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Building the world's first floating offshore wind farm

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#HywindScotland

First new investment for New Energy Solutions

Exploration

- Exploit prolific basins
- Test impact opportunities
- Access at scale

Development & Production

- Safe and secure operations
- Drive cost and capital efficiency
- Capitalise on technology and operating experience

Midstream & marketing

- Leverage European gas position
- Onshore access to premium markets
- Exploit global trading competence

Portfolio management

- Realise value
- Sharpen our upstream profile
- Strengthen execution and financial resilience

New Energy Solutions

- Build a distinct growth portfolio of profitable new, non-oil and gas options
- Identify and develop business models to drive demand for our core products

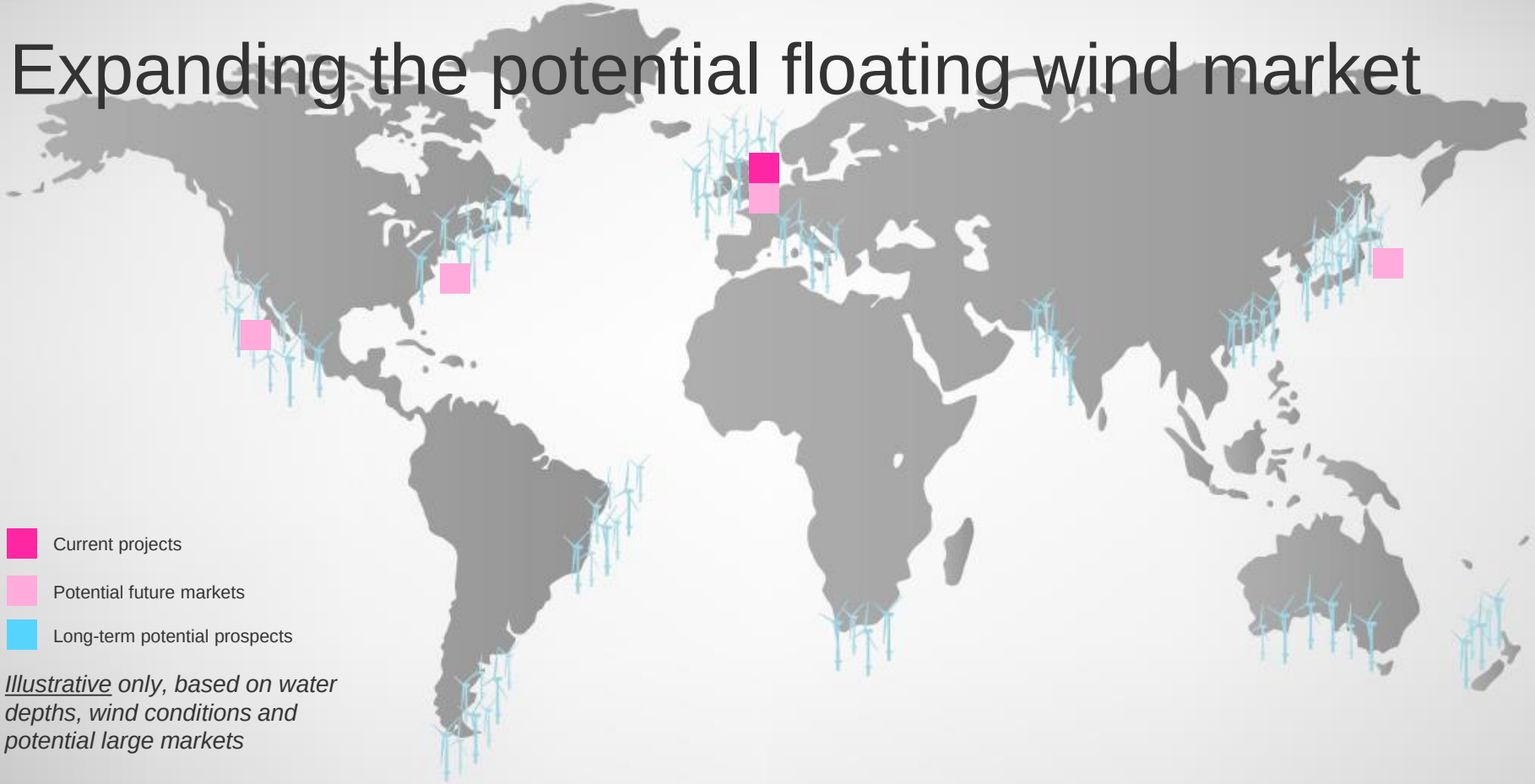
Realising the Hywind Scotland pilot park

