



Norway – local content lessons learned

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Advisor to Statoil's leadership 1980 - 2010



A changing world oil market

Political leaders will play a new role



Russia – sanctions
But still high
production and
exports of oil and
gas



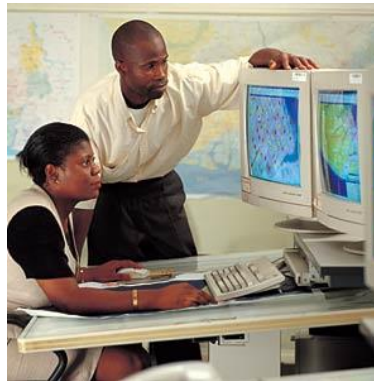
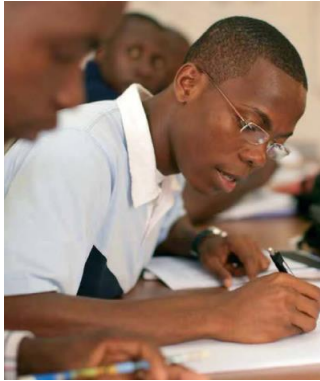
USA – a new and
unclear president
His aims is more
production of oil
and gas in the US



China – reduced
Production of oil
and gas at home
Has to import
more

Local content has spread rapidly

Regulatory requirements have emerged



- Local content has become a regulatory requirement
- It has entered the agenda of most resource-rich countries
- Local involvement was a “gentlemen’s agreement” – not a binding requirement like in the “old days”
- Oil companies used to start working with the tide or ahead of it to gain a “social license to operate”
- Most resource-driven countries have now legal local content provisions

Local content is far from a new feature

Brazil and Nigeria launched new policies



- Local content had two simple and powerful appeals
 - Create jobs at home rather than abroad
 - Channel business to home firms rather than foreign firms.
- Oil and gas local content policies introduced in 40-50 countries
- Brazil was a front-runner, but are recommending changes
- Nigeria had early legislation – less implementation
- Global organizations like WTO, regional agreements in US/Mexico/Canada and the European Union do not like local content policies



Oil changed Norway

“Make it an epoch – not an episode”



Quote 1971
Mr. Finn Lied, first
Minister of Oil and
Chairman of Statoil
board for a decade

- The petroleum resources belong to the nation – and should be developed to the benefit of the whole society
- Norway’s goals were long term
 - National control and state participation
 - Resource management
 - Building and fostering a Norwegian oil community
 - Technology and competence
- The issues are still the country’s priorities

“Building on existing industrial experience”

- Norway was an industrially developed nation when oil was discovered
- It had long maritime and engineering traditions and expertise
- Adapted quickly to support ambitions of local content development
- Norway hosted internationally competitive industries contributing to knowledge building in existing industries
- Norway had a favourable geography, low priced hydropower and deep fjords for construction of concrete substructures



“Delivering benefits to society”

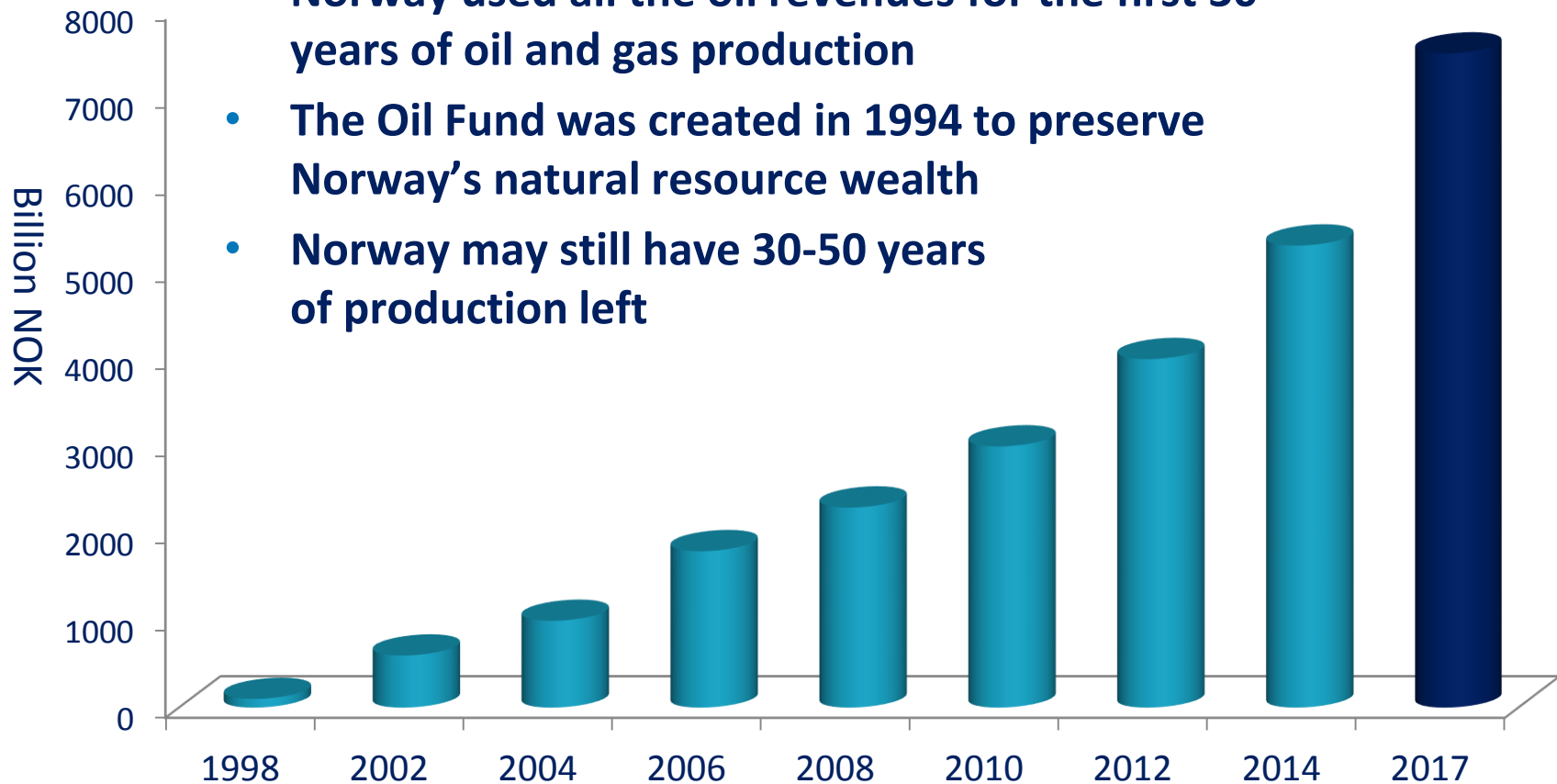
- The government focused on delivering wide societal benefits
- Institutions and organisations were formed for this purpose
- The licensing system was used by the government and Statoil to obtain a foothold in the international supply chains
- A key principle for local content development was the encouragement of Norwegian supply and service participation
- Developing a competitive environment was instrumental in ensuring technological and institutional innovation



