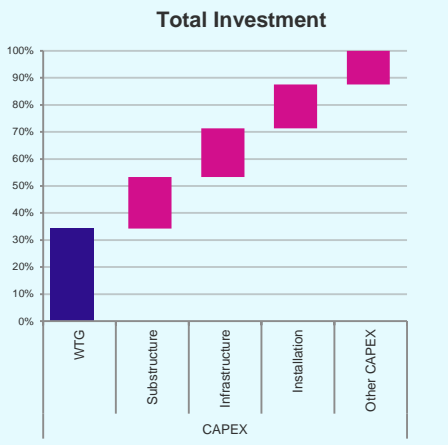




Hywind En Mulighet for Norge

Benefits of Offshore Wind Investments

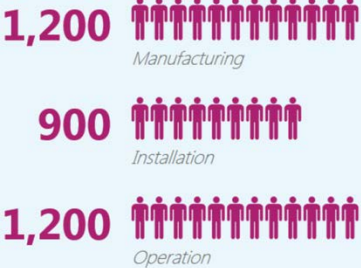
Use local suppliers



65% of investments in offshore wind can benefit local suppliers

Employment

300 MW, FULL TIME EQUIVALENT



Manning for Installation and Operation can contribute significantly to employment
 Operation is 60 FTE in 20 years

Transition

- Cover energy demand from other industries
- Contribute to decarbonisation
- Co-existence with other offshore activities

Can transform existing industries and increase sustainability
 Increase utilisation of allocated areas



Oil and gas: Large opportunities at the NCS



Where are the next floating wind opportunities?

Utilities



Why floating wind?

- Security of supply
- Limited space
- Sustainability

Big cities



Why floating wind?

- Transmission
- Electrification
- Limited space

Islands



Why floating wind?

- Cost of alternatives
- Security of supply
- Limited space

Oil and gas (!)

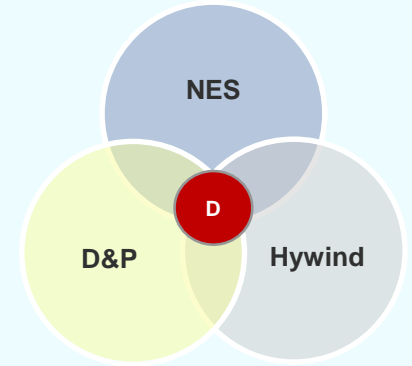
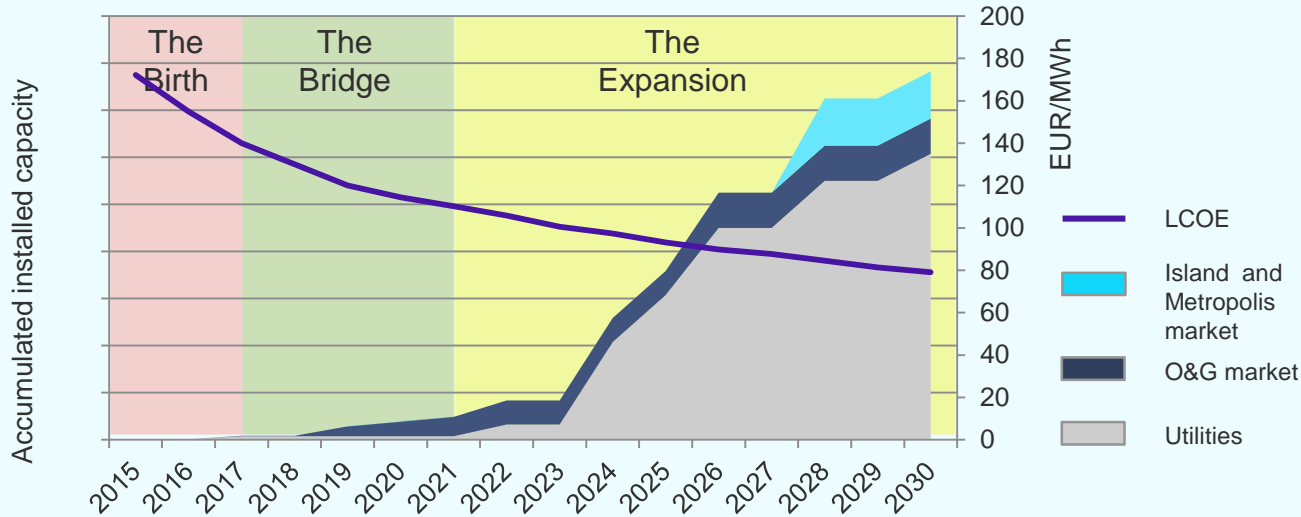


Why floating wind?

- Emission taxes
- Cost of fuels
- License to operate

Illustration photos from Flickr.com: Moyan Brenn, Darshan Simha and Nosh. Oil and gas photo by Statoil.

