

# The state of the offshore wind industry

## Lessons Learnt in the First Decade

Frank Wiersma, Anthony Crockford, Jean Grassin, Anna Ritzen, Thomas Winkel

Powercluster Conference, Bremerhaven, 1 June 2011



# Outline

## The state of offshore wind industry

### Situation

- Lessons learnt offshore wind projects
- Growing supply chain



### Opportunities

- Economic value added
- Employment effects



### Enablers

- Effective stakeholder engagement
- Stable drivers



## Situation

- Lessons learnt
- Supply chain

## Opportunities

- Value added
- Employment

## Enablers

- Stakeholders
- Drivers



# Lessons learnt offshore wind projects

## Situation

### Lessons learnt

- Supply chain

## Opportunities

- Value added
- Employment

## Enablers

- Stakeholders
- Drivers

- 12 Case studies, pointing to:
- Relevance pro-active approach Governments
- Key role experience and technology risks



# Growing supply chain

## Situation

- Lessons learnt
- Supply chain

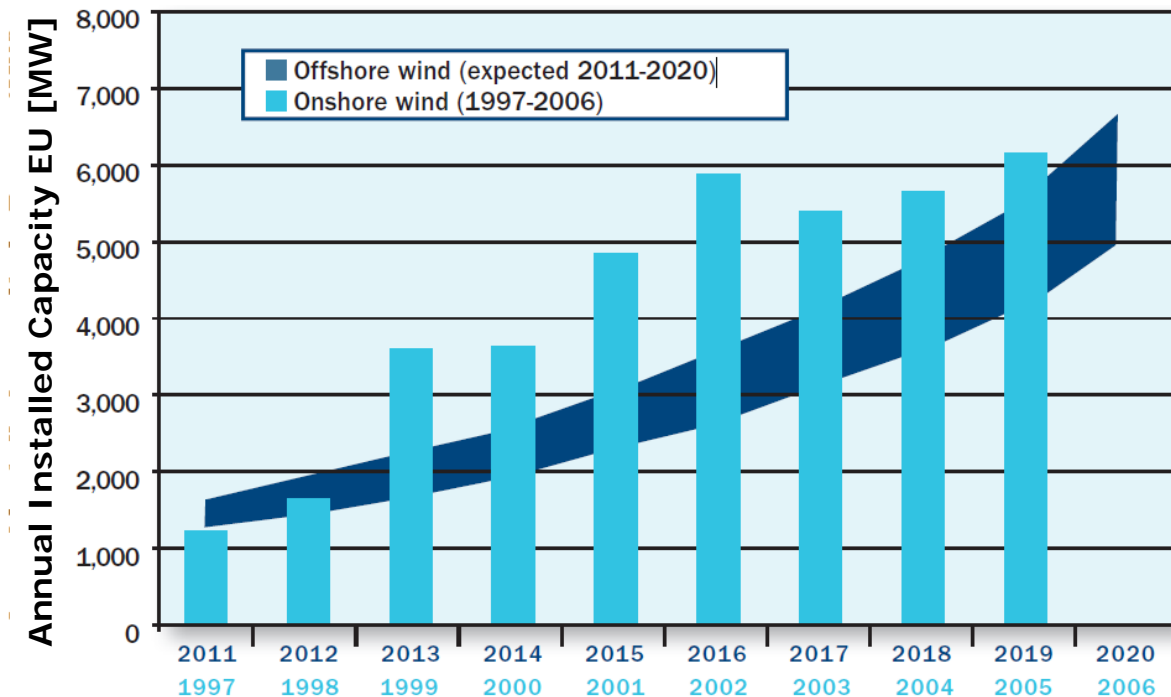
## Opportunities

- Value added
- Employment

## Enablers

- Stakeholders
- Drivers

- Rapid growth, large investments
- Incumbents and new entrants
- Reliability essential for feasibility and financing



