



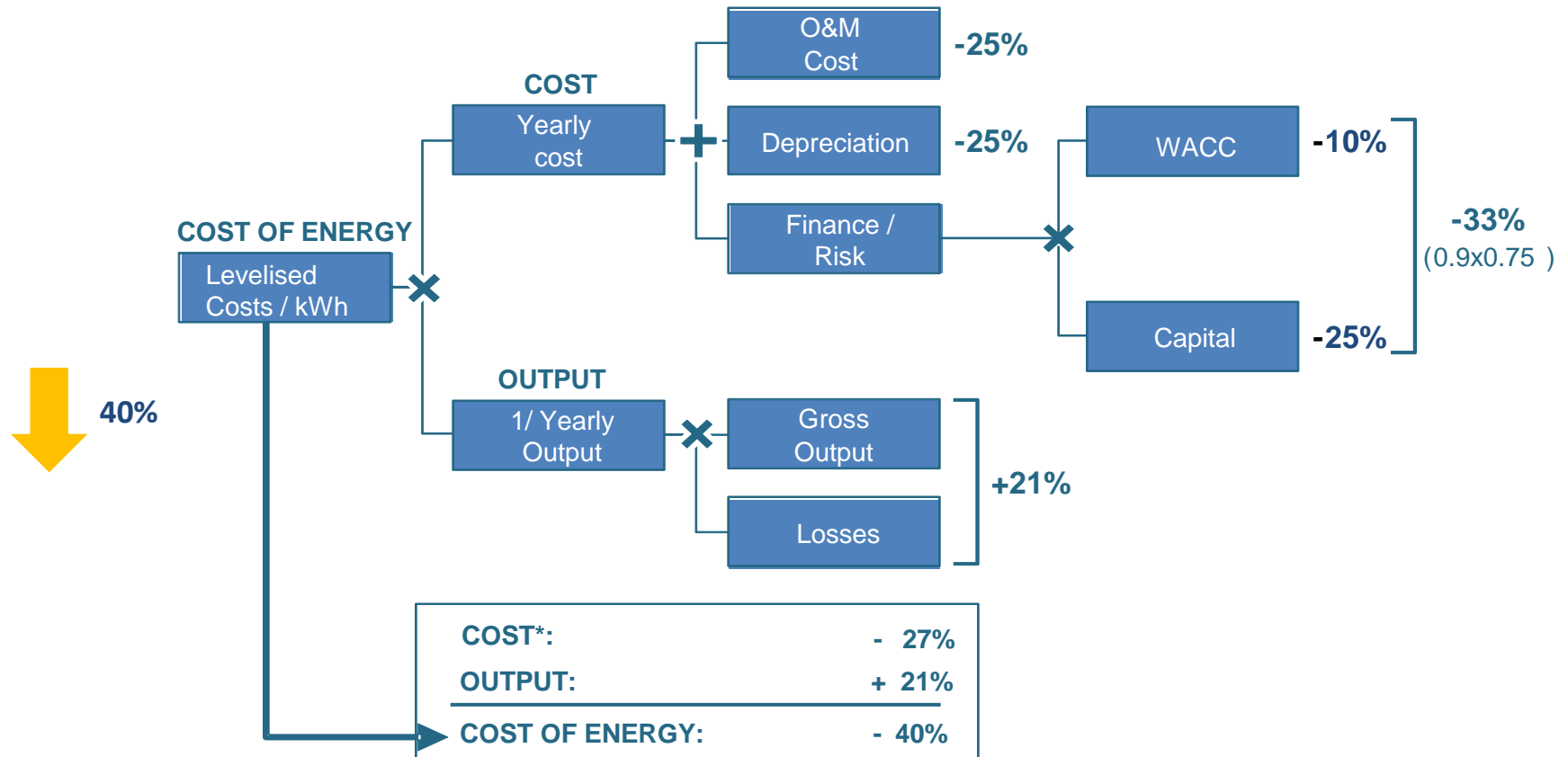
Ernst van Zijlen

20 augustus 2014

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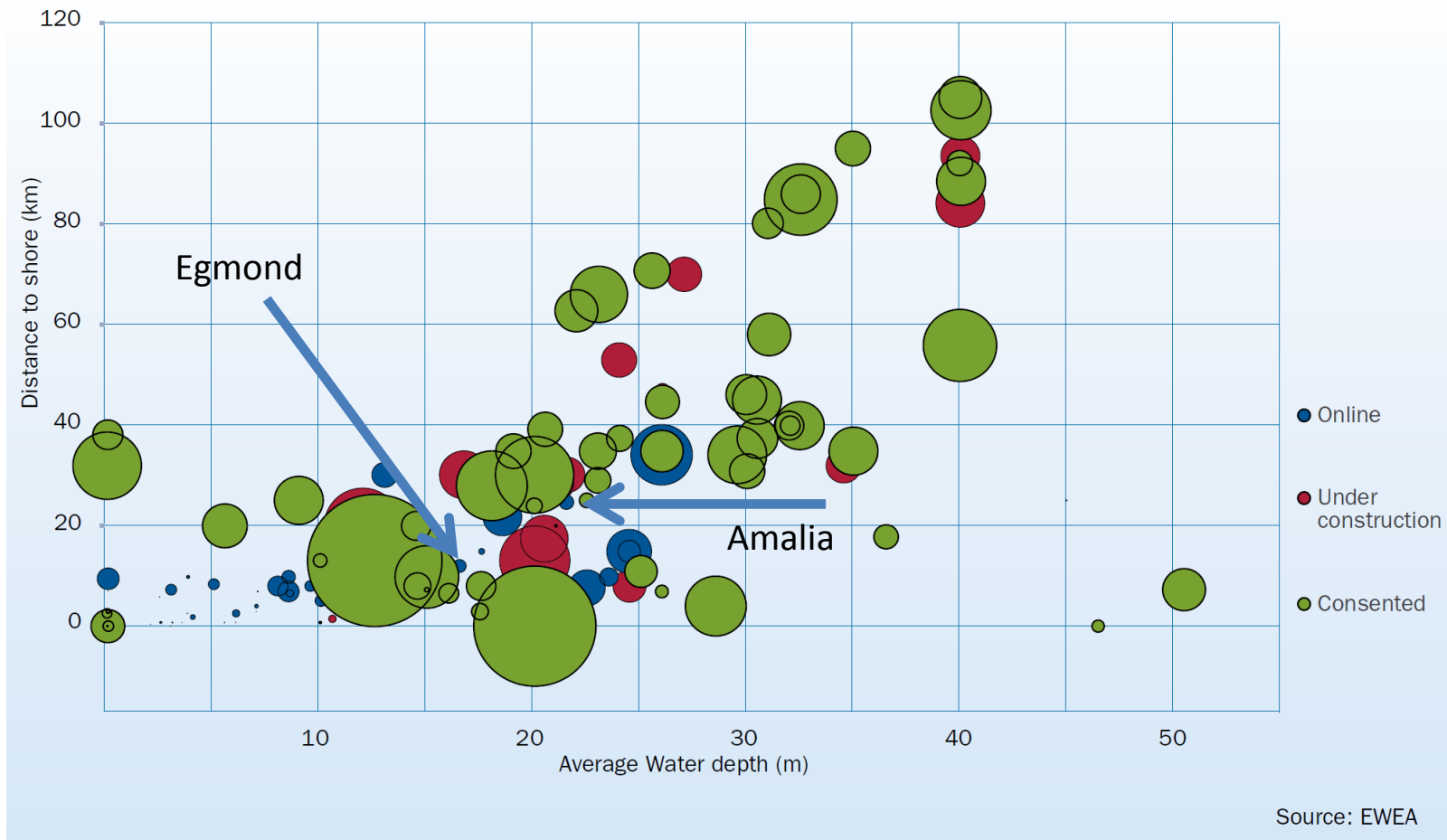
# Targets (KPI1)

## LCoE reduction target of 40% by 2020



\* Based on the following allocation of cost: 25 - 35% O&M, 40 - 50% CAPEX, 20 - 30% financing

