oceanone

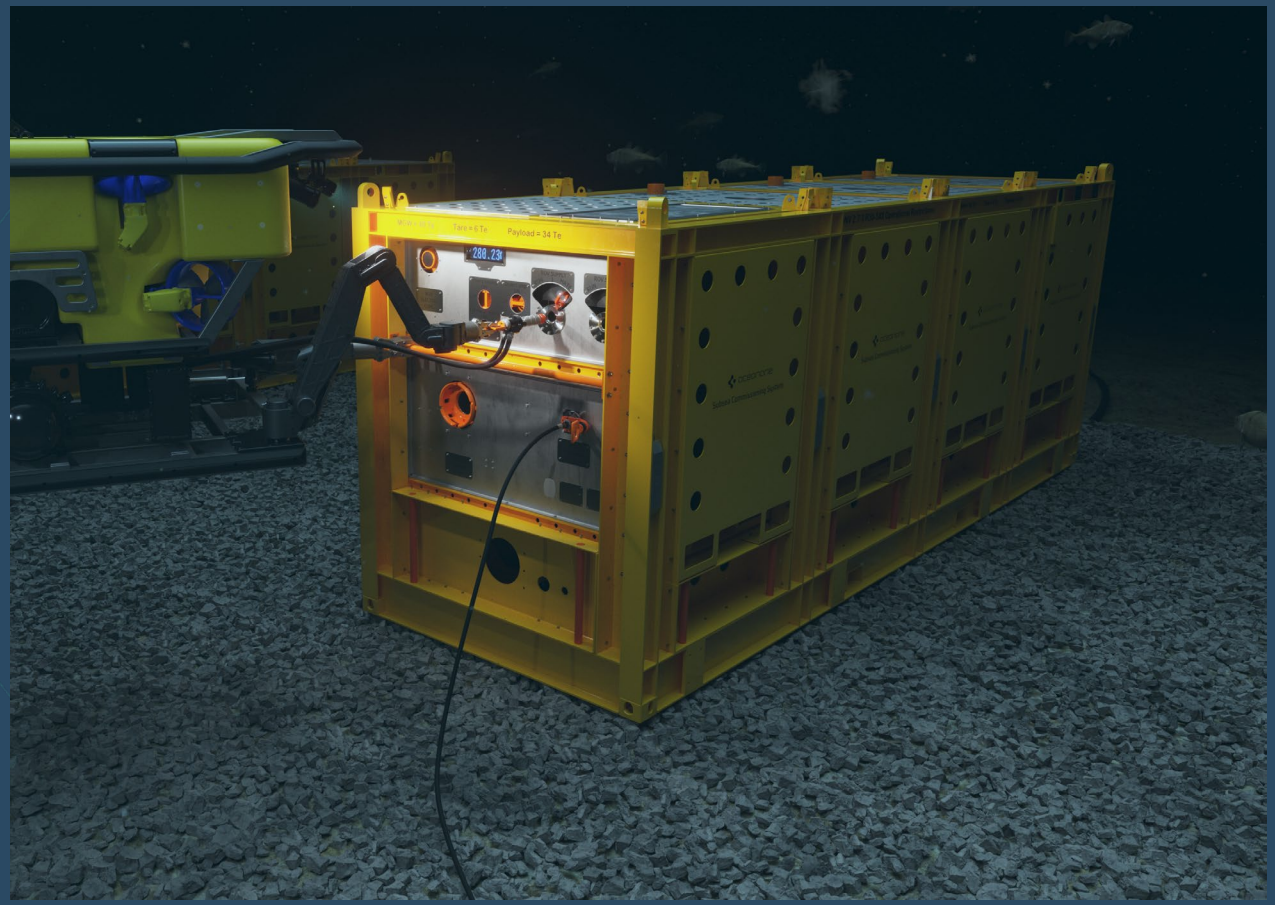
Bringing simplicity to subsea gel pumping with SubComm

FFU Seminar

29.01.2026

History

- The SubComm concept was developed by Envirex AS and Envirent AS in 2023.
- Initial operations with the SubComm were run by Envirent.
- OceanOne AS was established in May 2024 as a result of positive feedback from initial SubComm operations.



