



Offshore wind farm lifecycle and supply chain: Assessing local impacts

Local impacts of leaner supply chains: The case of Oostende port

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Wind[•]
EUROPE

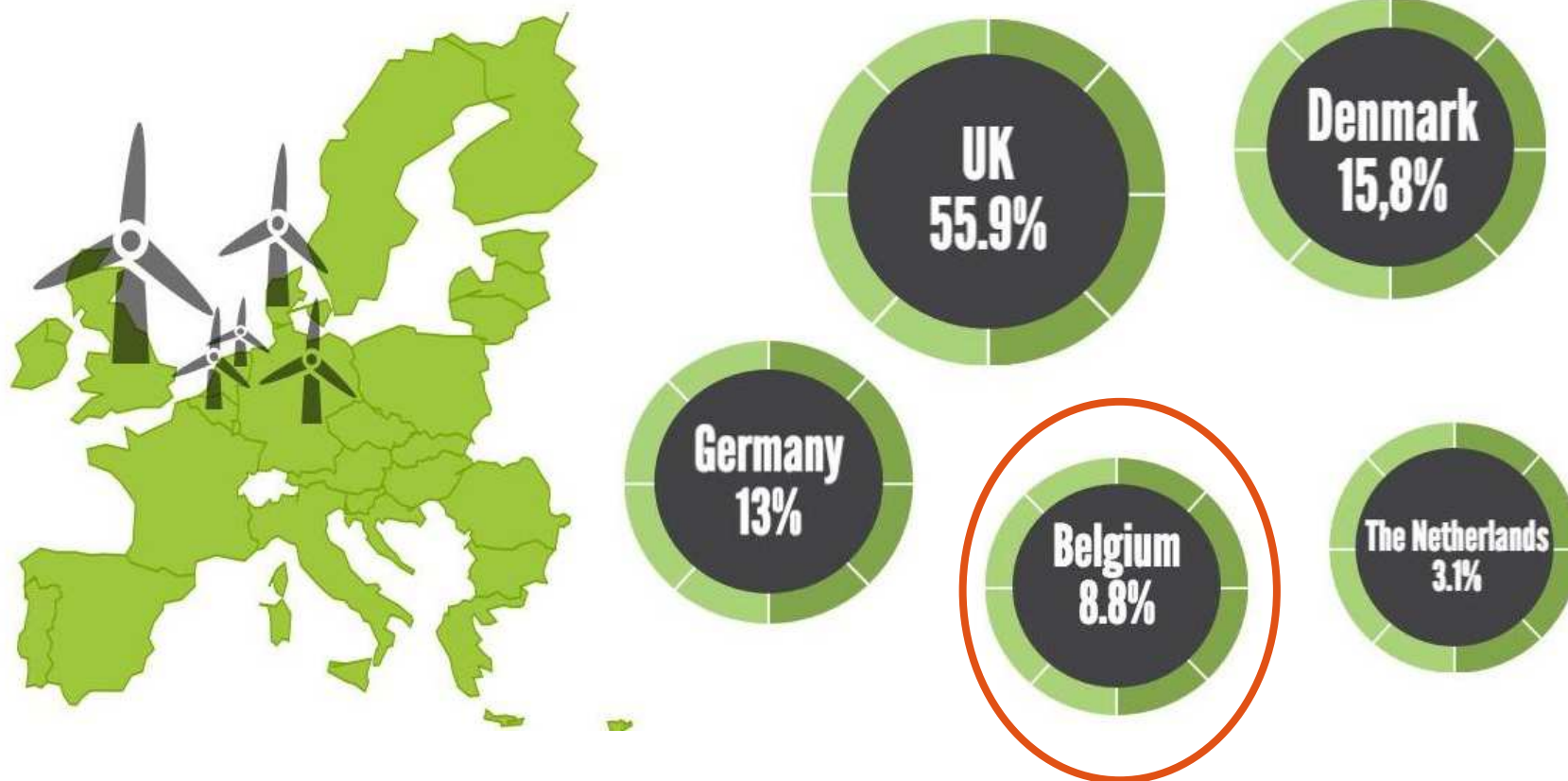
SUMMIT
2016
27-29 SEPTEMBER
HAMBURG


leanwind

Project supported within the
Ocean of Tomorrow call of the
EU 7th Framework Programme



