



Future trends in offshore renewable energy

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Mawi Consulting Engineer

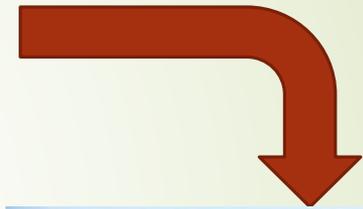
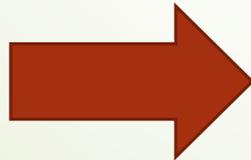
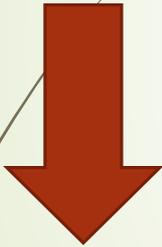


Agenda



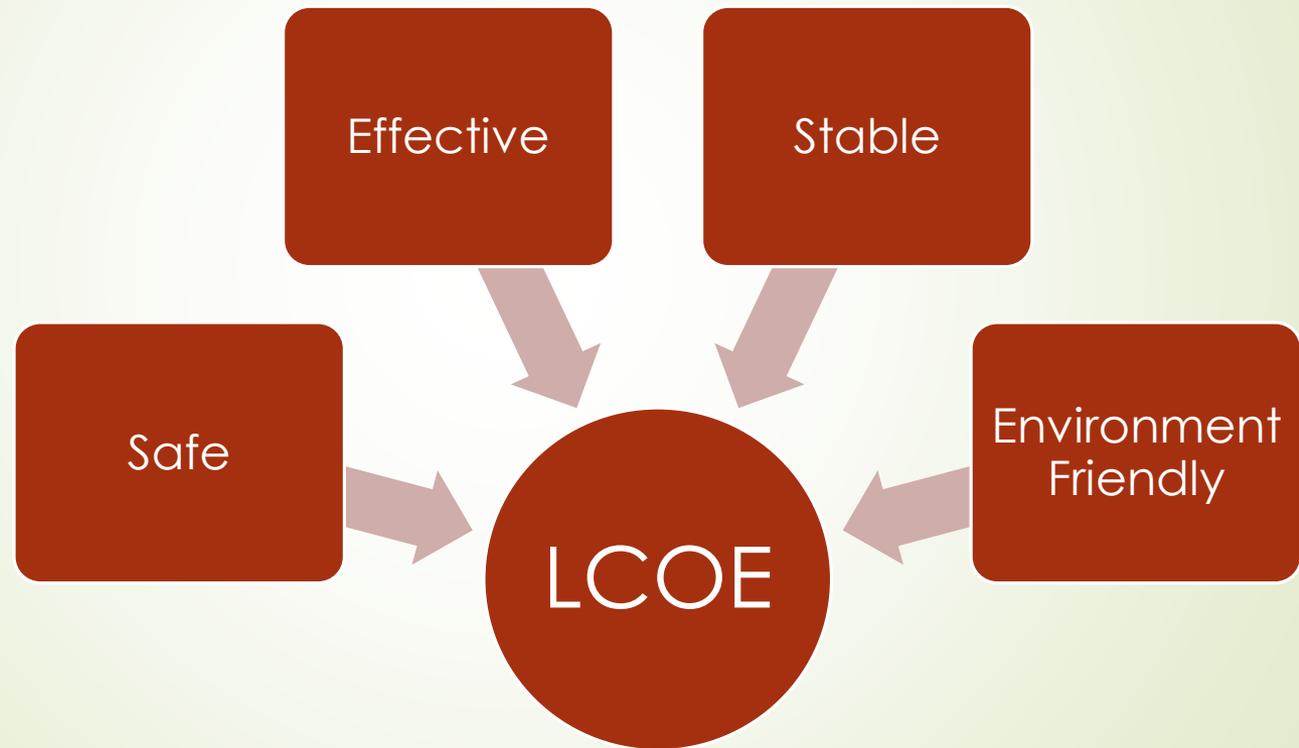
1. Why wind energy?
2. Key parameters of energy demand
3. Investment process
4. Supply chain elements
5. Challenge – Solution Examples
6. Innovation trends
7. Vision of the future