Saving hydrocarbon revenues for future generations

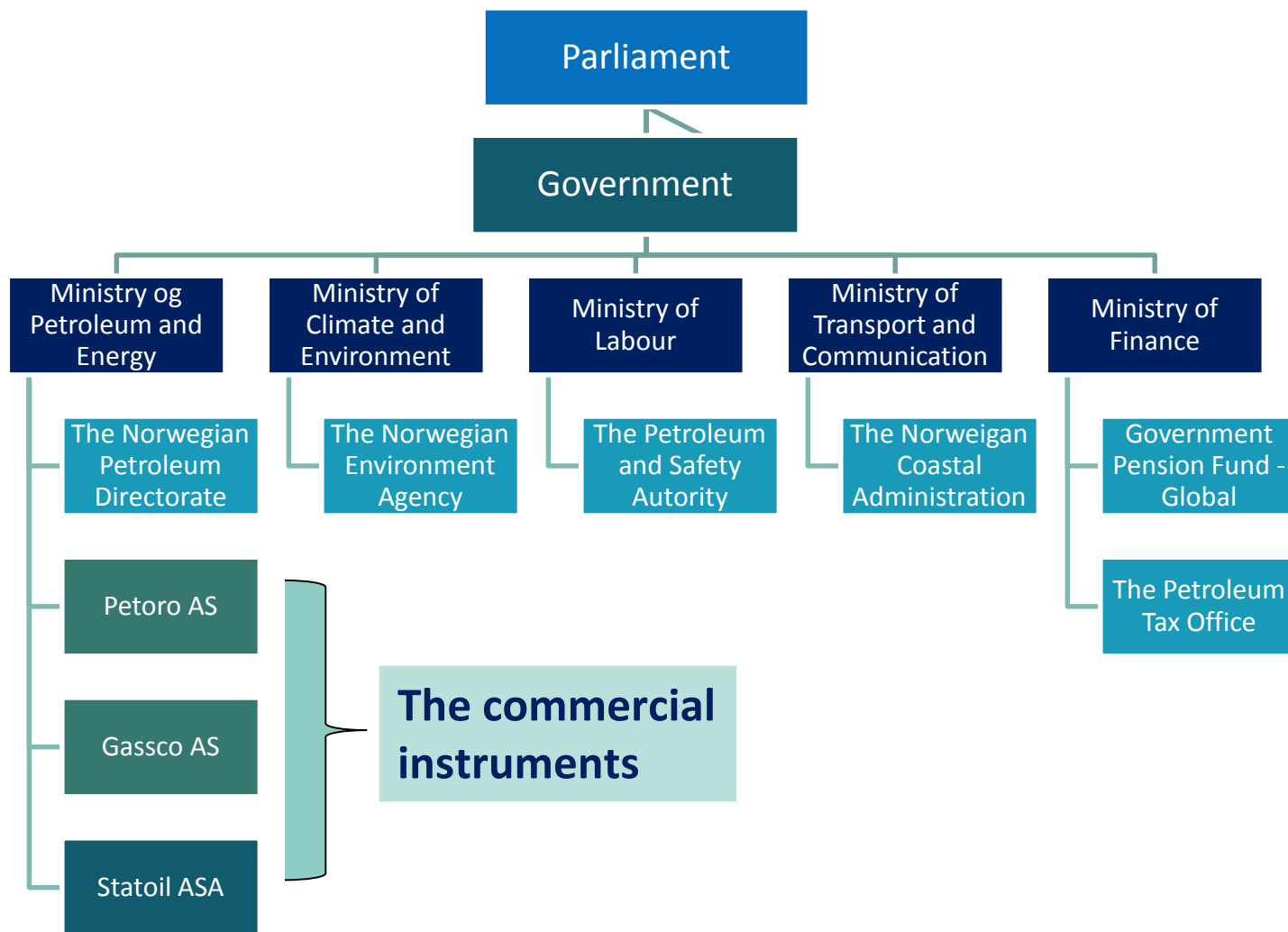
Pension fund is a key national strategy

- Norway used all the oil revenues for the first 30 years of oil and gas production
- The Oil Fund was created in 1994 to preserve Norway's natural resource wealth
- Norway may still have 30-50 years of production left



