



# Access to offshore wind facilities - What can we learn from other industries?

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**BWEA Health & Safety 2010**



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OFFSHORE STANDARD  
DNV-OS-J201

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OFFSHORE SUBSTATIONS  
FOR WIND FARMS

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OCTOBER 2009

DET NORSKE VERITAS

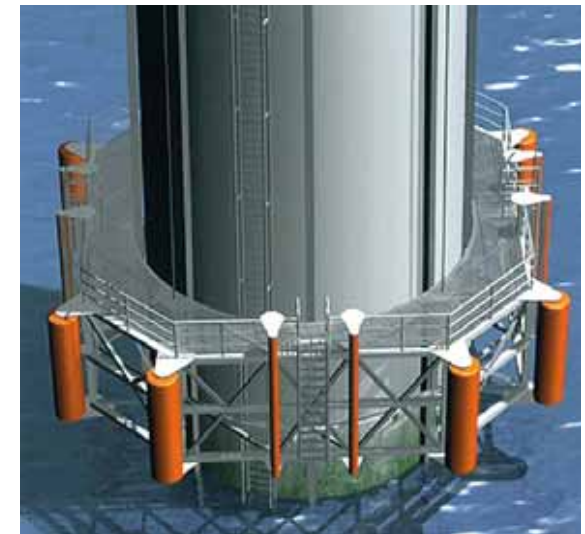
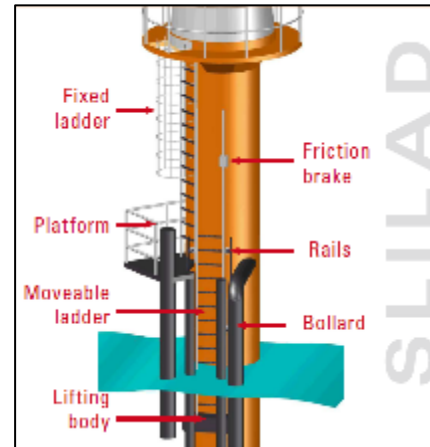
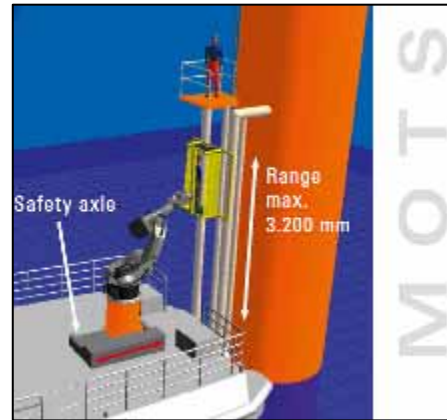
**Section 7 - Access and Transfer**  
**Section 8 – Emergency Response**

# Introduction

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- Synergies and differences exist between the offshore wind and the offshore oil & gas industries
- Lessons learned by the oil and gas industry in access and emergency response for offshore facilities are highly relevant for the wind industry (and visa-versa)
- DNV works across both industries and the aim of this presentation is to highlight particular aspects of O&G experience that may help the wind industry
- The focus of the presentation will be marine access to offshore assets