1. Why Wind Energy?

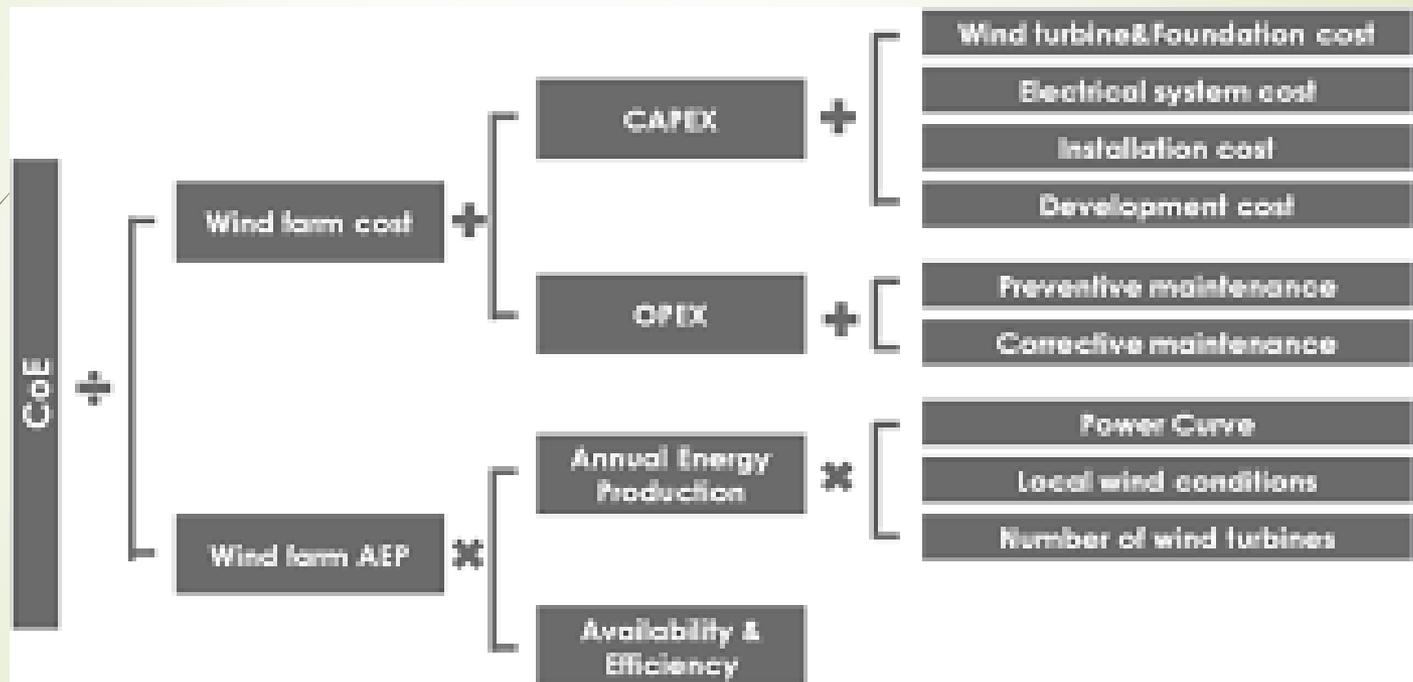


Orsted

2. Key parameters of energy demand



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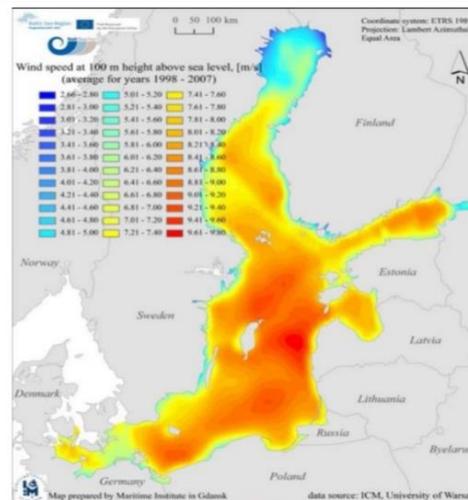


2. Key parameters of energy demand

NIRAS
HJELMSTED
CONSULTING

MEAN WIND SPEEDS

Baltic Sea



Maritime spatial planning and offshore wind development
Per Hjelmsted, HJELMSTED CONSULTING in cooperation with NIRAS

