



# OIL & GAS – CHALLENGING THE HOLISTIC PERSPECTIVE IN RELATION TO SOCIETY, ENVIRONMENT AND INFRASTRUCTURE

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**DR. FLEMMING BLIGAARD PEDERSEN**  
**CEO RAMBOLL GROUP**



# THIS PRESENTATION WILL FOCUS ON:

- Why there is a need to consider oil and gas in a holistic – a broader – perspective.
- Why there must be a constructive co-existence between industry, society, infrastructure and the environment.
- Why the oil and gas “spin-offs” are the most important and sustainable in the long run and not the oil and gas industry itself.

# RAMBOLL'S HOLISTIC APPROACH

- Ramboll is a world leader in design, management and technical competence
  - Ramboll is the largest North European provider with more than 9000 experts, covering almost all fields of technical aspects.
  - Ramboll has more than 15 years' permanent presence in Barents and in Murmansk – we fully acknowledge and understand the challenges and opportunities.
  - Ramboll is building strong local business units – and let profit remain by these units.
  - Ramboll has come to a deeper understanding on how our expertise must be fine-tuned and play along in a wider context than a limited "technical" approach to problems. – we are the "community consultant"
- That is why we take a holistic approach – taking all relevant aspects in consideration - technical, societal, economical, political.
  - Only then "technology" will be able to play a decisive role to solve tomorrow's global challenges.



# MORE THAN OIL AND GAS...

- The focus of this conference is the future of gas and oil in the Barents Sea.
- These natural resources can prove to be the start of a promising new era for the whole region . But it can also be a disaster in the long term.
- The situation requires both attention on oil and gas , AND the consequences for the local society.
- Too often we see that little is left of sustainable wealth and development to the local communities.
- And please keep in mind – in the long run these “side effects” are more important even to the national state. An energy boom has a rather short-term horizon anyway.
- That is why we need to take a holistic approach – taking in consideration all aspects of opportunities and challenges. We need to use the blessings of oil and gas to build long term industries , R & D and infrastructure.



# OIL AND GAS AS KEY DRIVERS

- Oil and gas are the key drivers in the Barents today. Let us look a little on this perspective.
- Russia and the rest of the Barents region is in the vanguard of oil and gas, but most of this experience is from on-shore operations. Here the operations are almost ultimate.
- Drilling platforms need to employ new and different technology to withstand harsh climatic conditions.
- Logistics are crucial – to supply offshore operations, but also onshore activities . This includes–both manpower and materials. The distances are enormous – nothing compares to previous experience.
- The experiences from the Norwegian oil and gas industry is well worth considering. Here, energy production has been combined with a strategic and long term approach, thus creating wealth and sustainability both for the nation and for the local communities. The toughest conditions have been overcome without harming profitability or the environment



# LESSONS FROM THE GUY NEXT DOOR

- Employment - Each employee working directly in the oil and gas sector creates new jobs for 5 more persons.
- Internationalization. Export of oil and gas opens up for new investors and a professional global industry is attracted to the Barents Region
- New technologies. Business clusters are emerging into world technology leaders in fields like drilling technology, specialized vessels, cold climate operations and floating production facilities.
- Research and Development. Universities and R & D institutions are becoming world leaders

Some achievements can be worth considering from the Norwegian side:

- Cooperation. A unique culture of cooperation between drilling companies, R & D, suppliers and public sector can be developed.
- Focus on the environment is perceived as a profitable investment for the future, not a cost issue.

# SUSTAINABLE DEVELOPMENT

- In 50 year's time – what will be left of the oil and gas industry?
- History both in Russia and other nations has shown that we really have a choice. Between short term profit and sustainable development
- Already, there is an awareness of the need to take care of the spin-offs from oil and gas, building up infrastructure, housing and education. The national and regional authorities are already busy working with this.
- In fact – in the long term spin-offs like these are the only real sustainable results in the aftermath of the oil and gas adventure.



- Is there a masterplan for this purpose?
- It should be. Our experience shows that a holistic approach can make a difference and function as a masterplan. In Ramboll we can provide solutions which are both profitable short term - and sustainable

# THE ENVIRONMENT THIS TIME?

- Building infrastructure, launch construction programmes and start R & D activities are well embedded in present plans and reflected in the work already taking place
- Has the concern for the environment the same priority?
- We know there are mixed opinions about environmental issues.
- What we should keep in mind is that “environment” is no longer the prerogative of activists and the public opinion. Today, the issue has moved into the Board Rooms and is a decisive part of business considerations and global politics which can not longer be neglected.



- A gas blow-out means catastrophe not only to the “environment” – but to the businesses involved as well.
- Environmental issues play a decisive part in every holistic approach.
- Being a main contributor to environmental solutions in the Barents region, as well as industry and infrastructure are the prime targets for Ramboll.

**THANK YOU**

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