Norway's oil and gas structure

Several ministries have a role to play

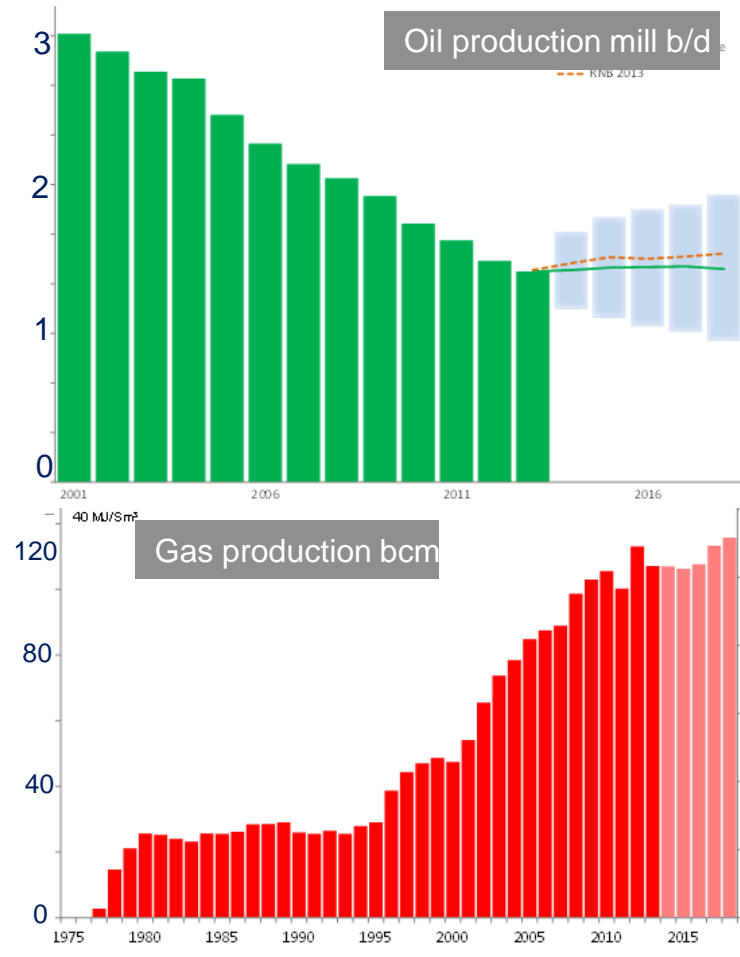
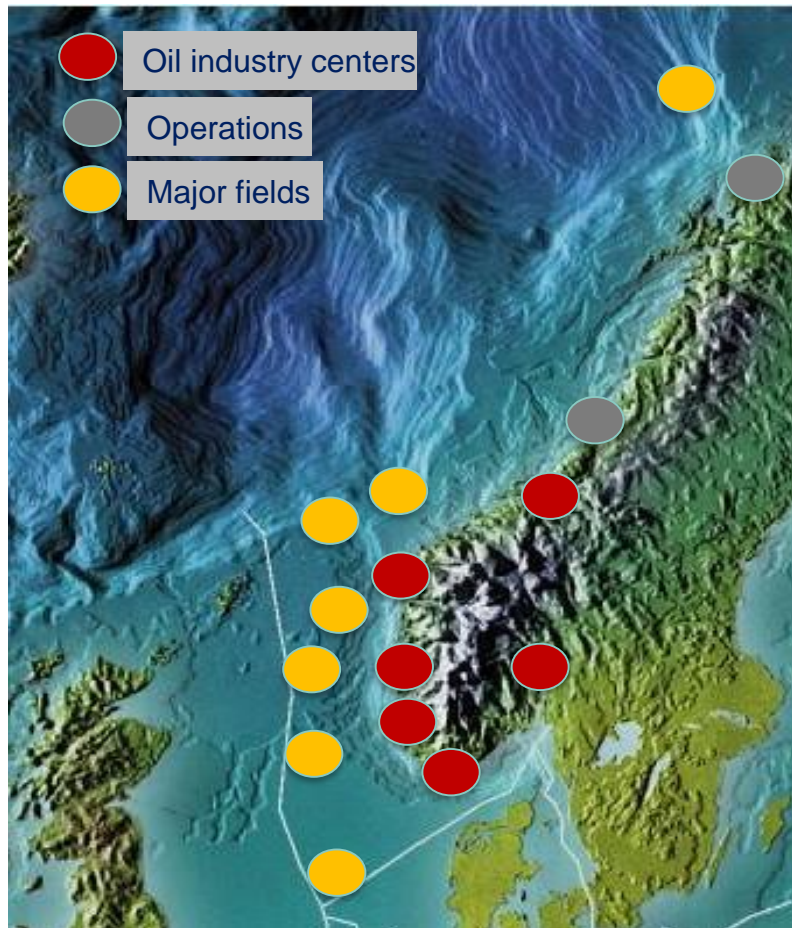




Current situation

High-in country value addition

Oil and gas production beyond 2050



A snapshot of Norwegian oil and gas industry

Statoil has become the dominant operator

- More than 80 fields in production
- Liquids production some 2 million b/d
- Gas sales : 120 billion cubic meters
- The world's second largest gas exporter
- Large system of pipelines linking Norway to Europe
 - LNG from the Barents Sea in the north
- More than 50 oil companies active in Norway
- Major oil companies less dominant than in the past
- Norway is prepared for a future with stricter climate change requirements with impact on oil and gas