- **Investing around NOK 2 billion**
- **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 km^2

- **Average wave height**: 1.8 m
- **Export cable length**: Ca. 30 km
- **Operational base**: Peterhead
- **Start power production**: 2017

Expanding the potential floating wind market



Illustrative only, based on water depths, wind conditions and potential large markets

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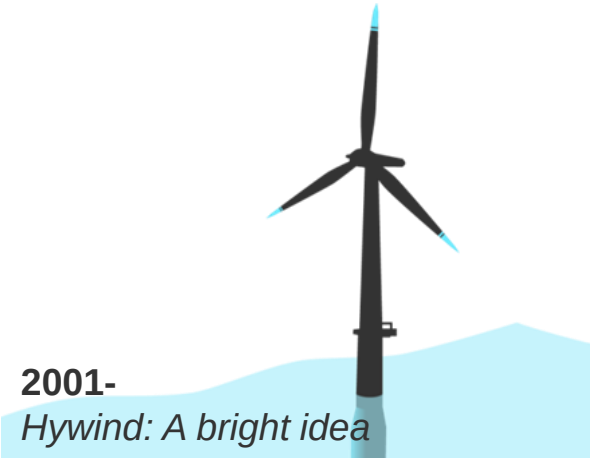
Further developing the unique Hywind concept



