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Trinity, 2008

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Career and Networking Evening  
November 2011

# Overview

- Oil and Gas Industry
- Wood Group Integrity Management
- Career Thus Far

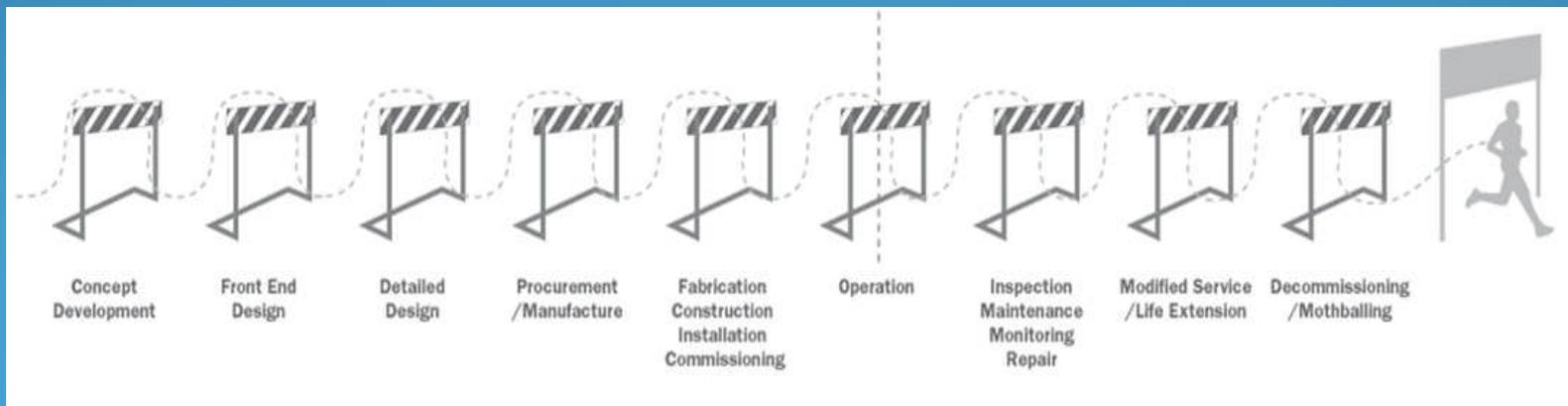
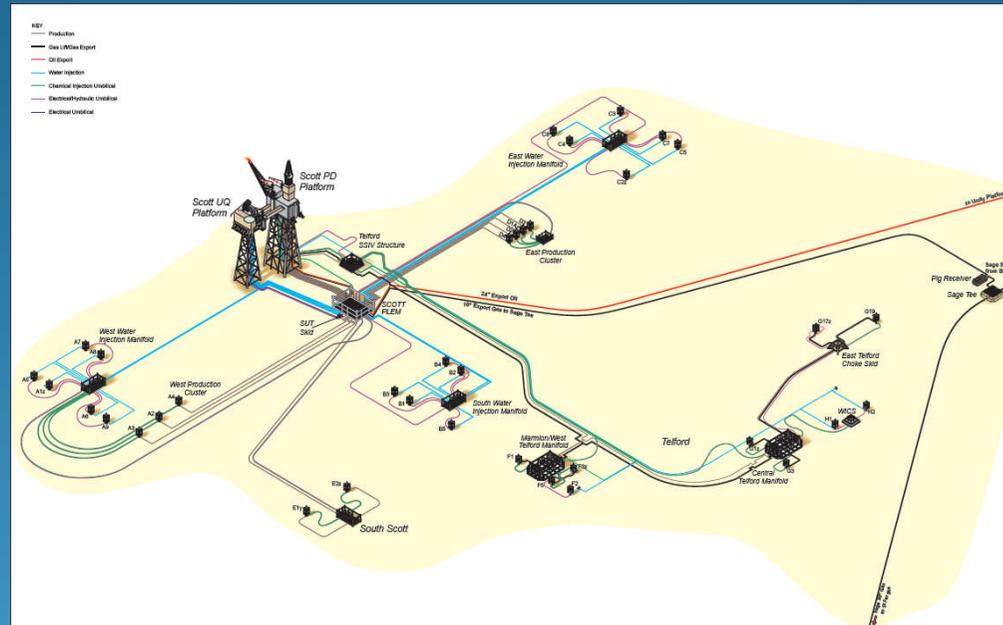
# Oil and Gas Industry: Popular Conceptions

- Dying industry?
  - North Sea
  - Globally



- Environmentally hazardous?
- Blue Collar?