source: EWEA, Ecofys

## Situation

- Lessons learnt
- Supply chain

## Opportunities

- Value added
- Employment

## Enablers

- Stakeholders
- Drivers



# Economic opportunities

## Situation

- Lessons learnt
- Supply chain

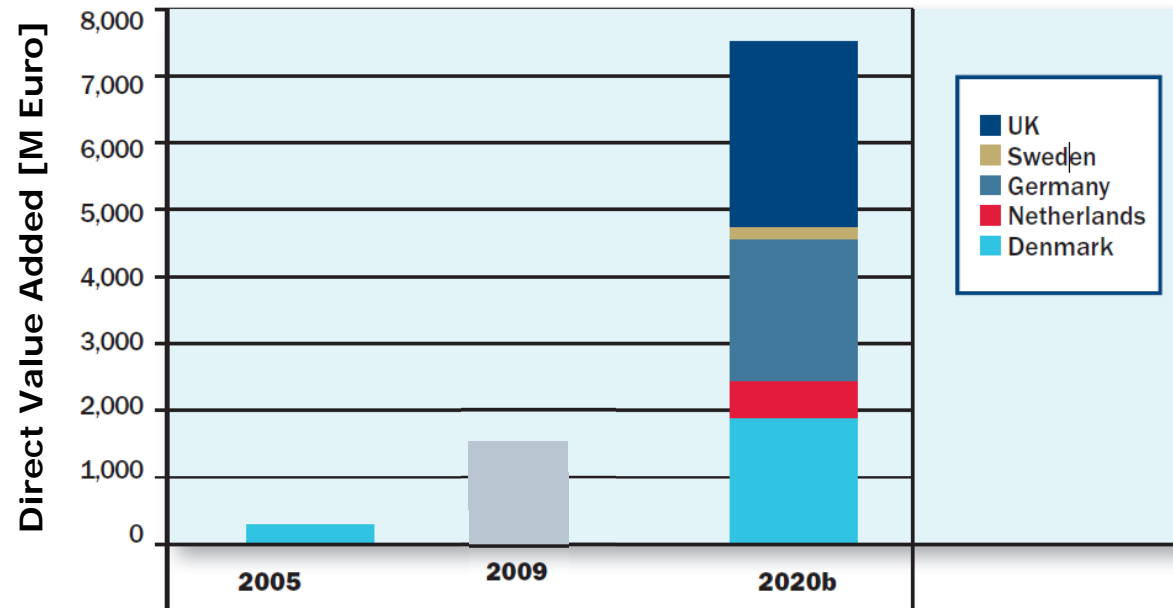
## Opportunities

- Value added
- Employment

## Enablers

- Stakeholders
- Drivers

- Opportunities increasingly acknowledged
- Examples successful investments both private and public
- Early mover advantage