Top 5 Offshore Wind Energy Countries in Europe 2015



1/3 of Belgium's installed wind power today (2.2 GW) is offshore

Belgian offshore wind (II)

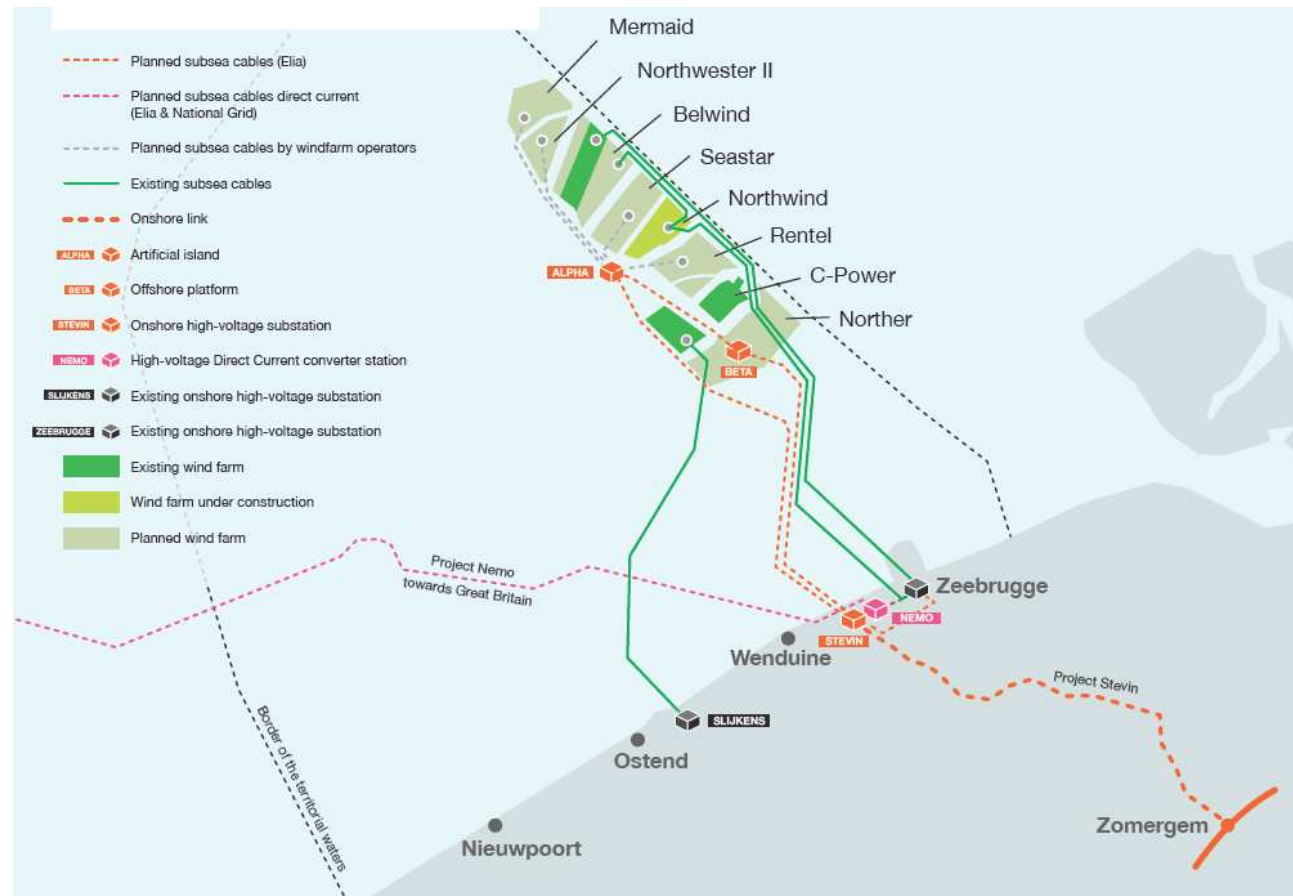
World's No. 5
- on 67 km coast

8 Concessions

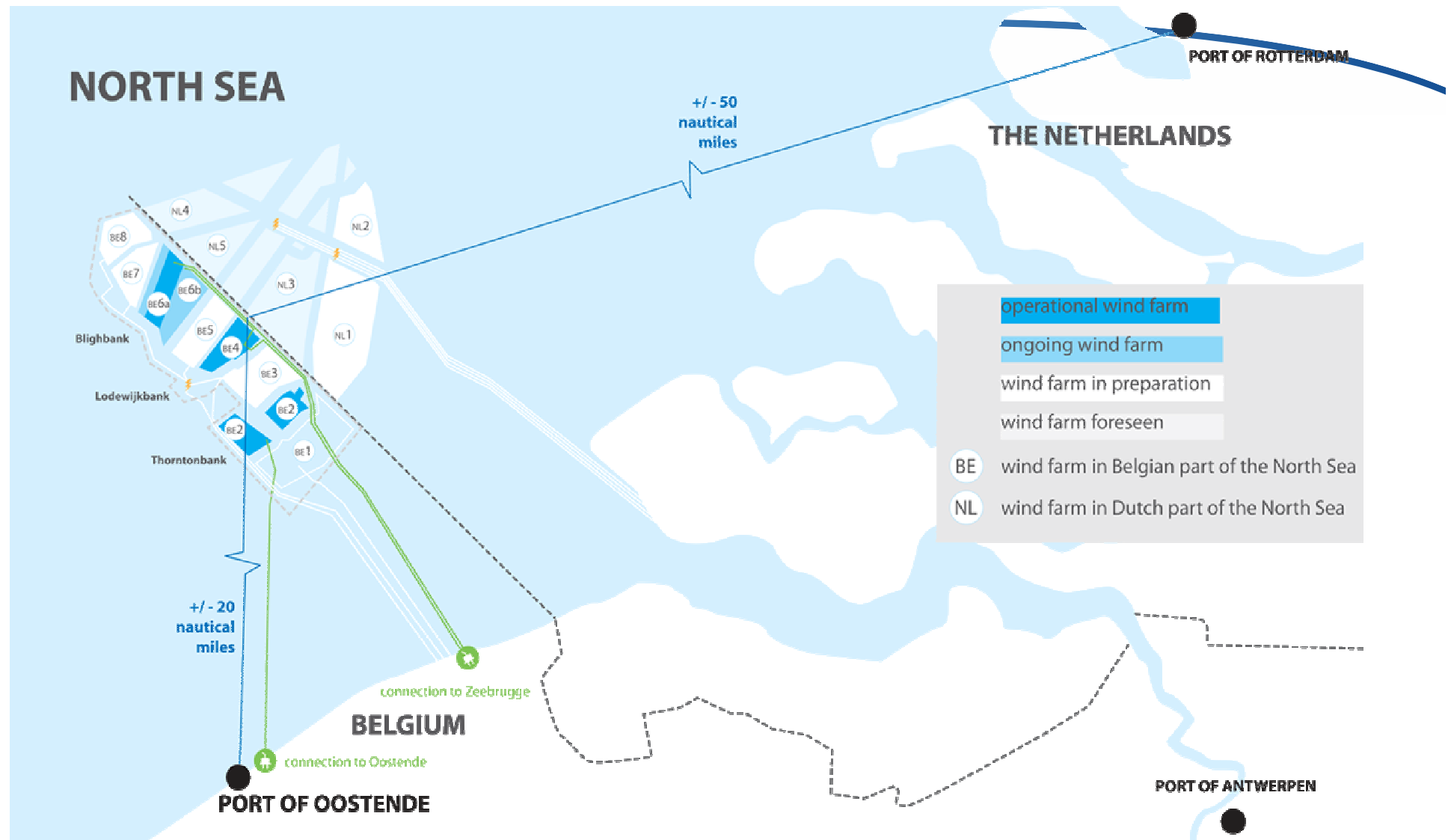
Wind parks:

- 3 operational
712 MW inst.