Bringing simplicity to subsea pumping with SubComm

- **Streamlined equipment**
  Replaces bulky, traditional deck gear
- **Simplified setup**
  No need for downlines or break-away connectors
- **Enhanced Flexibility**
  Adaptable scheduling with multiple vessels
- **Quick Mobilization**
  Cut mobilization time from days to hours
- **Space-Saving Design**
  Minimal deck footprint
- **Safe Operations**
  No high-pressure risks on deck
- **Clean and Secure**
  Eliminates potential for backflow to deck
- **Deep-Sea Ready**
  Engineered for 3000msw subsea operations

Parameters

- Depth 70 – 1350m
- More than 15 mobilisations
- 10 different fields
- Dimensions: 4"-16"
- 5267 offshore personnel hours

Operations

- Pig launching
- Barrier verification
- Pressure/leak testing
- Flooding
- Dewatering
- Fluid extraction and transfer
- Well Barrier Pumping
- Methanol Pumping
- Various uncategorized subsea pumping operations.

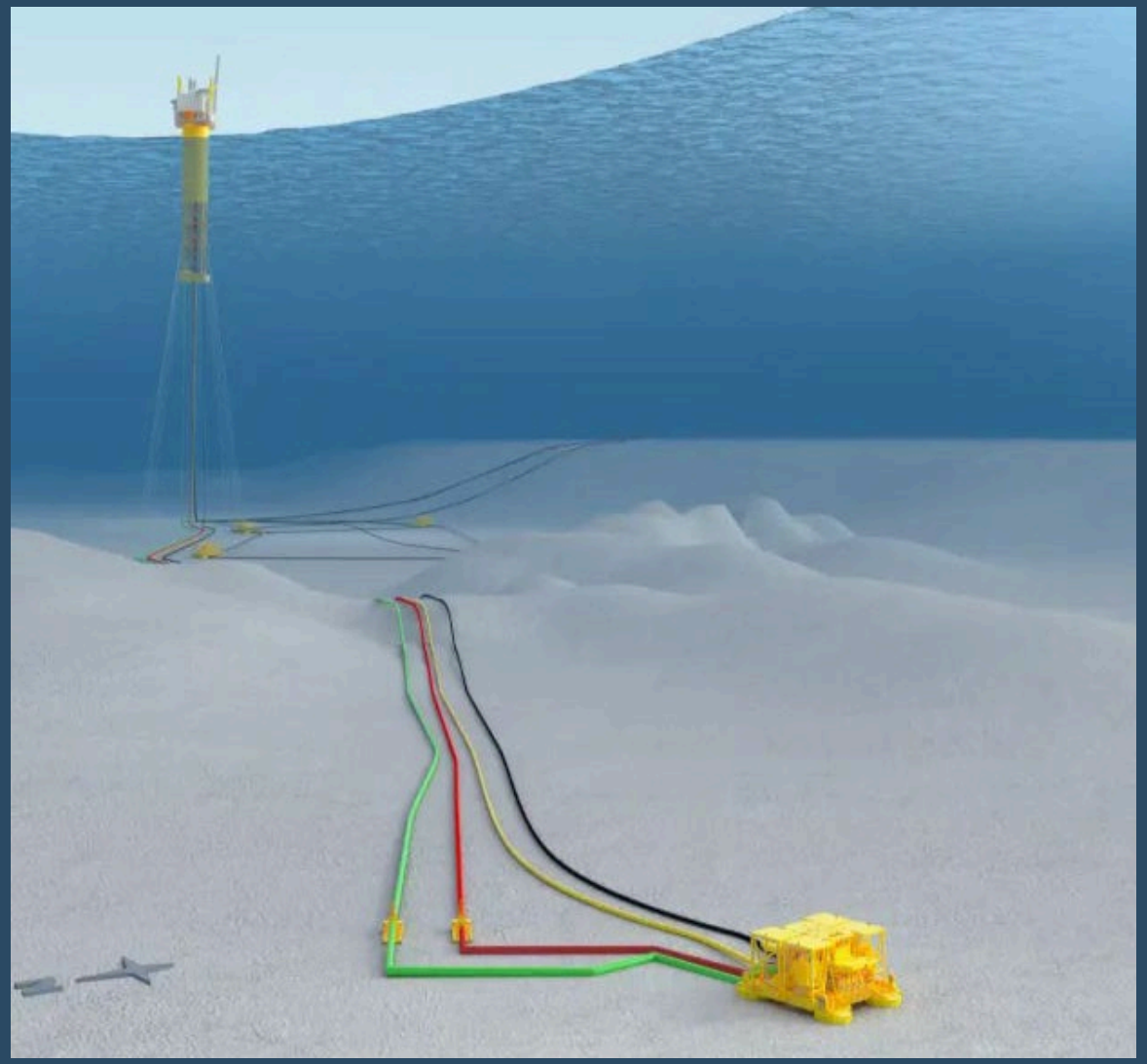
«Can the SubComm *pump gel*?»