WATER DEPTHS

Baltic Sea

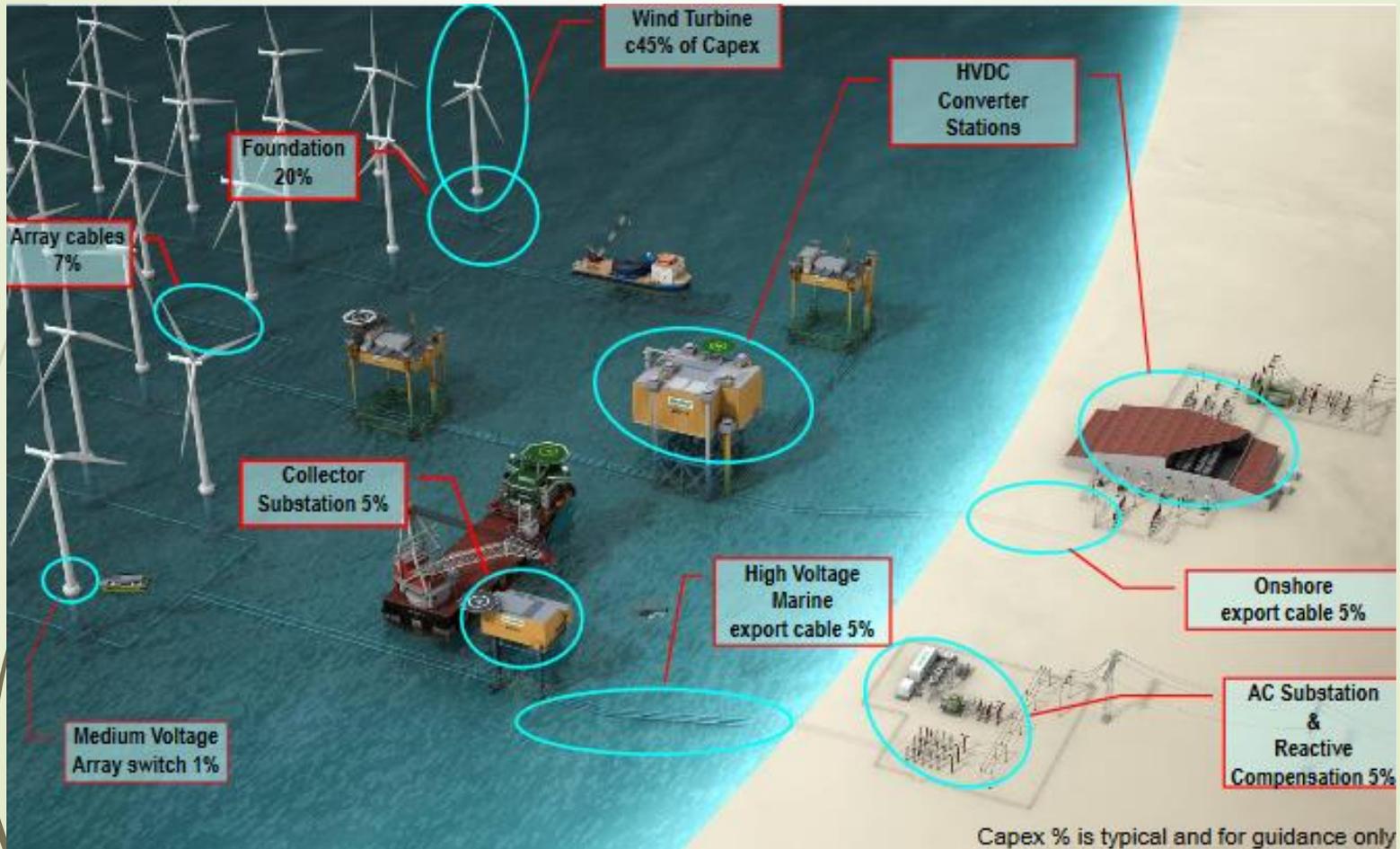


Maritime spatial planning and offshore wind development
Per Hjelmsted, HJELMSTED CONSULTING in cooperation with NIRAS