Terje Søviknes
Minister of oil

Statoil strategy has been adjusted with time

Norwegian champion – global player

- Statoil is the Norwegian oil and gas champion
- Intended to serve broad purposes of Norwegian petroleum and economic development
- Statoil's strategy has increasingly sought to assure its future by being competitive on the global stage
- Low oil prices have led to sales of assets in the USA and Canada
- But expansion in Brazil and offshore Canada
- Statoil's strategy is now similar to that of many major international oil company
- But it has the advantage of a large domestic footprint



Eldar Sætre
Statoil's 5th CEO

The oil industry has changed in four years

Profitable projects at far lower costs

- **Norway has seen a major reduction in costs on the NCS in the last years due to the market collapse**
- **But more than 10 major offshore projects are under development**
- **The industry has adjusted itself to the new market**
 - **40% cost reduction**
 - **More effective drilling**
 - **Simplified project solutions**
 - **Lower cost for people and their projects**
 - **Pipelines and cables cost have declined**
- **The Norwegian petroleum clusters are now able to deliver new profitable projects at far lower costs**

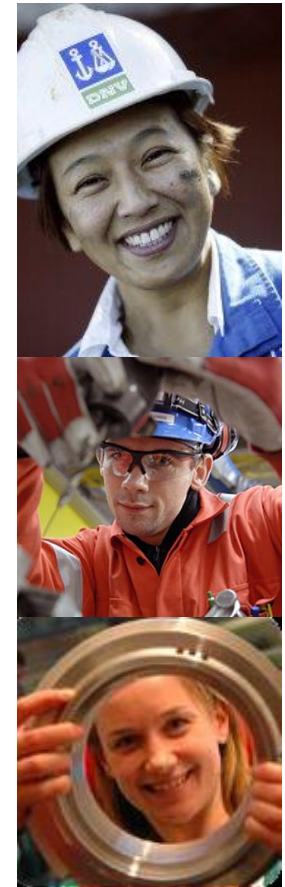


Head of Norway
Oil and Gas,
Karl Eirik Schjøtt-
Pedersen,
former Minister
of Finance

A large Norwegian service and supply industry

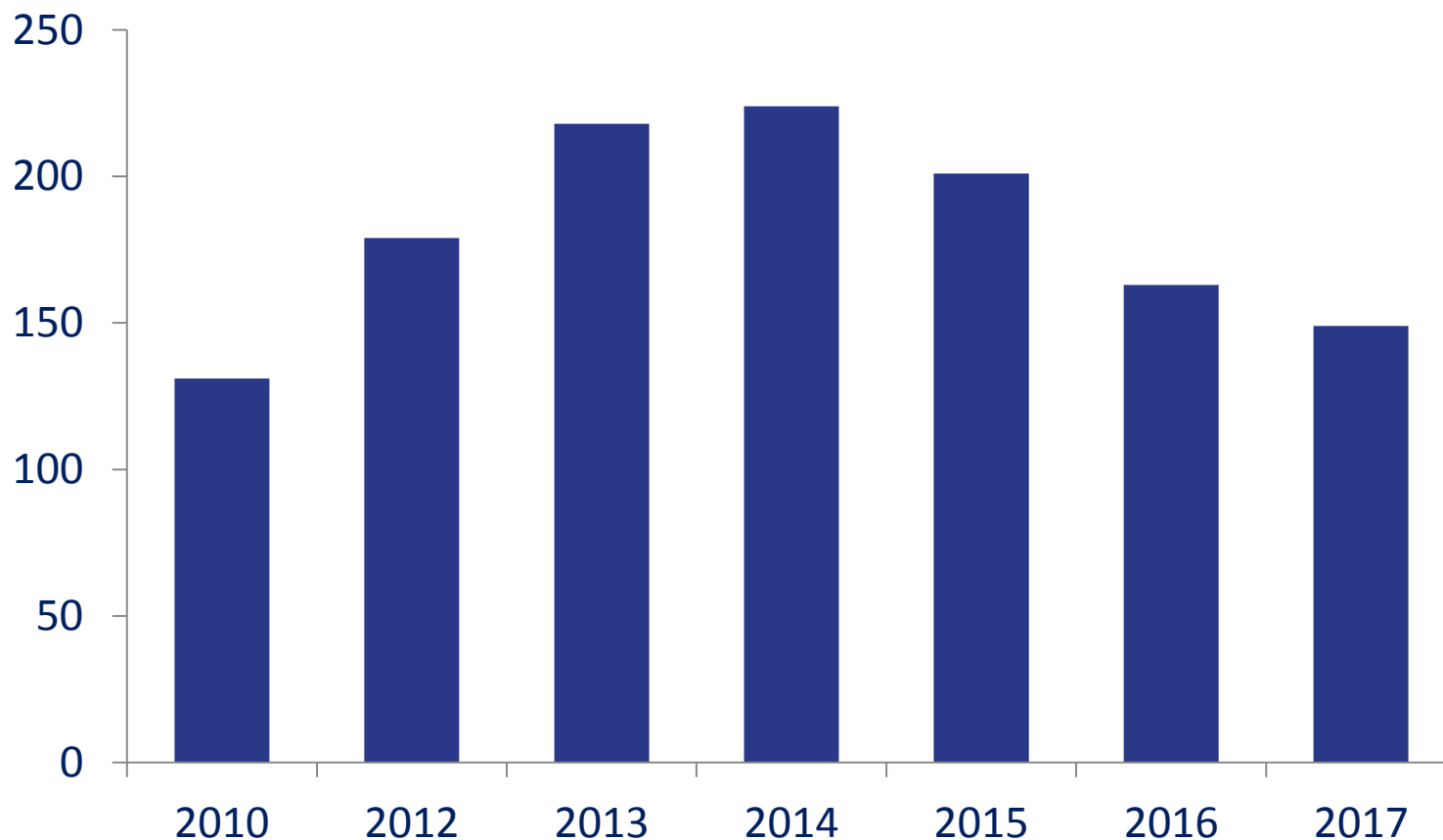
It has been hit hard by the price collapse