- 1 in construction
- 1 soon to be



Location, location, location...



Oostende port developing into a leading hub

Case study: focused on community impacts

How **Oostende** City & Port is affected by offshore wind

Securing impact

- socio-economic
- environmental
- societal

from the total set of decisions made (public & private)

Value chain central:
Lean supply chains

De Tijd 16.01.2016:
“Flemish sectors fight to spearhead clusters of the Blue Economy”

Vlaamse sectoren strijden om speerpuntclusters



Zeewierkweek is voor bedrijven als DEME, De Nul en Sloen een belangrijk toekomstproject. © AFP

De Vlaamse regering kroont eind dit jaar vijf economische sectoren tot 'speerpuntcluster'. Een reeks sectoren doet een gooi naar die erkenning en de bijbehorende budgetten.

LUKAS VANACKER

De spanning stijgt in de wereld van de Vlaamse sectorfederaties nu de Vlaamse regering haar beleid rond

DAAR IS DE BLAUWE ECONOMIE

De Vlaamse mariene en maritieme sector stelde gisteren in de haven van Oostende de 'Blue Growth Cluster' voor met als doel een erkenning als speerpuntcluster. De 'blauwe economie' omvat bedrijven en

hebber. Voor de sector agro en voeding staat Flanders' Food, een initiatief van de voedingsfederatie Fevia, klaar.

De vier genoemde sectoren bevestigen op vraag van De Tijd dat ze bezig zijn met hun clusterdossier. Voor de vijfde en (wellicht) laatste erkenning ligt de strijd volledig open. De cleantechsector (schone technologie, zoals wind-energie) maakt een kans, al is die

Case study: Methodology

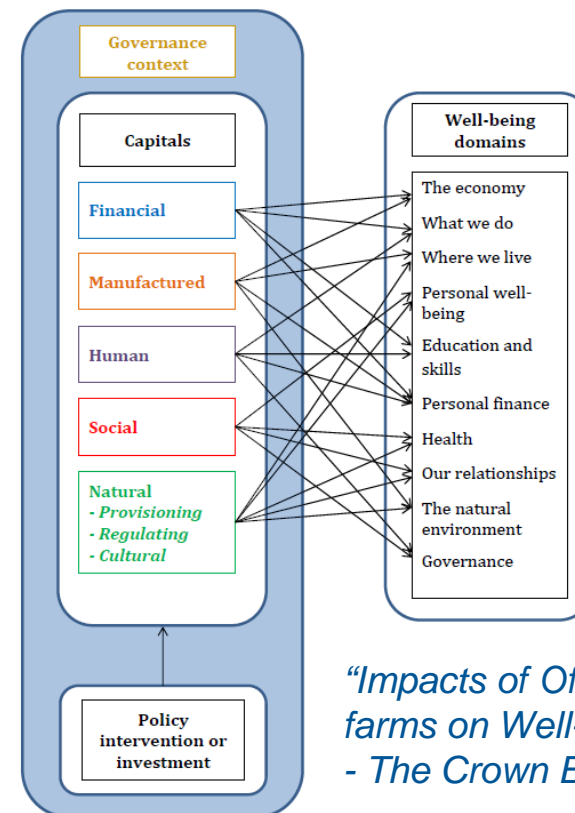
Information seeking

- Desk study
- Pro-active extraction of analysable information
- Direct engagement with stakeholders
- Interviews with industry & society decision makers
- Feedback Groups

...methodologies, esp. for analysis, need a lot of refinement...