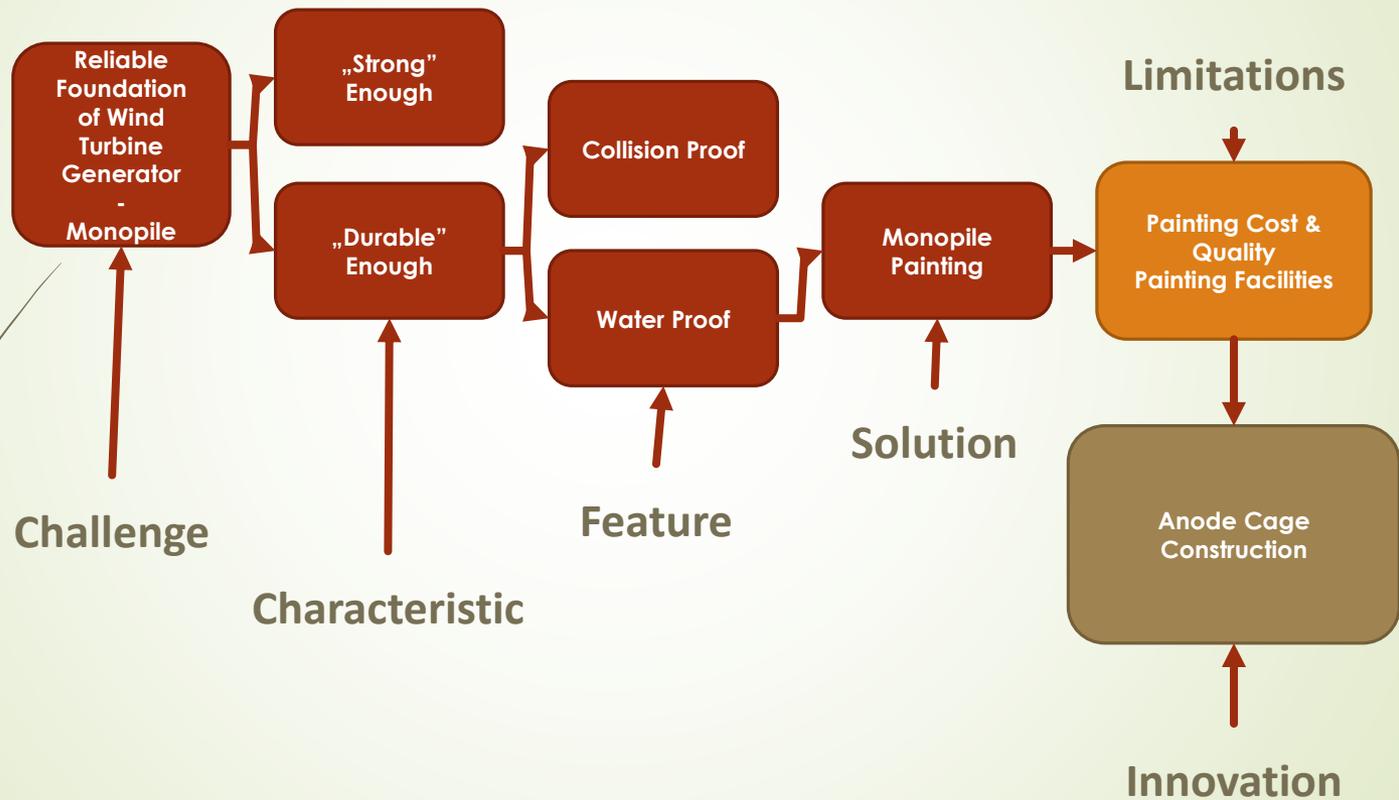
3. Investment process



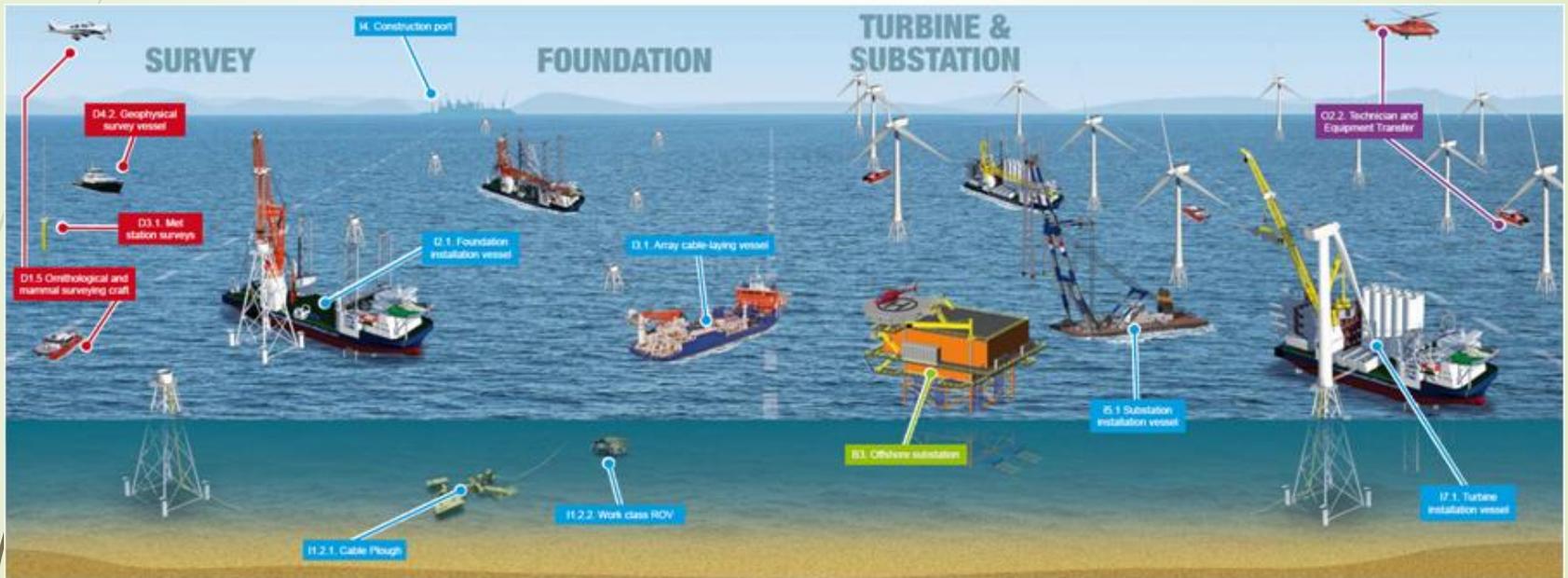
4. Supply Chain Elements



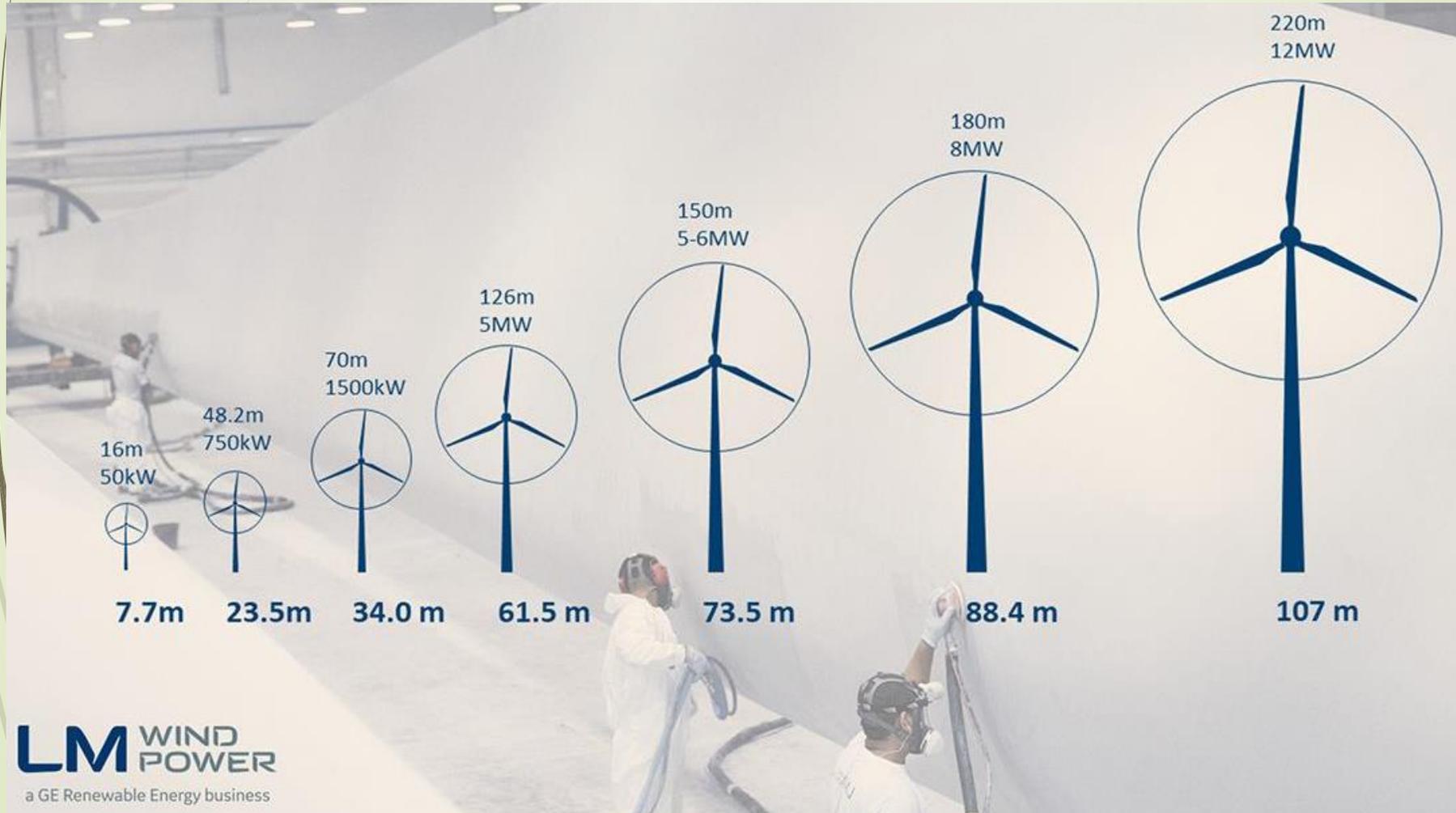
5. Challenge – Solution examples



5. Challenge – Solution examples



5. Challenge - Solution - WTG



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Materials :



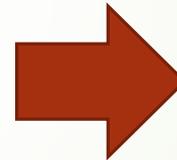
LM Wind Power

Logistics:



