PRODUCTION, PROCESSING AND WELLSTREAM TRANSPORT

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Brief presentation of own ideas for the specified GAPs, here formulated as questions and potential actions.

"Cost reduction is the result of correct use of technology"
(*A. Børrehaug* & *R. Akcora, 2014*).

New field development concepts

Q: With falling oil price, will subsea developments be too expensive compared to platforms and floaters?
GAP: Need more focus on heavy oil and high sulphur oil and gas

Increased production efficiency

Q: Will installation of artificial lift from t=0 reduce the number of expensive wells needed?
GAP: TBD

Subsea and in-well processing

Q: What else is achieved by subsea separation of liquid water other than reduced use of antifreeze?
GAP: More standardization of subsea equipment to reduced cost of marine operations.

Gas processing and LNG

Q: Are improvements in LNG production technology limited in potential such that costs will remain high?
GAP: Step up work on CO_2 capture at pressures above atmospheric pressure.

Subsea power supply and distribution

Q: Would an offshore ship with a CCPP reduced emission and reduce power costs, compared to conventional power generation (or cable from land)?
GAP: TBD

Multiphase technology and flow assurance

Q: Will a dual tieback pipeline reduce risk, improve recovery and reduce costs?
GAP: Paraffin wax deposition, monitoring and cleaning (pigging) needs to be tested from laboratory to field scale.

Unmanned facilities

Q: Should all platforms and floaters be designed for operation normally unmanned?
GAP: Results from integrated operations R&D need to be qualified for offshore use.

Condition monitoring and sensing

Q: Does an overflow (too much) of production data make it difficult to find out what is really important?
GAP: TBD

FLNG for gas and condensate fields

Q: Are political (including price of oil and gas) challenges more important than technical challenges?
GAP: TBD

Integrity management, not included here

Arctic maritime operations

Q: Is it twice as difficult/expensive to develop arctic resources compared to conventional offshore resources?

GAP: TBD

Water management, hydrate and sand production

Q: Is water more important in the world than oil and gas, also for an oil company?

GAP: TBD

Project management (not on GTE list)

Q: Can costs be reduced by fewer meetings and better project management?

GAP: TBD

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http://www.ipt.ntnu.no/~jsg/undervisning/GTE.pdf

NTNU Presentations: **Multiphase Transport in Oil and Gas Production**
http://www.ipt.ntnu.no/~jsg/undervisning/prosessering/gjester/gjester.html

NTNU Presentations: **Natural Gas – Reservoir to Market**
http://www.ipt.ntnu.no/~jsg/undervisning/naturgass/TPG4140.html

"I'm always happy to exchange my idea for a better idea from others"