Information processing

- Value chain analysis (3 German models)
- “5 capitals” model:



*“Impacts of Offshore wind farms on Well-being”
- The Crown Estate 2015*

Some recent events hosted by Port of Oostende:

Case study relevance

- Belgian Offshore Days
 - 20 & 21 April 2016
 - 250 industry professionals
- “O&M One-Stop Shop”
 - Launch 30 June 2016
- Coordinated events
7 & 8 Sept. 2016
 - Launch of Wind Europe
Offshore Wind Ports platform:
5 ports, 90 industry participants
 - Stakeholder Showcase on cost-
efficient offshore wind logistics

Ostend gets O&M One-Stop-Shop



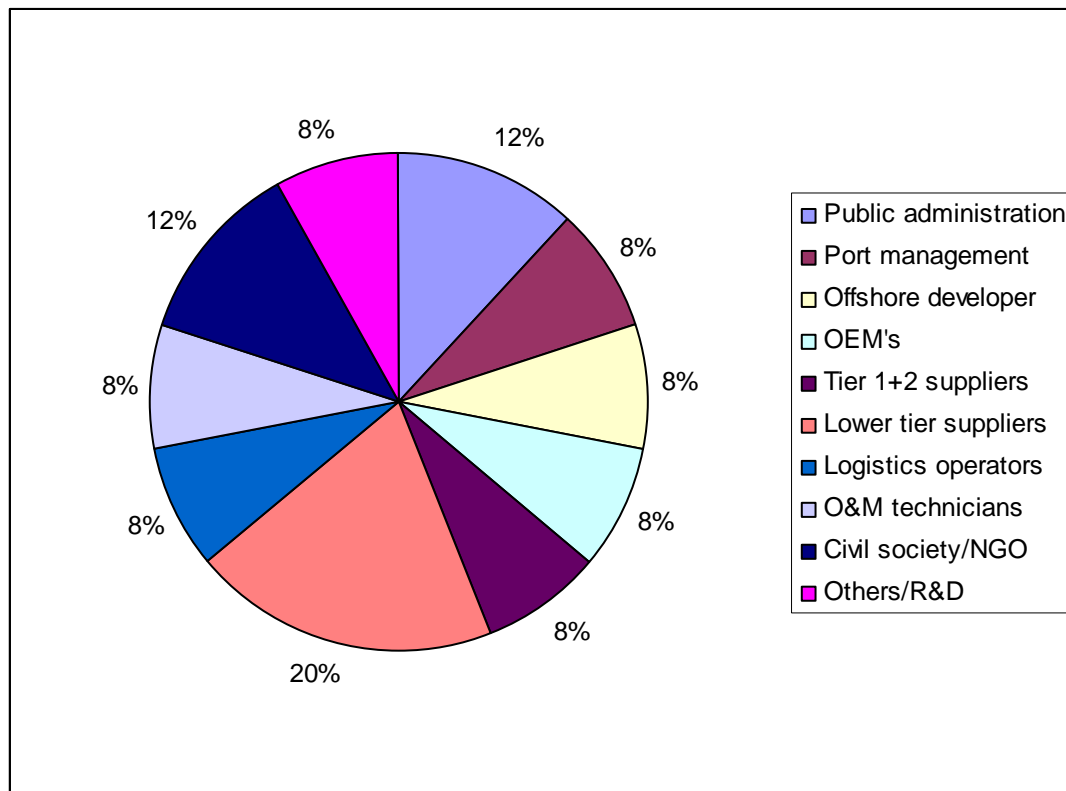
Innovative services for the offshore wind industry proposed at the Energy Port Ostend On the 30th of June in Ostend, the Belgian Offshore Cluster (BOC), the association of suppliers to the offshore wind industry,



More on: www.reboostende.be

Case study: Results so far (I)

Distribution of interviewees



First 25 interviews, temporary categorisation

Messages emerging

- Decisions made can have very long (>5 yr) lead time
- Cluster effects are real for both construction and O&M
- Consistent and sustained approach is essential to win a successful, lasting impact
- EPCI ontracting models allow consistency of approach, but sensitive to lead contractor
- Experience transfer between (non-competing) ports useful
- Energy industry track record not necessarily positive (cost)

Case study: Results (II.) Impact growing

- September 2016
 - 350 permanent jobs
 - Plus construction jobs
 - 45 companies present
 - Most but not all localised in port cluster
- Business cluster
 - 30 international businesses present
 - 15 “local” companies
 - Continuing growth: More in the “local” establishments
 - Supply chain well represented, R&D presence growing
 - Cluster effects are noticeable but still need strengthening



