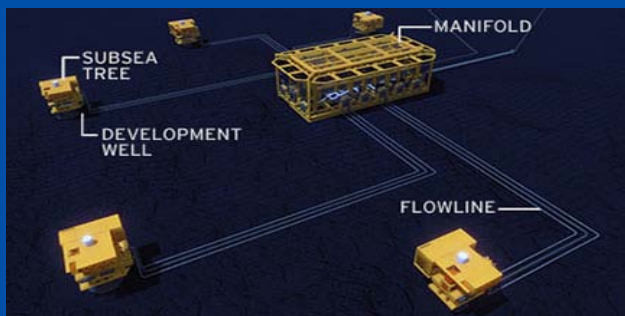


Mean Sea Level



Gorgon 216m

Diver Depth  
200m



Jansz 1350m

Work class  
ROV



# Supporting Gorgon Operations



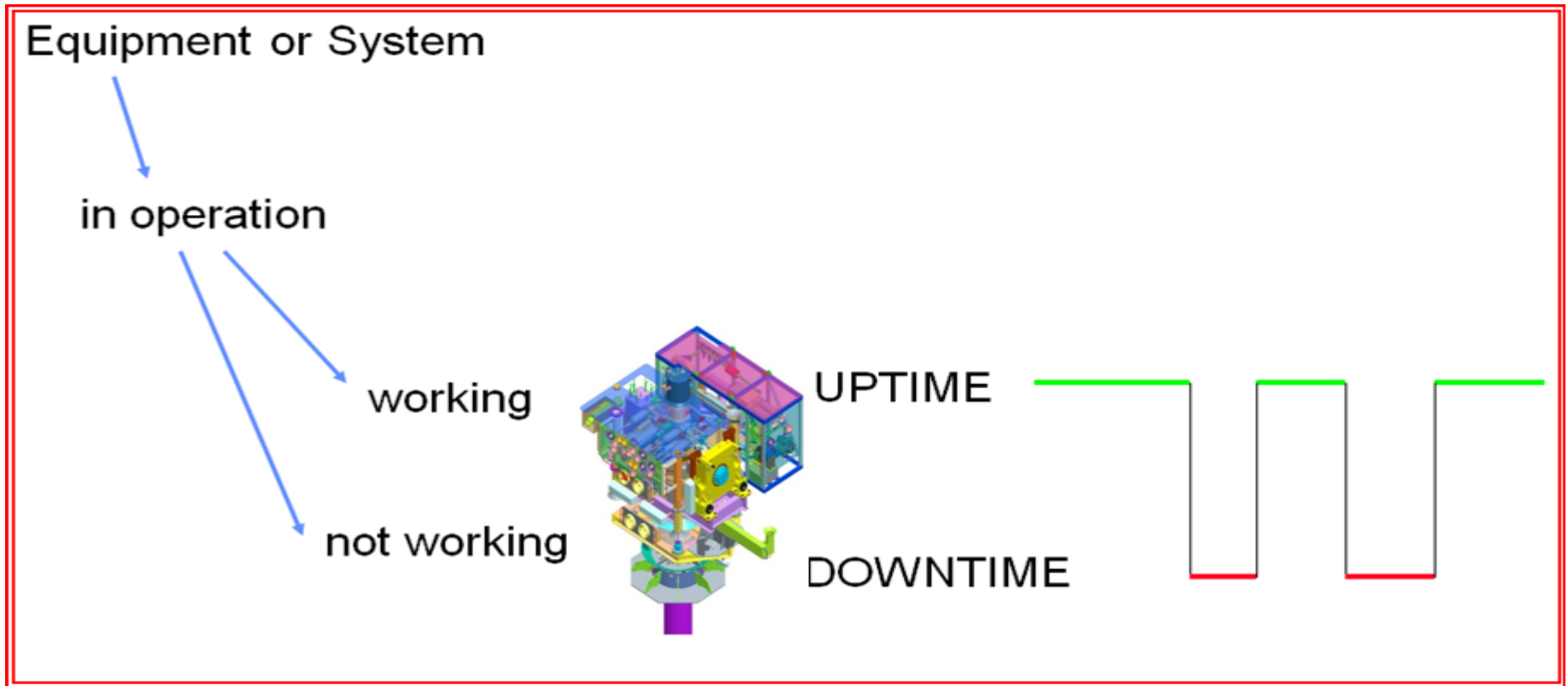
- We require a Subsea Team to support :
  - Regular inspection of Subsea infrastructure
  - Periodic Subsea Pigging
  - Subsea hardware repair, maintenance and changes as required
  - Supporting any operational issues with the subsea infrastructure