- The Norwegian service and supply industry's annual revenue was close to US\$ 50 billion before the oil price collapsed
- 40% of the revenues came from international markets
- The service and supply industry had 1250 active firms
- 125 000 were directly employed by the supply and service companies
 - 26 000 were permanently stationed offshore
 - Some 27 000 worked for the oil companies
- Near 100,000 jobs were indirectly linked to oil and gas
- More than 45 000 people have lost their jobs since the oil price began declining



Development of investments in oil and gas

Several major projects are emerging



MillionNOK

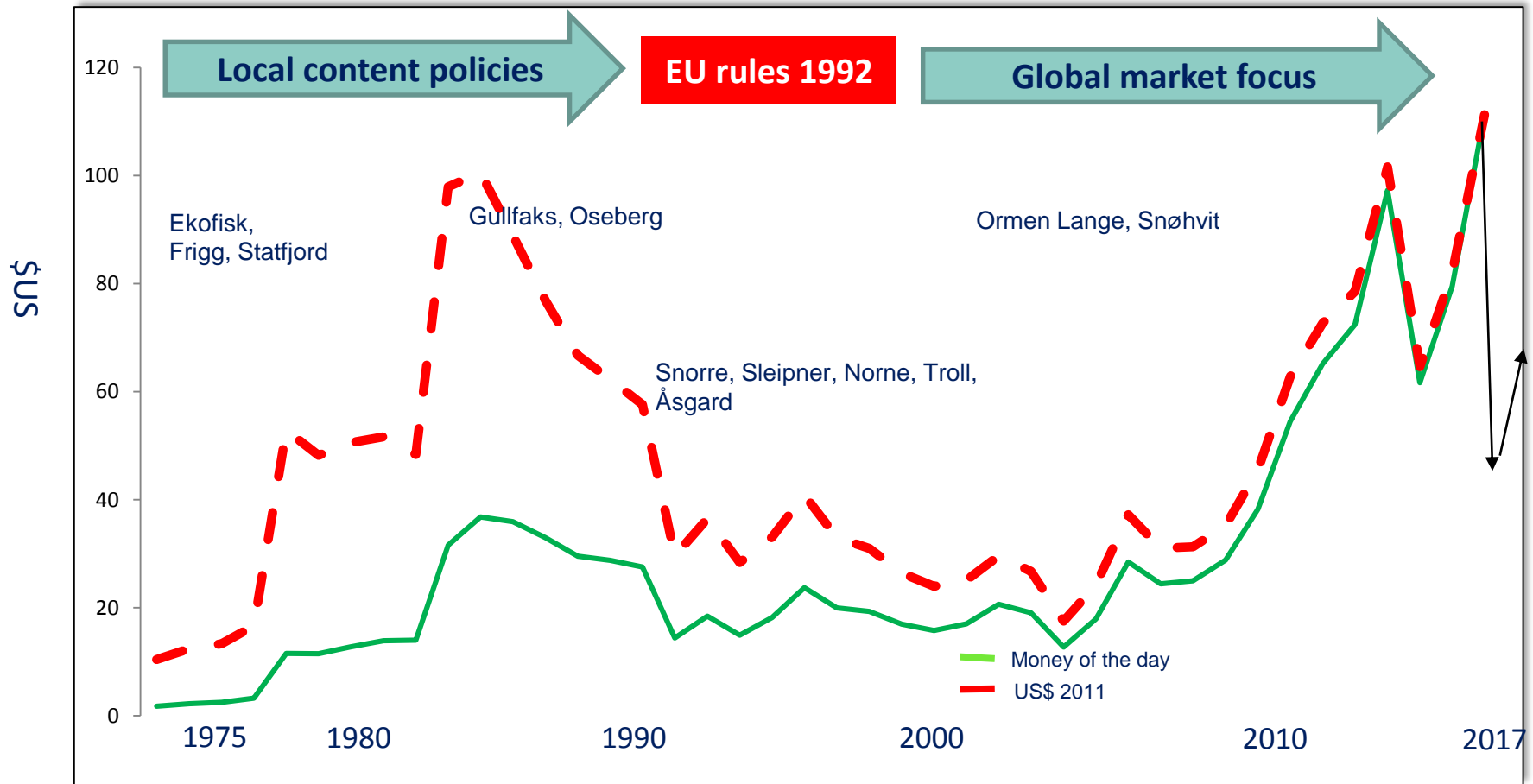


Arvid Hallen
Head of
R&D Center



**Technology –
important part of
the business**

Local content policies and price of oil



Cost focus – NCS standards

Local content legislation introduced in 1972

Securing local firms a fair opportunity



“Norwegian goods and services should have preference provided it is competitive in price and quality, schedule and service”