Siemens

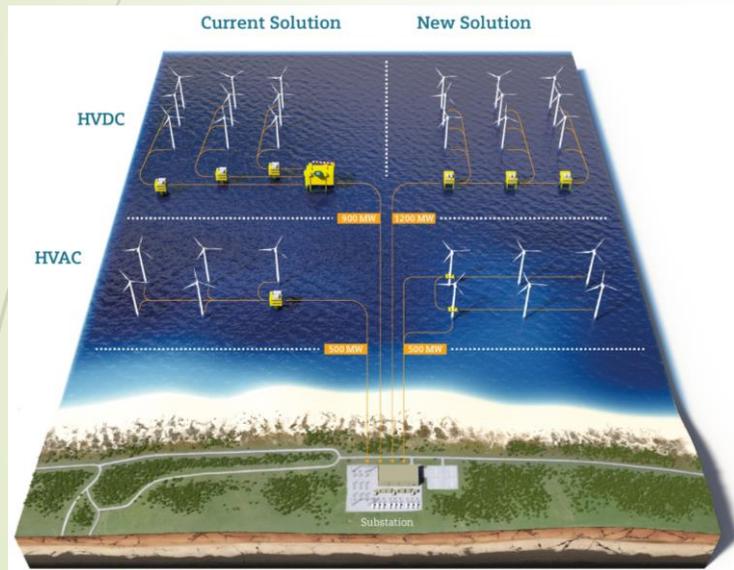
5. Challenge - Solution - O&M



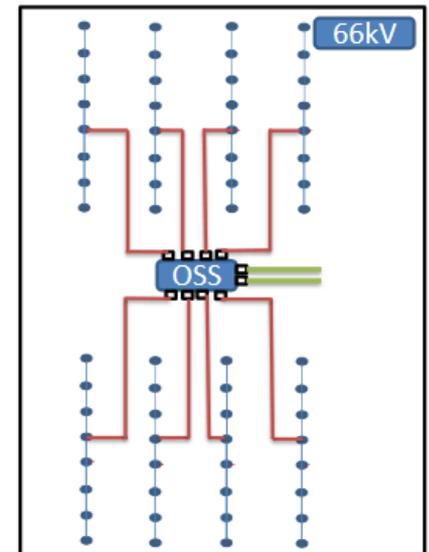
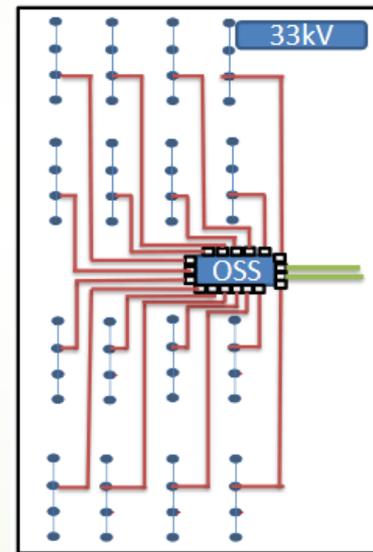
5. Challenge - Solution – BoP

Transformer Stations :

Cabling:



