Industry perspectives

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What the companies need

- Credible R&D technology to improve risk analysis along the value chain, improve recovery and give better overall economics
- Results within the timeframe of economically important projects ie. Results that have impact
- License to operate

  -Local content, technology champion
- Improve safety through technology

  -e.g. pressure prediction from seismic

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What companies can offer

- Data
  - Seismic, core, production
- Software
- Expertise
  - All staff have been to University.....
  - Experience
  - Problem definition (what issue to solve)
- Financial Resources

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3 different sizes

The big, middle and small:
3 sets of challenges

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All organisations

- Living within an environment where stability challenged by high staff turnover of both local and ex-pat staff. This particularly affects oil companies, but also research organisations
- There will be a difference in focus depending on whether one is in a producing asset or purely exploration company
- Difficulty in replacing reserves globally, accumulations are smaller and more expensive, IOR more challenging

The Large Organisation

- A head office that has control (all $$$$$)
- A global R&D portfolio with many issues not relevant in Norway
  - Shale gas, Coal Bed Methane, Heavy oil, onshore
- Operators have substantially sized R&D budgets
- Operators of producing assets have focus on EOR
- Producing units promote development and implementation of new technology to improve operation efficiency, well monitoring and safety.
- Generally long term focus

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The Medium Size Company

- Often in multiple countries
- Head office control again (all $$$$$) and probably less resources to be shared across the board
- Multiple technology challenges
- Can be a lead in niche areas

The Small Company

- Located in one or two countries
- Focus on a narrow business strategy
- Private equity driven companies can have short term drivers and less research focus
- Liable to swings in fortune, buyout
- Key staff can have a big impact, efficient processes
- Non-operating companies have limited R&D budgets

Technology R&D challenges

- New Plays: e.g. Basement highs
- Regional play models (e.g. sub-basalt)
- Seismic imaging and characterisation
- Basin modelling and geochemistry (e.g. microseeps)
- Improved uncertainty modelling
- Improved Recovery (e.g. Triassic Barents Sea)
- HPHT – geomechanics, diagenesis, recovery factors
- Skills set maintenance (e.g. Biostrat)

Some Questions for discussion (1)

- How can we make R&D processes more efficient than they are today?
- Are we clear about what should be directed to universities and what to service companies / consultants?
- Do issues of confidentialilty limit university cooperation?
- How big should consortia be before they become ineffective? And is there enough commitment?
- Is university research too slow for oil companies?
- How good is the Scandinavian cooperation and how can it be (even) better?

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Some Questions for discussion (2)

- What sort of graduates are we looking for?
- How can industry give them more practice / insight before graduation?
- Has industry clearly informed Universities about their direct needs e.g. within basin modelling, reservoir description, recovery processes etc?
- Have the FORCE seminars been a useful window for universities to understand the industry challenges or have these been mainly an arena for the oil companies?

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