§ 54 in the Petroleum Law

- Roles and responsibilities clearly defined between government and the oil companies
- The Ministry established an office to monitor local content in 1973
- Oil companies had to present all tenders above one million kroner
- The Ministry was informed of the evaluations before contract award
- Oil companies had to present their tendering strategy twice a year
- Supply based had to be located in Norway – not the UK
- Tendering information was released to the whole petroleum cluster

Norway's strategic approach

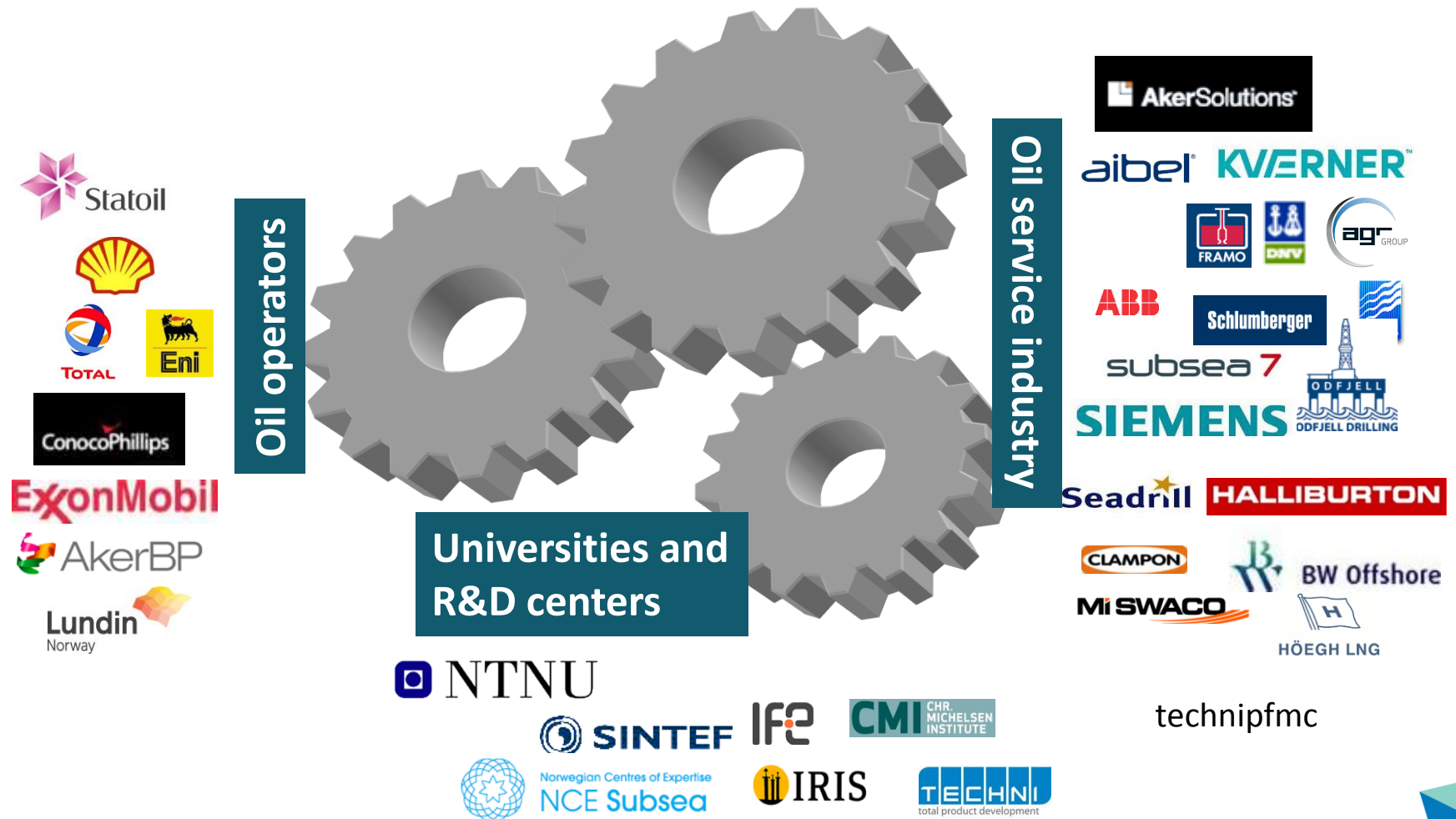
Attracting global competent firms



- Norwegian supplier industry was built with a focus on 'Norwegian content' rather than 'Norwegian ownership'
- Norway introduced policies to *attract global competence*
- Foreign ownership among Norwegian based suppliers above 50%
- Many have made strategic acquisition of local enterprises
- Have not harmed the development of the national clusters
- Rather led to more focus on competitiveness and technology

The government used incentives

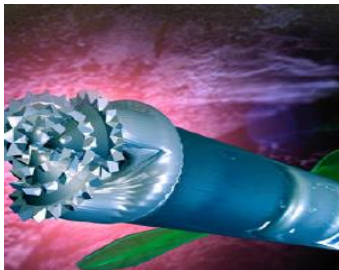
Wide ranging technology cooperation



Oil companies made the NCS a laboratory

New technologies – more production

Troll Oil



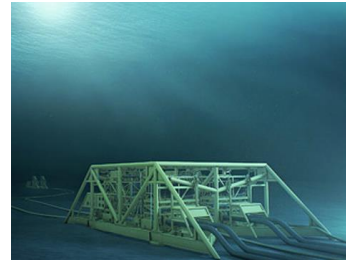
**Tapping
a thin oil
layer
Drilling
systems
Advanced
software**