Case

- 14" pipeline, newly installed
- 1350m depth
- Temperature -2˚C

- Expected to start production in 2026

- Challenge: Remove pig receiver without introducing seawater to Irpa pipeline
- Suggestion: Use gel as barrier towards seawater ingress



Gel

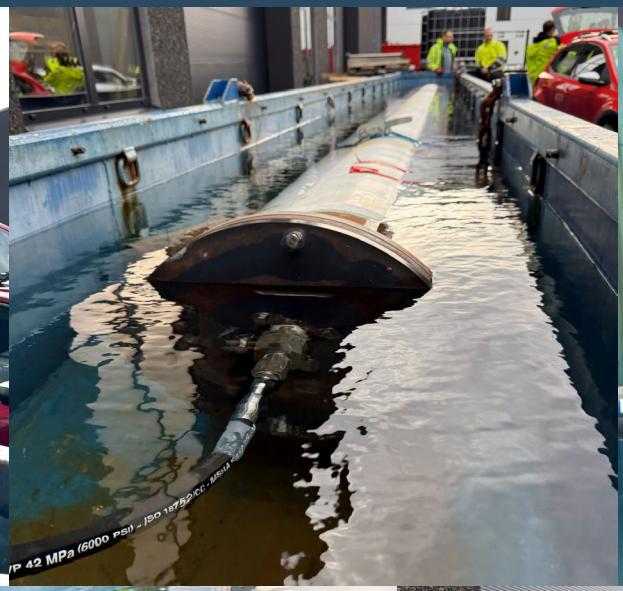
- Viscous thixotropic fluid
  - Viscosity changes when mechanical stress is applied
  - More fluid when in motion
  - Returns to an original state when at rest
  - Example paint, ketchup and toothpaste
- Used for various purposes
  - Pick-up gel
  - Barrier
  - Prevent seawater ingress

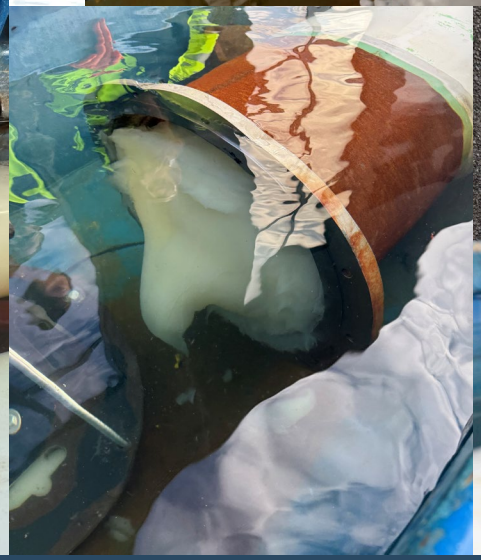
«Can the SubComm *pump gel*?»

FAST TRACK PROJECT

- Gel pump
- Gel
- Qualification program
  - Simulating subsea conditions
  - Offshore gel test
- Planning of offshore campaign
  - Engineering
  - Procedures and task plan
- HSEQ