source: Employ-RES

# Employment effects

## Situation

- Lessons learnt
- Supply chain

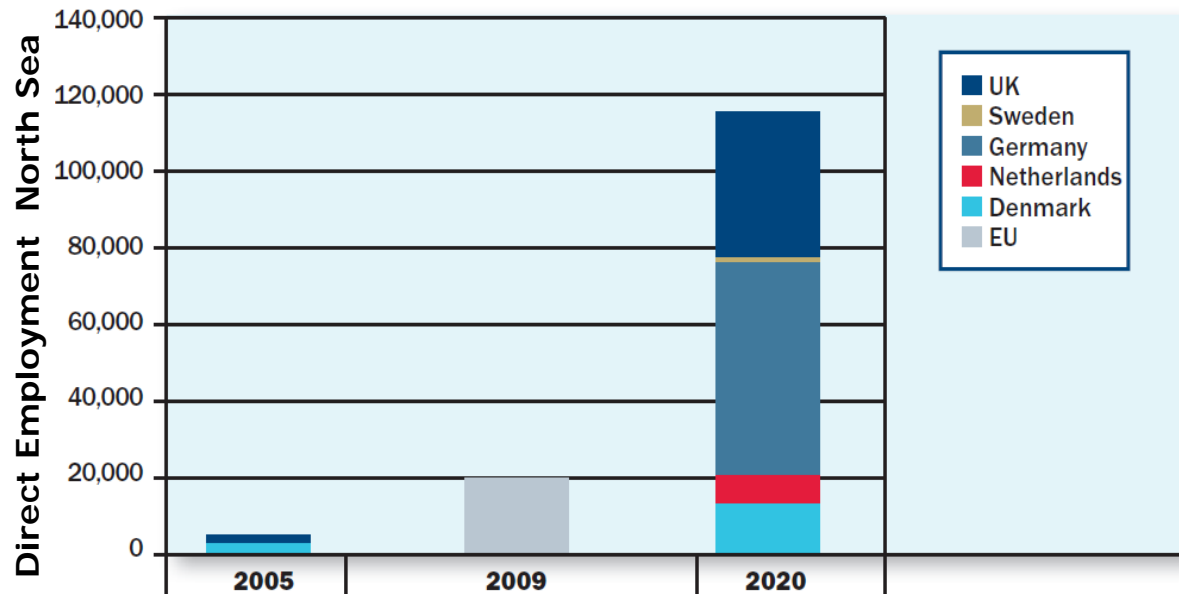
## Opportunities

- Value added
- Employment

## Enablers

- Stakeholders
- Drivers

- Scarcity qualified and experienced staff
- Focus on education and training
- International business and competing regions



source: Employ-RES



## Situation

- Lessons learnt
- Supply chain

## Opportunities

- Value added
- Employment

## Enablers

- Stakeholders
- Drivers



# Effective stakeholder engagement

## Situation

- Lessons learnt
- Supply chain

## Opportunities




- Value added
- Employment

## Enablers

- Stakeholders
- Drivers

- Clear permitting process essential
- Scope for optimisation
  - Aligning
  - Streamlining

	UK	DK	NL	BE	DE	NO	SE
Site selection	Developer	Developer	Developer	Developer	Developer	Developer	Developer
Environmental Impact Assessment	Developer	National authority	Developer	Developer	Developer	Developer	Developer
Stakeholder consultation	Developer	National authority	National authority	National authority	Developer	National authority	Developer
Permits offshore	National authority	National authority	National authority	National authority	National authority	National authority	National authority
Permits onshore	National authority	National authority	National authority	National authority	Local authority	National authority	Local authority

	<b>Developer</b>
	<b>National authority</b>
	<b>Local authority</b>



# Stable drivers

## Situation

- Lessons learnt
- Supply chain

## Opportunities

- Value added
- Employment

## Enablers

- Stakeholders
- Drivers

- Governments
  - EU 2020 target
  - National policies and support schemes
- Financing
  - Access to funds
  - Mature risk - return profile key
- Challenges sector
  - Efficient project delivery
  - Proven track record incl. new technologies



# Conclusions

## The state of the offshore wind industry

### Situation

- Lessons learnt
- Supply chain

### Opportunities

- Value added
- Employment

### Enablers

- Stakeholders
- Drivers

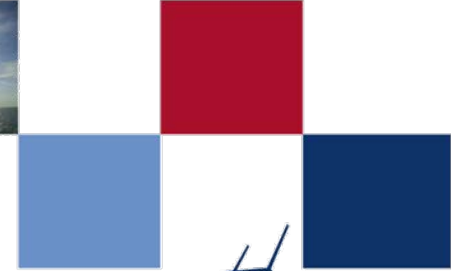
### Essential ingredients for future:

- Confidence policy outlook
- Reliable technologies and track record
- Experience and lessons learnt



# Get your copy!

The state of the offshore wind industry



or Download from

[www.ecofys.com/com/publications/offshorewindreport.htm](http://www.ecofys.com/com/publications/offshorewindreport.htm)



for more information

W: [www.ecofys.com](http://www.ecofys.com)

contact Frank Wiersma

E: [f.wiersma@ecofys.com](mailto:f.wiersma@ecofys.com)