Floating Wind Road Map



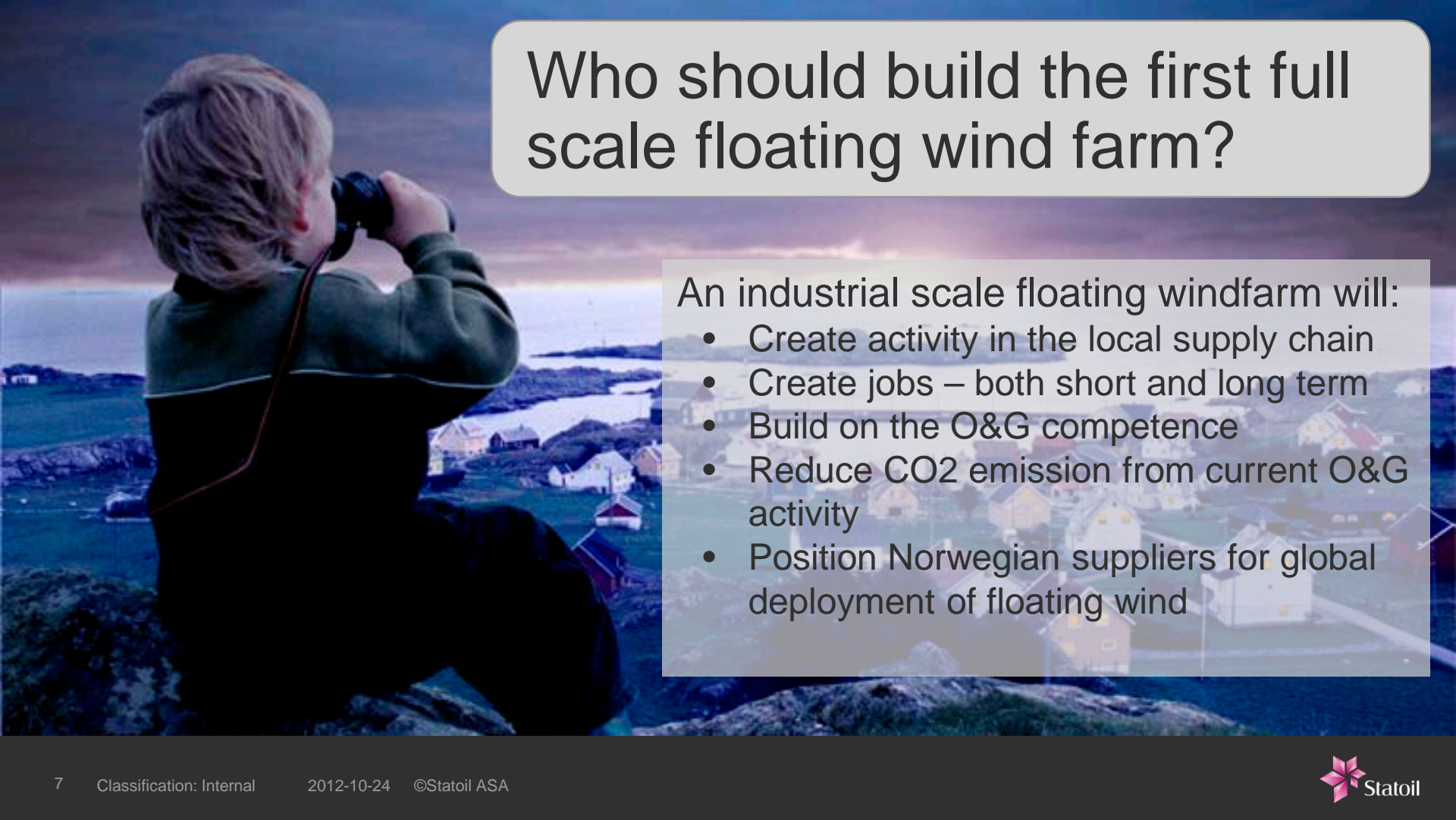
Trends for bridging phase

- Using Statoil oil and gas portfolio as an enabler
- Using the NCS as a technology lab for bridging hydrocarbons and renewables
- Step-wise focus on capturing learning and reducing LCOE
- Broadening the supply chain towards utility scale

Realising the Hywind Scotland project



- **Investing GBP 180 mill**
- **60-70% cost reduction** from the Hywind Demo project in Norway
- **Powering ~20,000 UK homes**
- **Installed capacity:** 30 MW
- **Water depth:** 95-120 m
- **Avg. wind speed:** 10.1 m/s
- **Area:** ~4 km²
- **Average wave height:** 1.8 m
- **Export cable length:** Ca. 30 km
- **Operational base:** Peterhead
- **Start power production:** 2017



Who should build the first full scale floating wind farm?

An industrial scale floating windfarm will:

- Create activity in the local supply chain
- Create jobs – both short and long term
- Build on the O&G competence
- Reduce CO2 emission from current O&G activity
- Position Norwegian suppliers for global deployment of floating wind