# Bigger, deeper, further





## Overview cost reduction

### Component

- R&D / technical development from TR1 to TRL 7
- 5 theme's

### Wind farm

- Value engineering
- Learning by doing
- Economy of scale

### Sector

- Chain integration (vertical cooperation)
- Competition

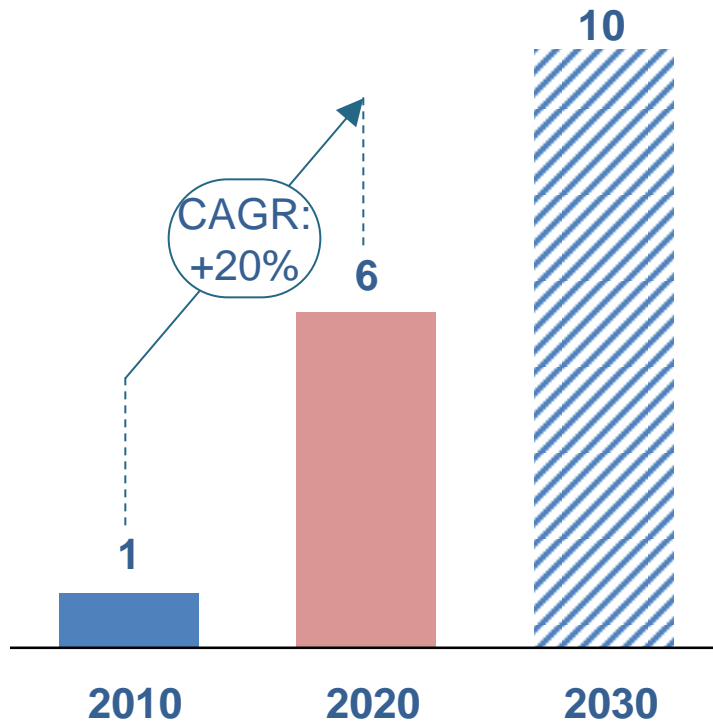
### System

- Policy (support, permits, space, R&D)
- Industry politics
- Energy system (incl. grid), transition