Tordis IOR



**Subsea
separation
boosting
and
injection
system**

Åsgard



**Åsgard
Subsea
gas
compression
- Boosting
production**

Ormen Lange



**Aker Solution
Full scale
subsea
gas
compression
pilot**



**Local content no
longer accepted**

Norway and UK dropped local content in 1972

EU policies prohibit local content policies

- Norway and the UK introduced local content strategies in 1974
 - United Kingdom set up “Offshore Supplies Office”
 - The aim was to raise British participation from 30% to 70%
- Norway introduced policies to assist Norwegian based firms
 - Ministry of Petroleum monitored contracts awards
 - Statoil had a dominant role in all licenses and pushed for use of companies based in Norway
- The most important step was the use of concrete platforms
- Another key issue was to move engineering to Norway
- UK and Norway had to drop local content requirement in 1992
 - It was against European Union policies

Had to follow EU rules and regulations from the 1990s

No preference to Norwegian firms



**Infant industry argument
no longer applicable**

- The Norwegian population voted against membership in the European Union twice
- But it joined the European Economic Area
- Norway had to introduce EU regulations to its oil and gas strategy
- The new regulations were based on competition as the key principle
 - Predictability, transparency, traceability
 - Prohibited to discriminate on the basis of nationality
 - Not allowed to use EU standards and specifications to obstruct competition

The industry developed Norwegian standards Made life easier for the suppliers

- The NORSOK standards were developed by the Norwegian petroleum industry to ensure adequate safety, value adding and cost effectiveness
- The intention was to replace the specifications which the different oil companies were using
- 79 national NORSOK standards are now in active use
- *Standards Norway*” became an important basis for the regulations on the Norwegian continental shelf
- Hundreds of Norwegian experts participated in the petroleum standardization
- Norway’s petroleum standards are a voluntary tripartite cooperation between oil industry, employee unions and the government.



Finn Kristensen
launched the
NORSOK standards
as Minister in the
1990s

Growing focus on corruption issues

Statoil – its lesson learned was tough



- Statoil's Iran contract with the son of a former President led to major changes
- He was involved in corruption
- The Chairman of Statoil, the CEO and the head of International E&P had to resign
 - Statoil got a large fine from the Norwegian Financial Police
 - Even larger fine from US investigations
- Norway has been exposed to a number of corruption cases in the oil and gas sector
- Established guidelines for 200 companies
- Worked hard to enable small and medium sized companies to handle the challenges



**International
expansion**

Norway's oil industry became global – for a while

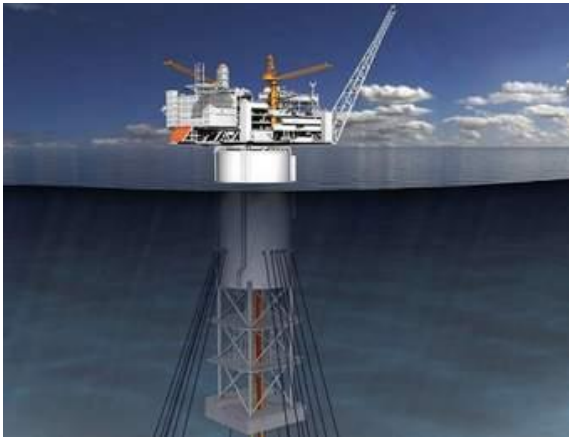
Large international markets became important



- The Norwegian oil industry grew internationally in the late 1990s
- Norway established a new entity, INTSOK, to open the doors for the companies in new markets internationally'
- UK markets were the front runner
- Gulf of Mexico moved as fast
- Brazil became the big success story – more than 100 companies
- Norway's oil and gas cluster operated all over the world
- Many Norwegian firms have been hard hit by the price collapse