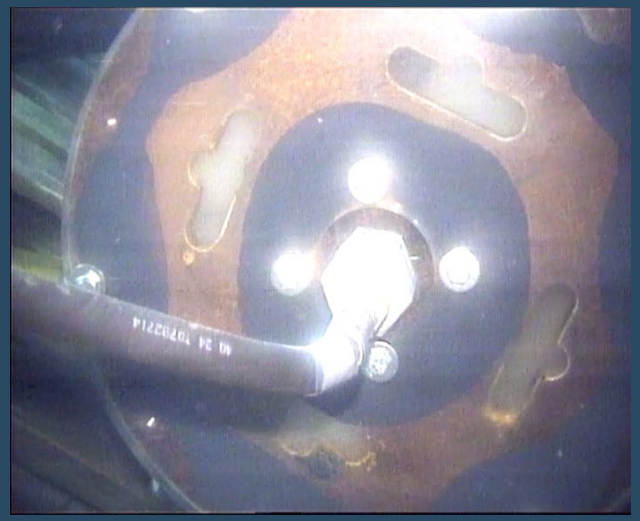
Onshore gel qualification

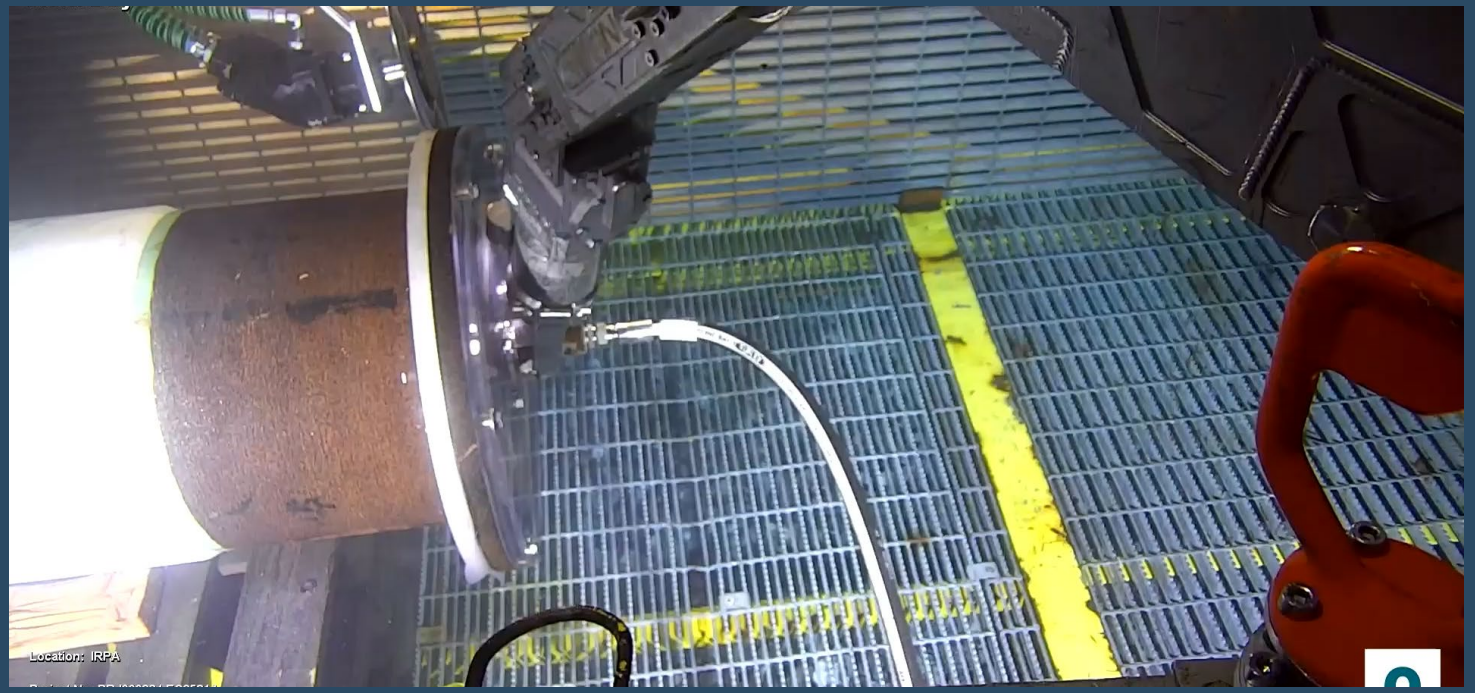




Gel test, at field

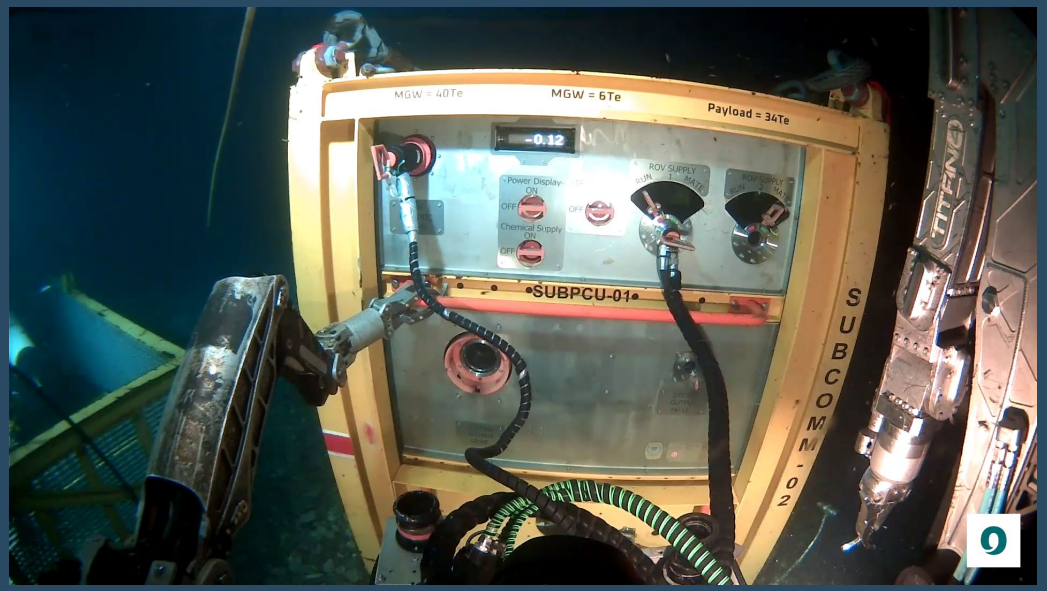
- To confirm that the gel performs as intended in its operating environment

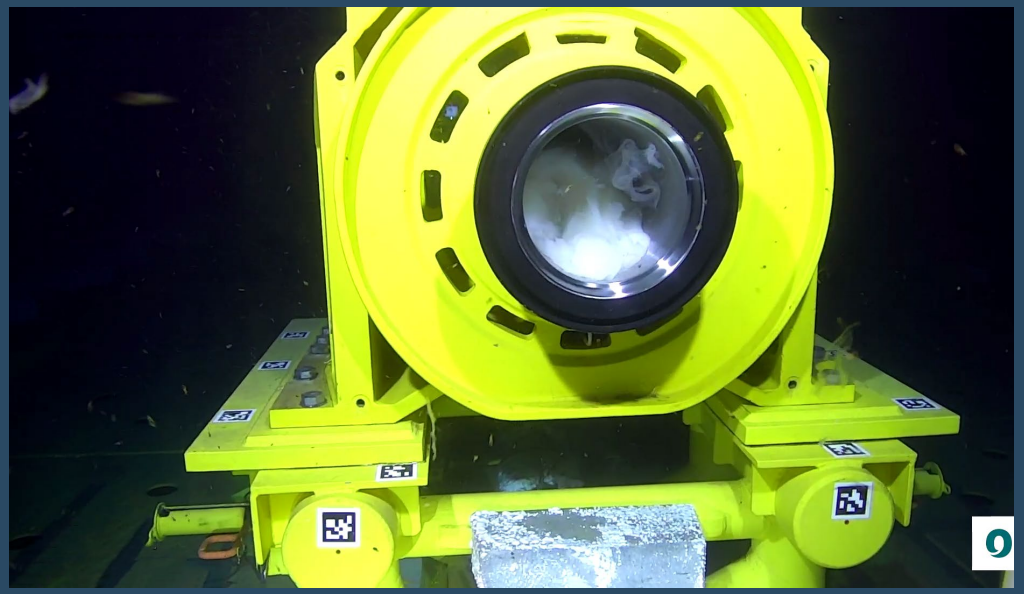




Gelling operation

- Offshore operation conducted October 2025.
- Two SubComms mobilized
  - No. 1 – MEG/FW-mix filled
  - No. 2 – gel filled
- Pressure equalization with MEG/FW
- Gel injection
- DeepOcean removed PLR and installed HP Cap
- Flushed with MEG/FW mix to remove the gel through discharge stab





Summary

- The worlds first subsea gelling operation, successfully completed
- Technology proven through extensive testing and offshore operation
- SubComm has been secured for more gelling campaigns 2026

- OceanOne is ready for the next ‘uncategorized subsea pumping’ challenge