# Oil and Gas Industry: Typical Development



# Wood Group Integrity Management: Summary



Service company providing oil and gas, and power generation industries with:

- Engineering support
- Production support
- Maintenance management
- Industrial gas turbine overhaul
- Repair services

- ✓ More than 28,000 employees
- ✓ Over 50 countries
- ✓ ca. \$5 billion sales

## What does WGIM provide?



### INSPECTION ENGINEERING & MANAGEMENT

- Risk Assessment
- Risk Based Inspection
- Risk based Maintenance
- IMMR Planning & Implementation
- Pipeline Repair Planning & Implementation
- Regulator Documentation Development & Submission
- Remaining Life Assessment
- Fitness-for-Service Assessment
- Integrity Audits
- Coating &/or Insulation Audit
- Cathodic Protection Audit
- Corrosion Audits
- Life Extension
- Change of Service Assessment
- Non-Destructive Inspection Technology
- In-Line Cleaning & Inspection

# Wood Group Integrity Management: Software

The screenshot displays the Wood Group Integrity Management software interface, which is used for managing offshore wind farm assets. The interface is divided into several key sections:

- Assets Panel (Left):** A hierarchical tree view showing the structure of an offshore wind farm. It includes categories like Accommodation Platform 1, Cable Array (with sub-items Cable 001, Cable 002, Cable 003), Transformer Substation 1, WTG 001 (with sub-items Adjacent Seabed, Blades, Boatlanding, Foundation, Hub, Nacelle, Tower, and Transition Piece), and WTG 002-004.
- 3D Model View (Center):** A 3D visualization of an offshore wind farm in a blue sea. A red helicopter is shown in flight near a turbine. A callout box labeled 'O&M' points to a turbine. A green arrow points to a turbine tower. A 'Windfarm Overview' button is visible at the bottom.
- 3D Model Detail (Right):** A detailed 3D cutaway view of a wind turbine, showing internal components like the nacelle, gearbox, generator, and blades. Labels indicate various parts such as '12" OEP', '16" INFIELD', and '24" GEP'.
- Schedules Table (Bottom Center):** A table showing maintenance and inspection schedules for various pipeline assets from 2007 to 2013. The table includes columns for Asset, Model, and years. Assets listed include 12" OEP, 16" INFIELD, and 24" GEP. The table uses colored dots to indicate task status: red for 'Task Incomplete', green for 'Task Complete', and purple for 'Unknown Event'. Other symbols include a circle for 'Anode', a square for 'CP Reading', a triangle for 'GVI', a diamond for 'Survey Note', and a star for 'Debris'.
- Risk Matrix (Bottom Left):** A 5x5 risk matrix for 'Offshore Pipeline'. The vertical axis represents 'Likelihood' (Very Likely, Likely, Unlikely, Remote, Improbable) and the horizontal axis represents 'Consequence' (Minor, Moderate, Serious, Major, Catastrophic). The matrix cells are color-coded from green (low risk) to red (high risk). A red dot is present in the 'Very Likely' / 'Catastrophic' cell.
- Tasks Panel (Bottom Right):** A table listing specific tasks and their completion status. The table has columns for Event, Schedule, Asset, Modified, A, Completed, T, and PT. Tasks include '2005 Riser Inspect WGIM / Pipelines / 12" OEP / 05 - 12" Flexible Riser (F50)', '2007 ROV WGIM / Pipelines / 12" OEP', and '2009 ROV WGIM / Pipelines / 12" OEP'. A red exclamation mark icon is shown next to the '2005 Riser Inspect' task.

# Wood Group Integrity Management: Locations



# Wood Group Integrity Management: Clients



## Career Thus Far...

- Trinity 2004 – 2008
- Part II in Princeton: Block Copolymers
- Joined WGIM Dec 2008