2001-
Hywind: A bright idea

- Unique concept
- Intellectual property owned by Statoil, patented technology

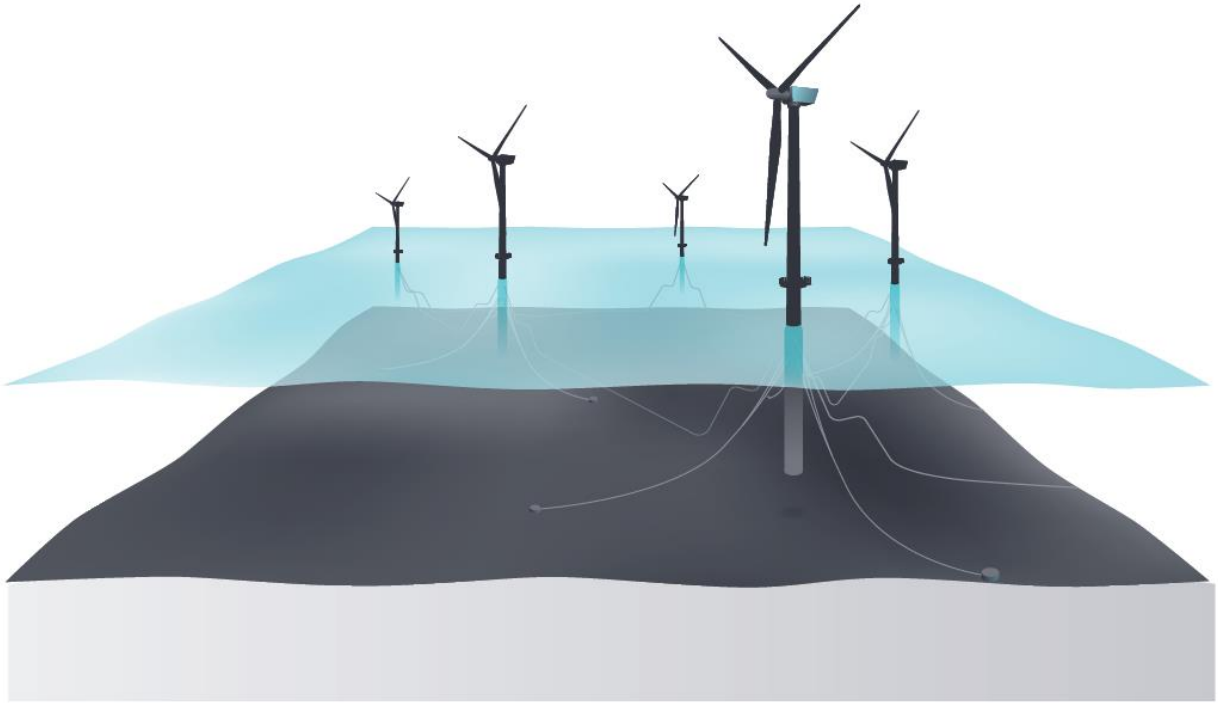
2009-
Demo: Proven in the North Sea

- Concept verified, performance beyond expectations
- Excellent production, well-functioning technical systems

2017-
Pilot park: A world's first

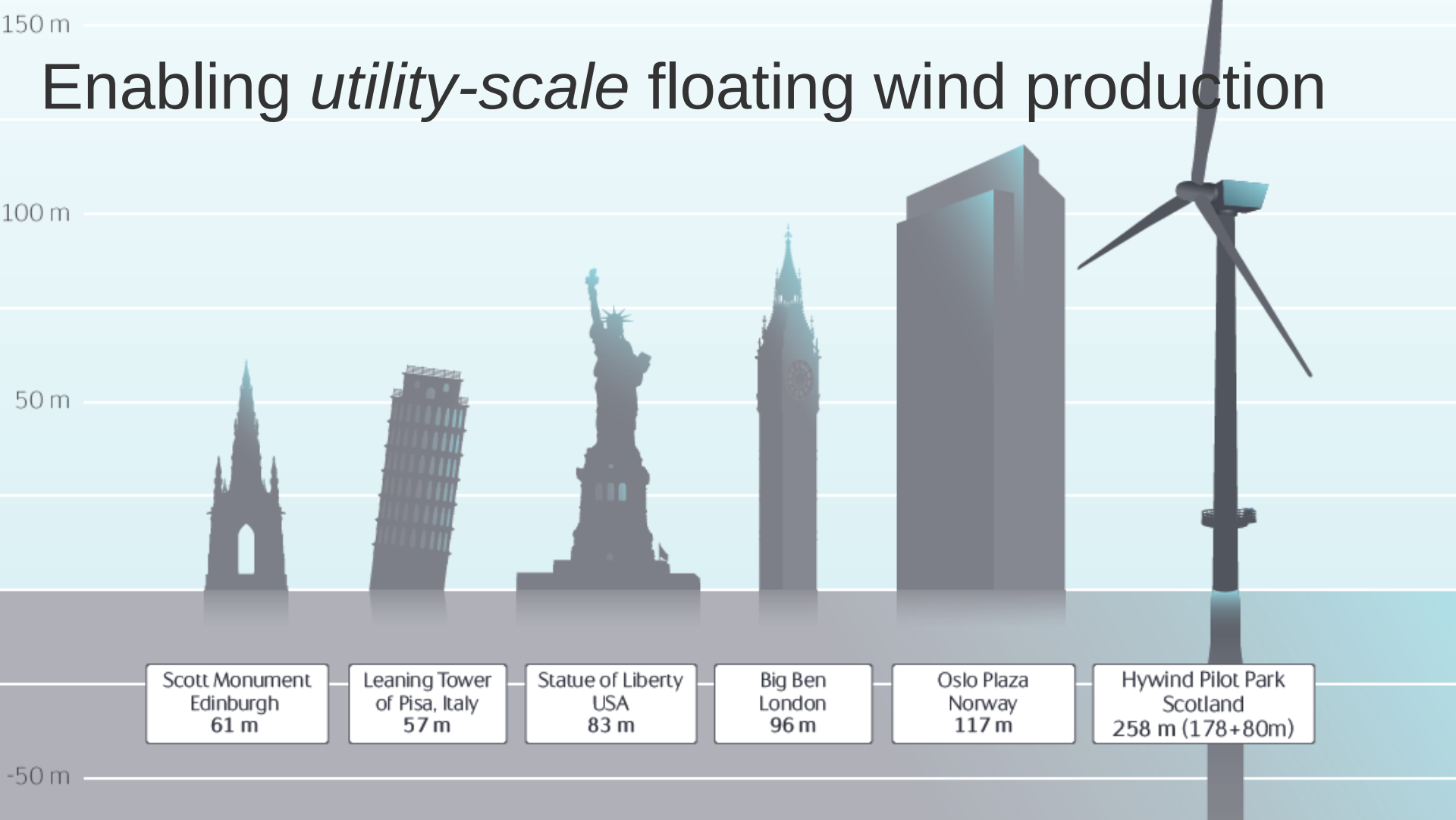
- Development of larger and lighter units and economies of scale
- Further improving cost competitiveness