# Supporting Gorgon Operations



- Reliability And Maintainability





- Gorgon Project construction phase using ProjectConnect and Industry Capability Network WA
- Chevron Operational Phase:
- [www.projectconnect.com.au/Project\\_Preview.asp?PID=62939262](http://www.projectconnect.com.au/Project_Preview.asp?PID=62939262)
- GE Oil and Gas:
- [www.projectconnect.com.au/Project\\_Preview.asp?PID=59457640](http://www.projectconnect.com.au/Project_Preview.asp?PID=59457640)



- Requirements
  - DP
  - ROVs
  - Craneage
  - Deck space
  - Safety Case
- Scope
  - 30 days repair/replace (RAM model)
  - 40 days inspection (RBI estimate)

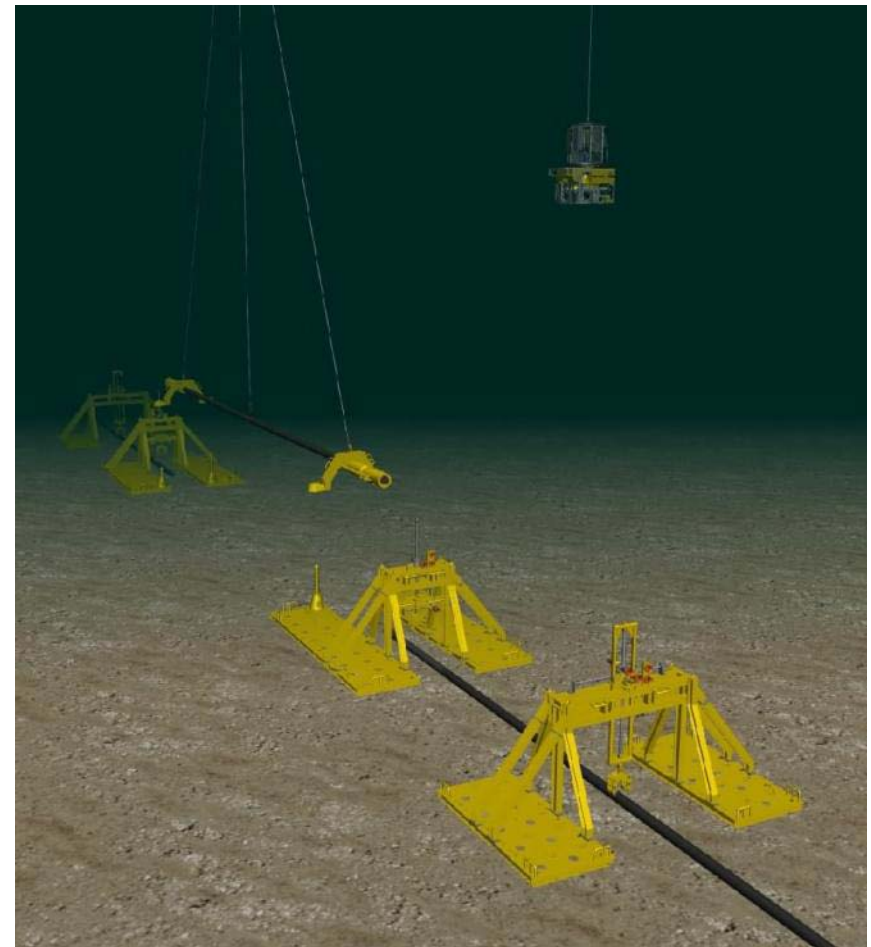


- Subsea Team (14 Chevron)
  - Planned topside number = 340
  - Qualified and Trainees
  - Controls
  - Intervention
  - Hardware
  - Project
  - Integrity
  - Pipeline
- Third-Party Personnel
  - Vendor Support
  - Project Engineering
  - Integrity Management
  - Specialist Services (EPRS, Pigging etc.)

# Local Support



- Chevron employees
- Vessel & ROV Services
- Engineering Services
- Integrity Services
- Working with Woodside/Inpex as PROFA umbrella to a shared repair capability



# Questions



- For more info: [www.chevronaustralia.com/ourbusinesses/gorgon.aspx](http://www.chevronaustralia.com/ourbusinesses/gorgon.aspx)