# Career Thus Far: Failure Investigation



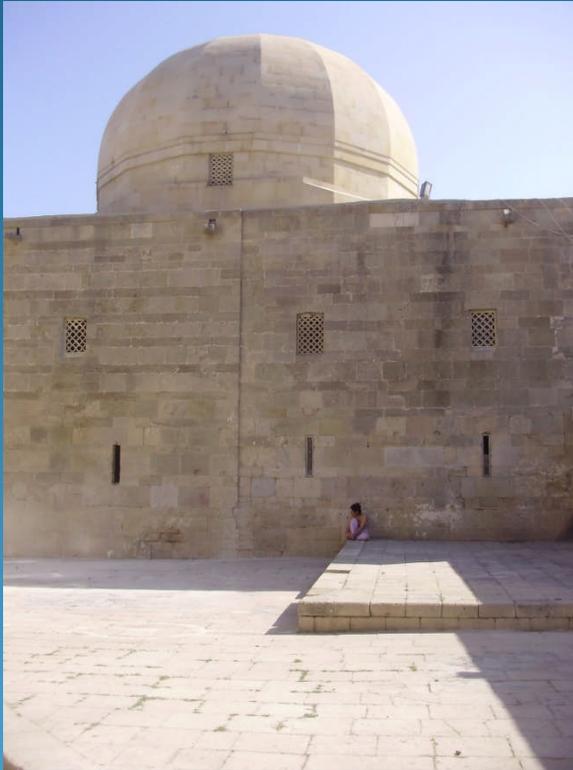
Failure of 2.5" pipe

High cycle fatigue plus defects in material

Cost of lost production >£200k per day



# Career Thus Far: Baku

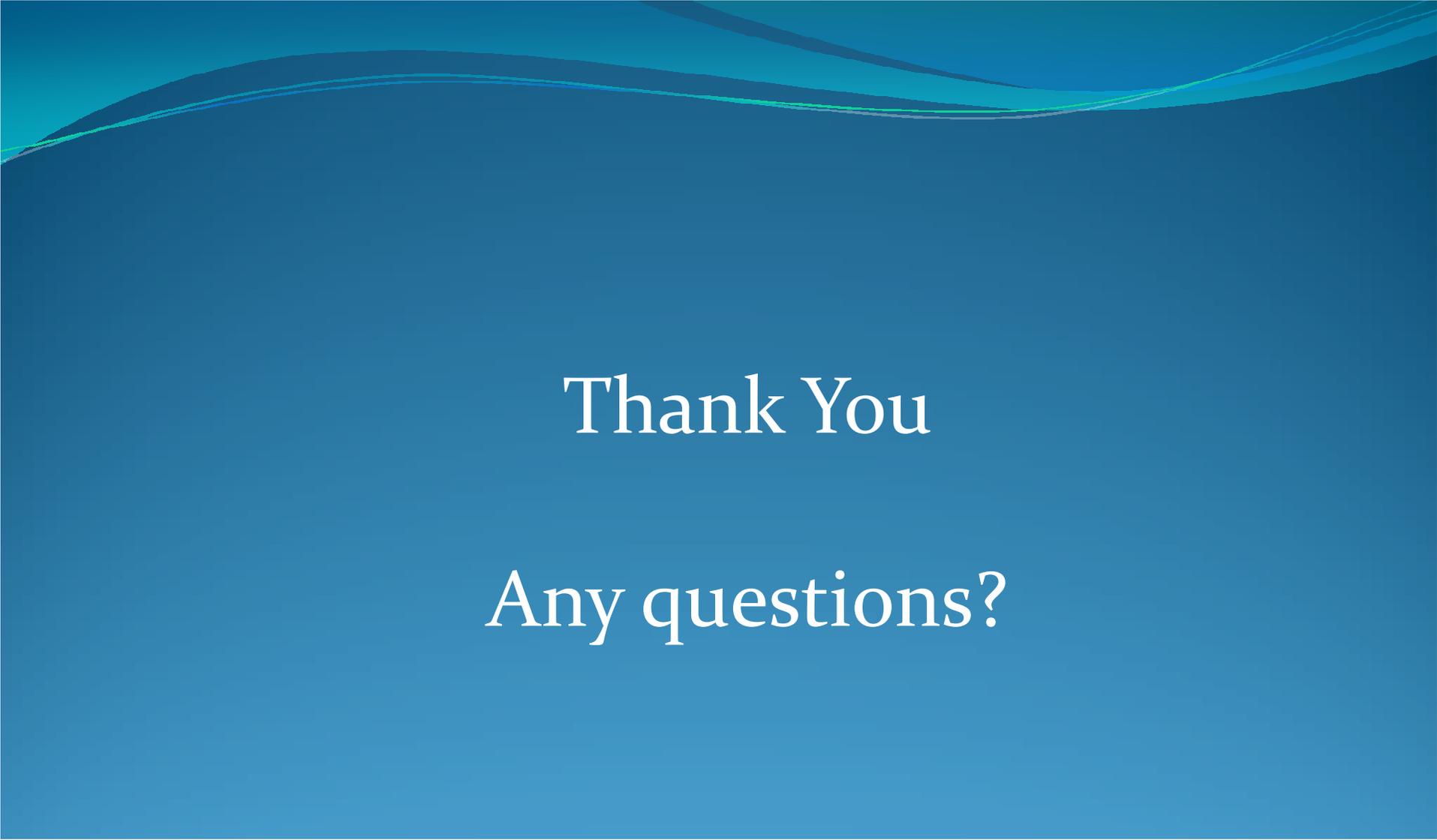


## Career Thus Far...

- Current role:
  - Technical input for bids
  - Management of team / projects
  - Materials engineering (CP, etc.)

## Advantages of Industry

- Always requirement for materials engineers
- Well remunerated
- Reasonable working hours
- Travel opportunities
- Technical and non-technical opportunities



Thank You

Any questions?

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