Applying proven technology in new application



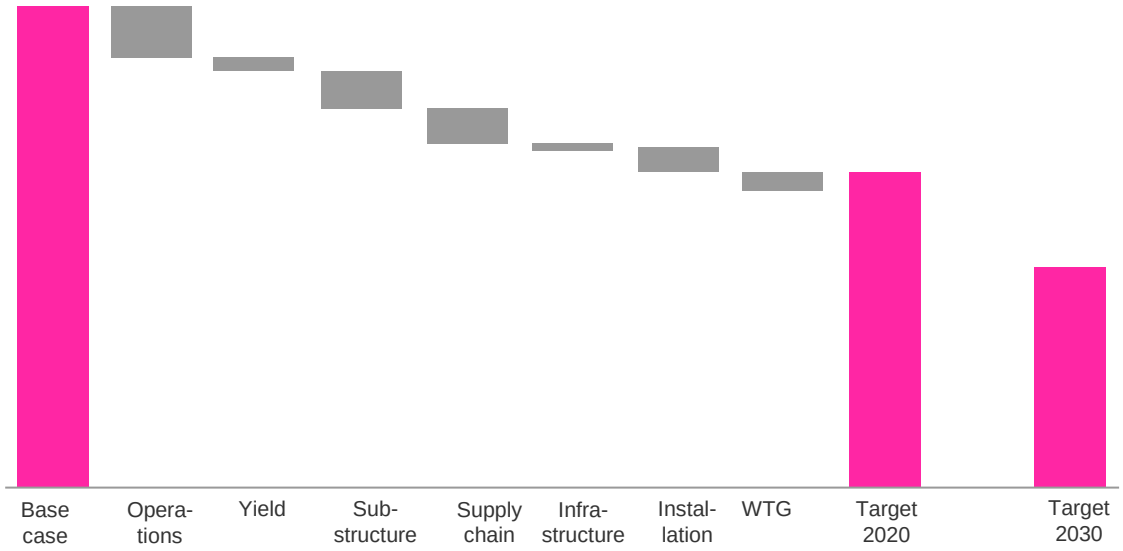
- Standard offshore wind turbine
- Spar-type substructure
- Simple structure - efficient fabrication
- Suitable for harsh conditions
- Simple 3-line mooring system
- Patented motion control reduces fatigue, increases production

Enabling *utility-scale* floating wind production



Bringing down the cost

Cost reduction of 40-50% by 2030 realistic, making floating offshore wind competitive without support regimes



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Statoil. The Power of Possible