South Korea was more competitive

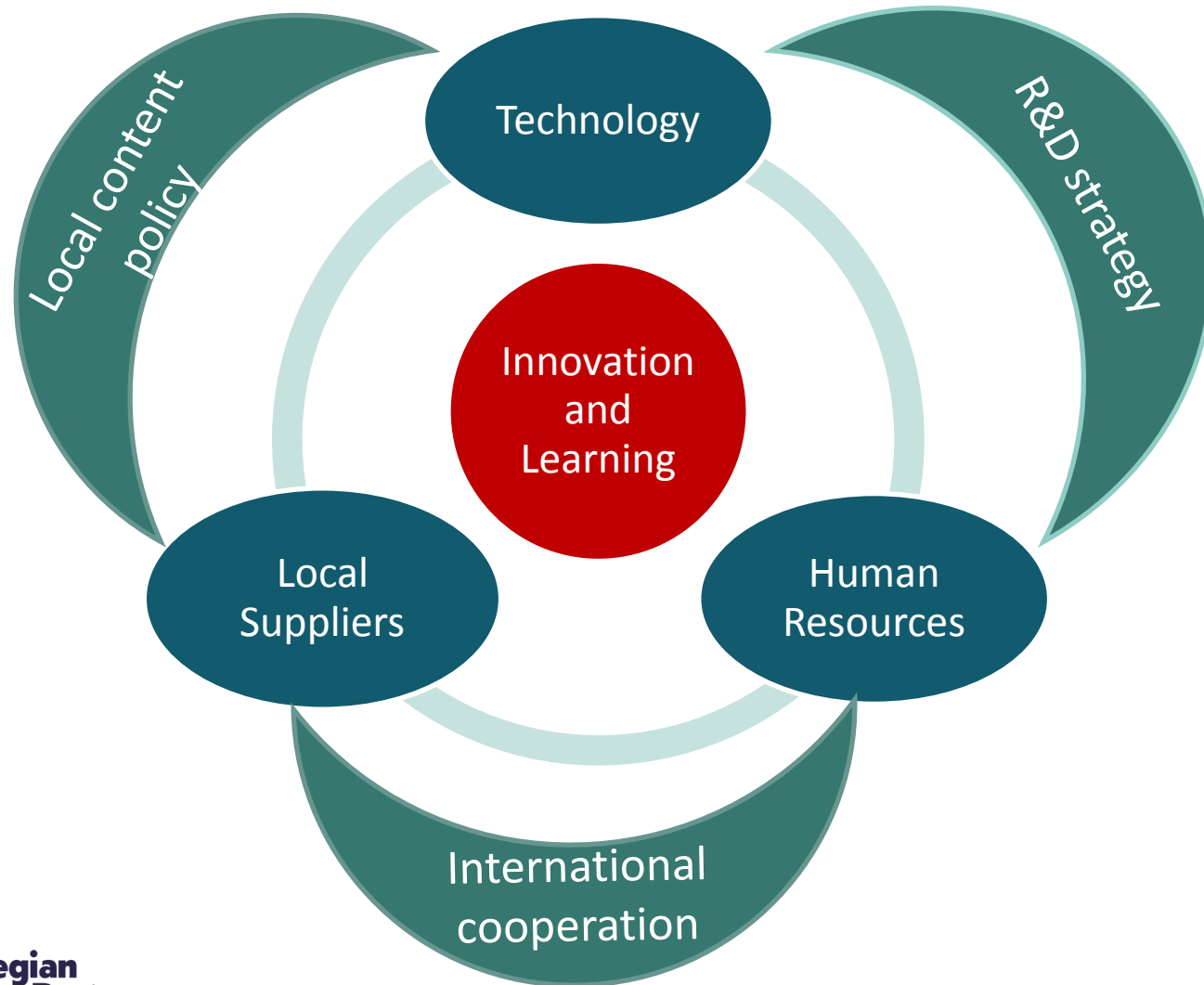
Norwegian clients were difficult to handle



- Norwegian oil companies placed more than 10 major contracts three Korean yards
- Statoil had personnel in the yards to supervise all projects
- The cost went far above all contracts
- South Korea had a very different approach to the Norwegian firms
- Korean yards had a clear and rigid structure with a strong role for the top of the hierarchy
- They also had problems understanding the NORSOK-standards
- Will influence future Norwegian contracts

Local content must be seen in a wider perspective

Innovation, learning, technology and cost



Brazil's has high research and development ambitions

Statoil involved in the Doris robot project



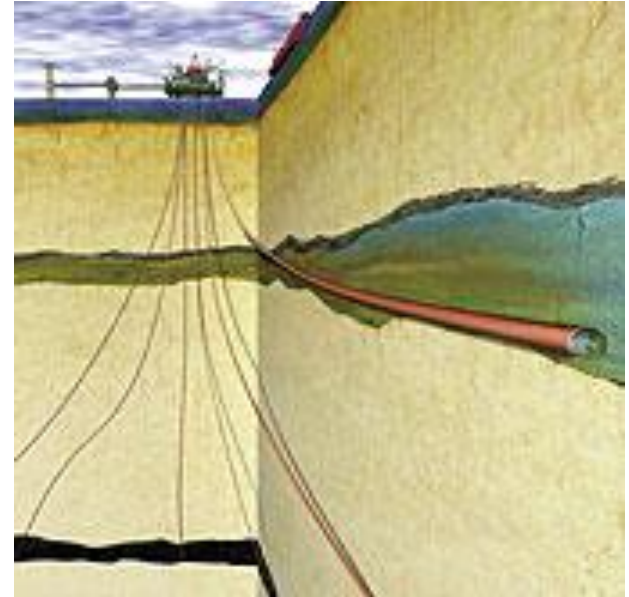
Norway's
Crown Prince
Harald has
visited CENPES
to be briefed
on new ideas

- **Brazil's high focus on R&D is attractive for many**
- **CENPES has become a strong force**
- **The robotics group at UFRJ is closely monitored by many outside Brazil**
- **The Doris robot project is a collaboration financed by Statoil and Petrobras**
- **The idea is that the robot should monitor and do surveillance of topside offshore installations**
- **The robot can be programmed to perform autonomous inspection rounds to detect anomalies or irregularities**
- **The robot is part of the oil industry's new future**



New challenges

Handled CO2 for future storage Environment has been important for years



- Sleipner field – North Sea with a lot of CO₂
- Six year study from 1990 found the way
- One million tonn CO₂ stored every years
- Snøhvit field in the far north - 700 000 tonn annually

Local content should be seen in a wider perspective

A future with more focus on low carbon



- Oil and gas industry will be part of the solution to the world's energy and climate challenges
- Major oil companies, like Total and Statoil, are investing actively in low-carbon technology and renewables, such as wind power.
- Climate policy measures should be predictable, transparent and internationally applied to avoid carbon leakage, ensure cost effectiveness and create a level playing field in global market
- A price on greenhouse gas emissions based on the “emitter pays” principle should be the preferred climate policy framework

The oil industry will have to face a new future

Civil society has become more influential



global witness



GREENPEACE



- Civil society has in the last decade grown in influence
- They are increasingly setting the agenda
- They are influencing political leaders, financial institutions and government policies
- Issues like
 - The environment
 - Human rights
 - Corruption
- Demanding more transparency in the oil and gas sector

The far-north of Norway is still an uncertainty

Major potential remaining for the future