Siemens



JDR Cables

5. Challenge - Solution - Foundation



Orsted



Carbon Trust

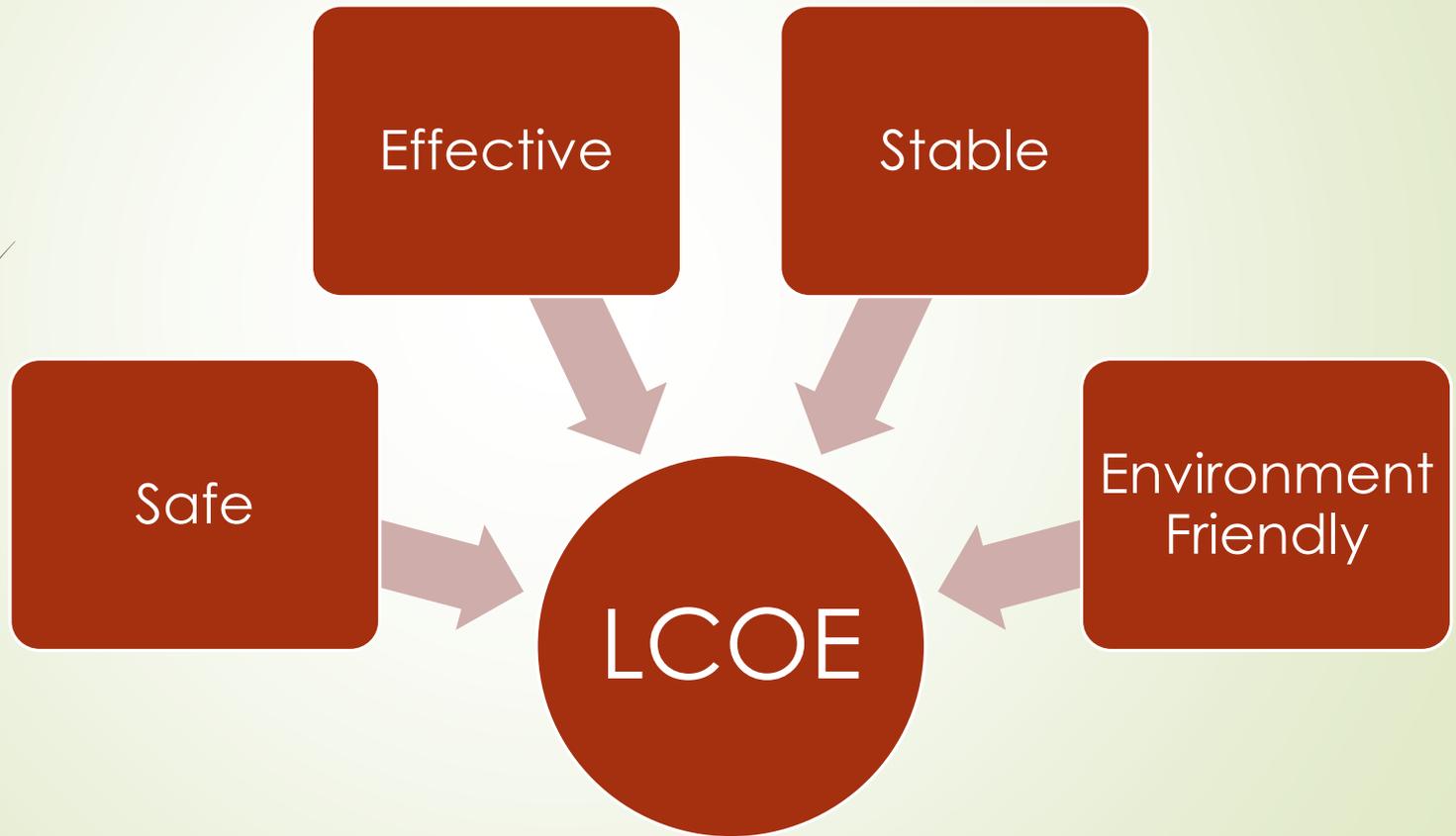


Equinor



Jan De Nul

6. Innovation Trends



6. Innovation Trends - Safety



6. Innovation Trends - Effectiveness

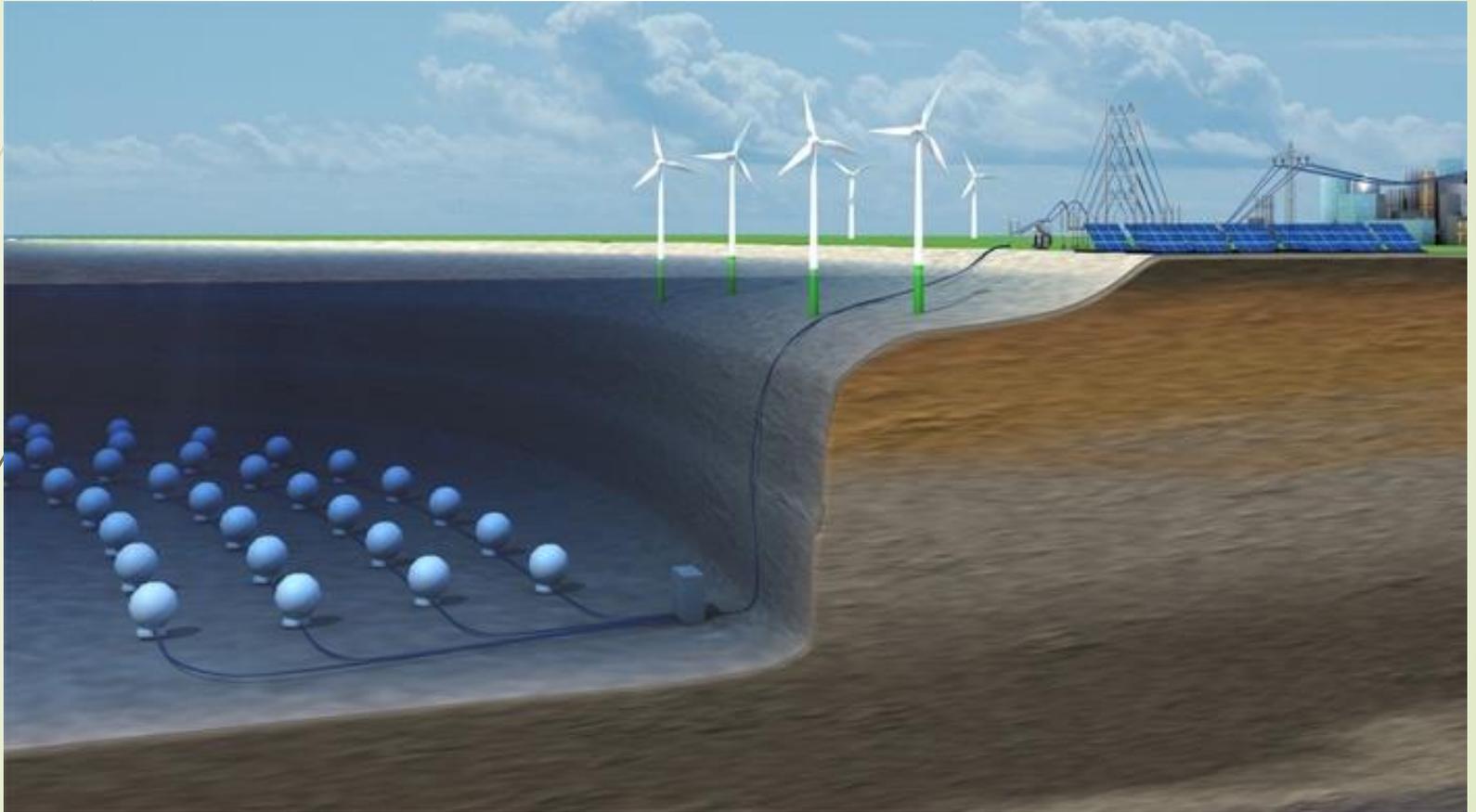


SeaTwirl



Equinor

6. Innovation Trends - Stable