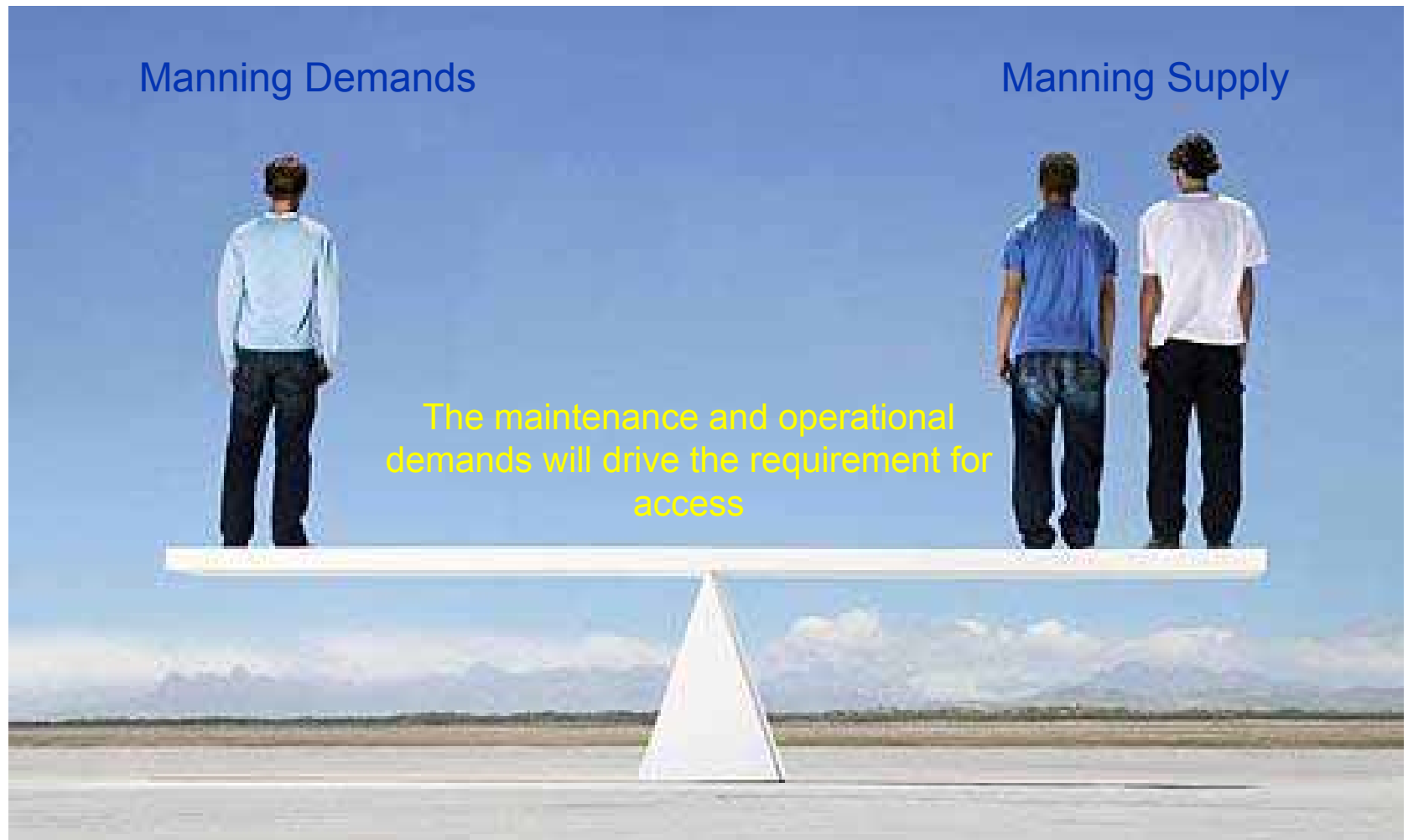
# Marine Access Systems?



# Other Marine Access Systems



# Why Do We Need Access?



# Why O&G Are Moving Towards Marine Access

## Manning Demands are Heavy

Integrity issues – aging installations  
High maintenance burden – safety equipment!  
Change of use  
Maintaining redundant structures and systems  
Projects, tiebacks, life extension



## Manning Supply is Light Can't get the spanner time:

Transportation limitations  
Weather restrictions  
Unrealistic working efficiency estimates  
Limited welfare provisions  
Transportation time

# O&G Marine Access Benefits (Over Helicopters)

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- **Increased working time** – If workforce live on vessel minimal time is lost for shuttling and transferring to and from installations
- **Larger workforce available** - The number of workers on the vessel is determined during vessel selection based on the required team size and the manning model (e.g. personnel deployment strategy)
- **Reduced transportation risk** – The transportation risk for a typical O&G worker can be reduced by around 50% if marine access replaced helicopter access
- **Increased flexibility** – With sufficient planning and facilities, the vessel can be used for multi-facility manning, workforce accommodation, rescue boat cover shared between manned facilities, workshop activities, storage, or as a supply vessel as and when required
- **Lower capital expenditure** – no helideck or landing platform
- **Lower operating expenditure** – no helicopter costs or helideck maintenance and inspection

# O&G Marine Access Challenges / Opportunities

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- Ensuring safe operations
  - Take account of the motion of the vessel and the workforce not being used to it
  - Robust safety management systems needed
  - Incident and emergency response should be developed and routinely practiced (e.g. unplanned stays, ladder rescue, MOB, facility evacuation, rescue and recovery)
- Minimising weather downtime
  - Understand the relationship between environmental conditions, vessel motions and transfer system operation
  - Position and orientation of both the transfer system on the vessel and any platform-based locking or landing platform can significantly influence the availability of the transfer system
- Maximising productivity
- Simultaneous Operations
  - Standby vessel sharing
  - Remote facility manning – A ‘mother ship’ equipped with a ‘daughter craft’
  - 24-hour operations – Back-to-back manning of facilities have been achieved

# Examples



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# Conclusions

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- Synergies and differences exist between the offshore wind and the offshore oil & gas industries
- Both industries must satisfy manning demand of offshore facilities in a cost-effective and efficient manner
- Reducing manning demand through the design process is important.
- Manning demand is not just how many manhours are needed but:
  - When are they required
  - What response is required
  - Over what period are they required
  - How many workers are needed
  - Impact of interruptions
- Fluctuations in manning demand requirements must be satisfied efficiently, cost effectively, with contingencies and realistic emergency response arrangements in place.
- The relationship between environmental conditions and transfer system availability should be defined in detail taking full account of vessel characteristics.

# Safeguarding life, property and the environment

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