Photo and numbers by courtesy of W. Stubbe, Port of Oostende

Case study: Results (III). Some quotes

“Diversification of skill sets available is key to long term business”

- O&M service provider

“Efficiency of port operations is the paramount issue”

- Vessel operator

“Assembly operations need more than space, local logistics providers a big advantage”

- 2nd tier supplier

“Seemingly illogical decisions are a response to misplaced local-content rules”

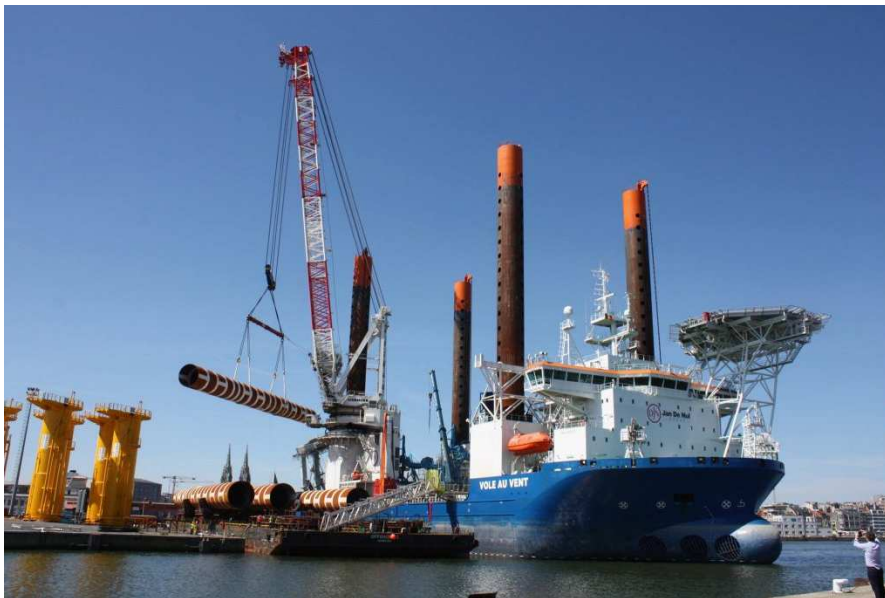
- OEM executive

“With big non-recourse project finance, you need to be secure against repeating mistakes” – Project developer

Comparing two on-going field developments: Different local impact?

Bligh Bank 2 (“Nobelwind”)

- 50 x 3.3 MW
- € 655m project
- last monopile installed 22.09.



*First monopiles, TP's load-out 11.05.2016
on Vole au Vent, christened in Port 28.04.*

Rentel

- 42 x 7.0 MW
- est. €1250m, first with EFSI (Juncker fund) support
- Approaching FID... start “immediately”



*Signed deal for WT's & 17-year SMA
at Belgian Offshore Days 21.04.2016*

***Effects of “Latest Tech”
vs. “Leaner supply chain”***

Case study: Further on-going work

- Socio-economic
 - Effect on employment and local new business volume
 - Will permanent jobs in O&M continue to add *more* value vs. construction?
 - Quantification challenges:
 - Other studies show wide range from 0.2 to >1.2 jobs/MW
 - Numbers/Indicators for “lean-ness” of supply chain not well established
 - Quality of jobs
 - Skill sets & Diversification
 - Include taxation effects
- Environmental
 - Waste management
 - Sea traffic
 - Land traffic
 - Local noise
 - Housing market and vs. tourism

Expect study to provide real-world test of some modelling approaches.

Concluding remarks

The case of Oostende and its port

- Smaller ports can win new business by being a dedicated and trusted partner for the industry
- Lead times from decision to effect can be long: consistency of effort and persistence is needed
- Diversification of skills needs a constant awareness by service providers, education & public authorities
- Cluster effects growing but time needed for impact
- Environmental issues so far are manageable and mostly local to the port area

Bligh Bank 2: Last of 55 monopiles installed 22.09.2016 - Photo courtesy Jan de Nul

Case study is on-going... Your Input & Feedback wanted!