6. Innovation Trends – Environment Friendly



7. Vision of the Future - Hubs

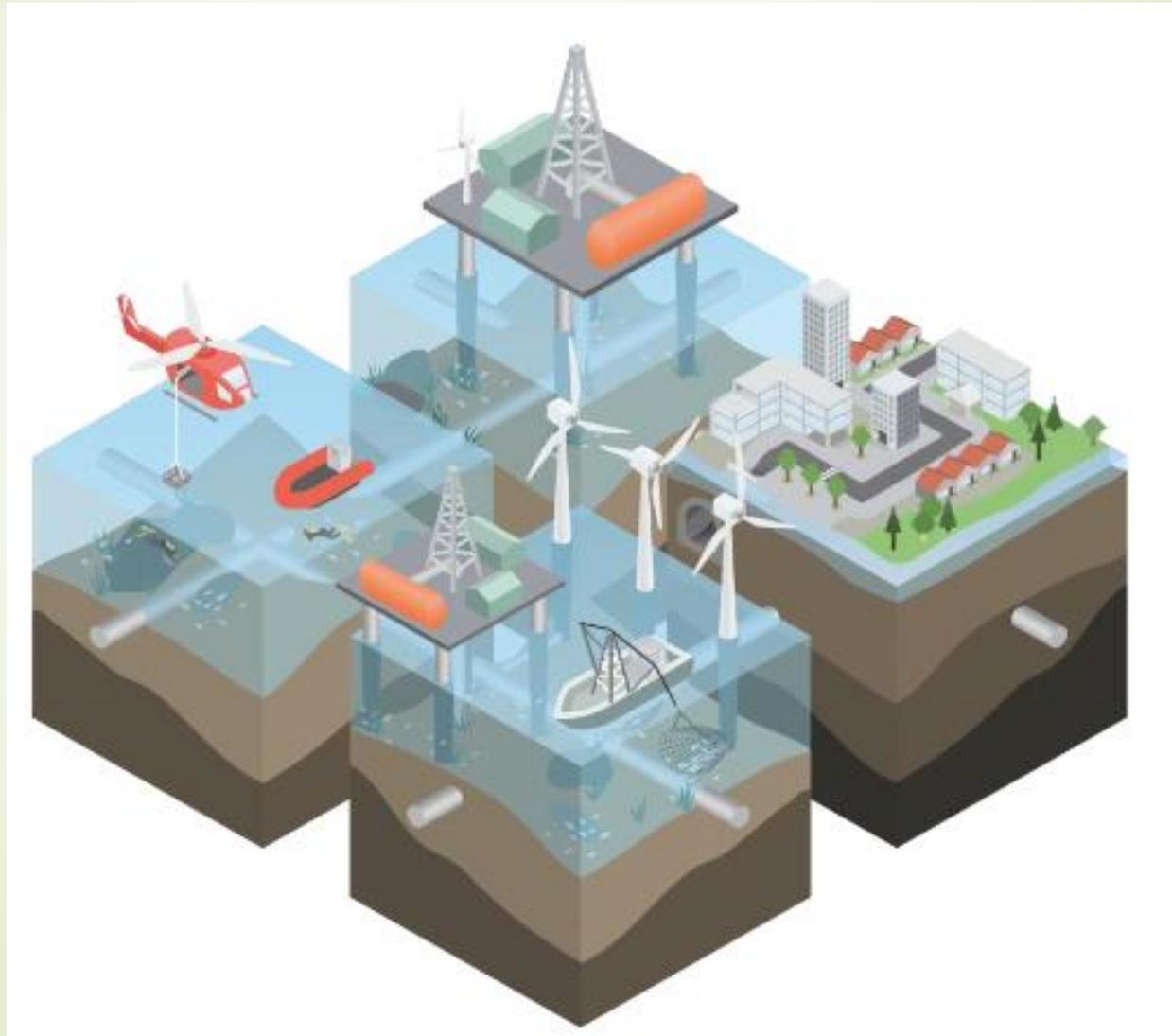


Port of Rotterdam

7. Vision of the Future – New Concepts



7. Vision of the Future – Multiuse & Integration





Thank You for your attention!

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