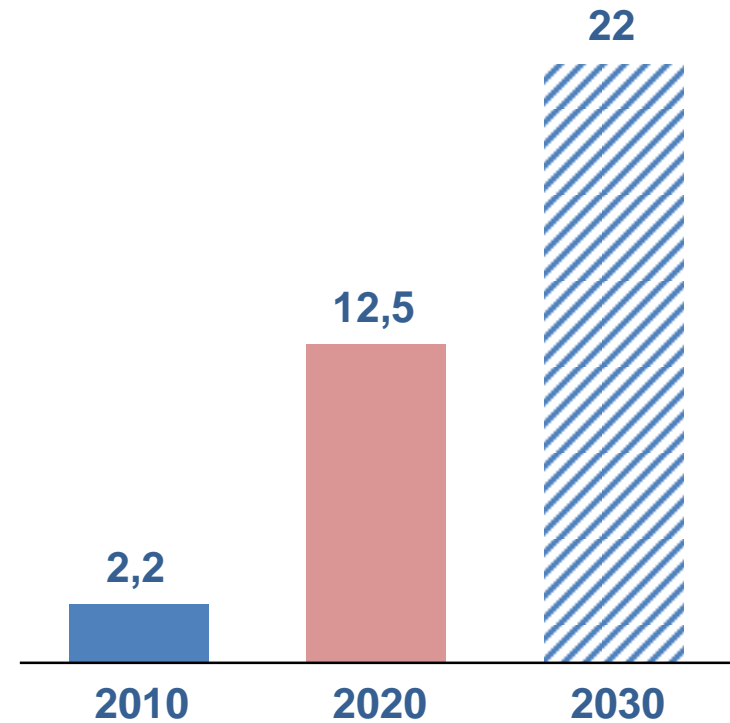
Demonstratie

# Targets (KPI 2)

## Turnover [€ biljon]

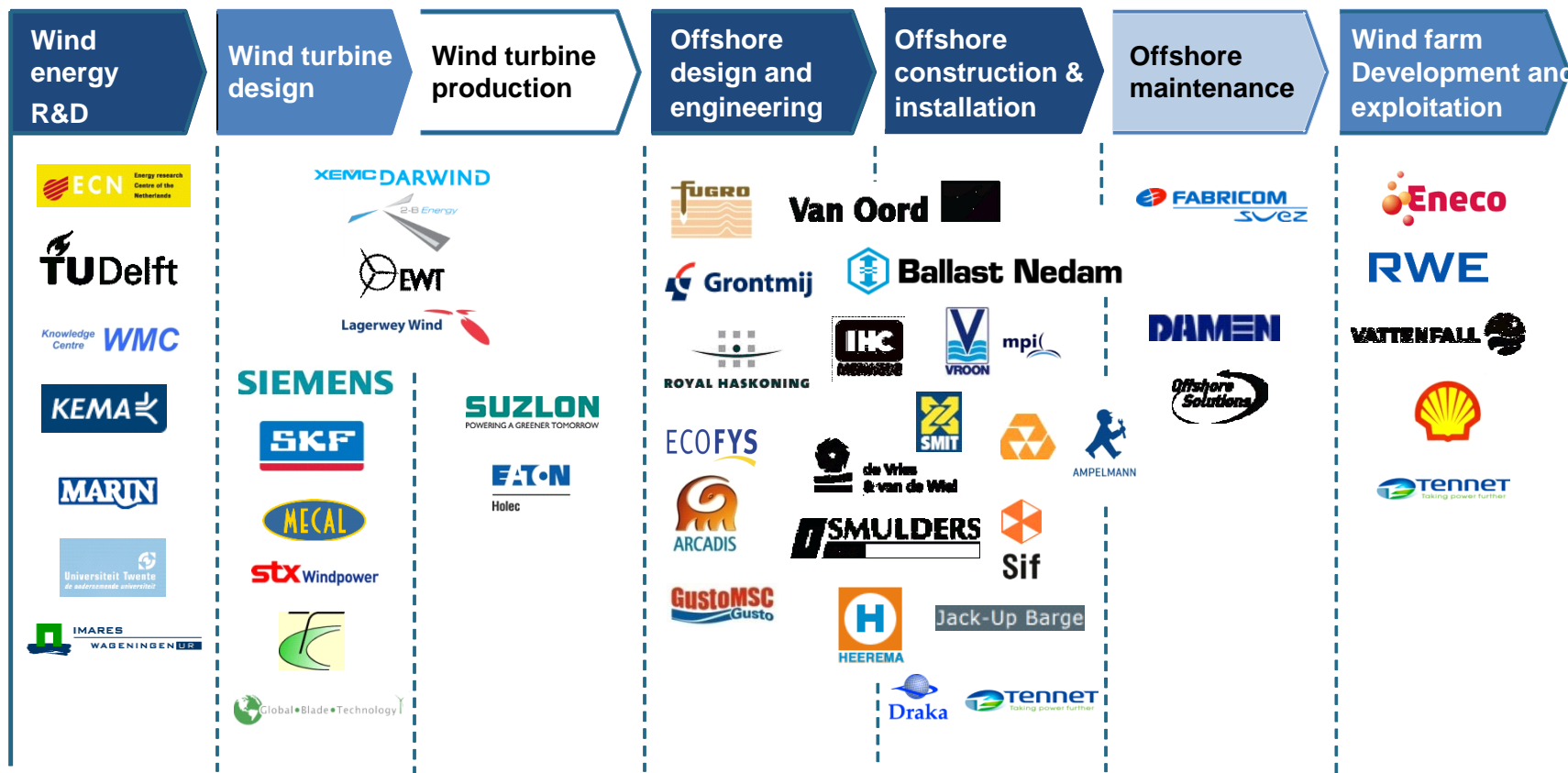


## Employment [FTE k]



# Dutch Offshore Wind

## A strong sector with high potential



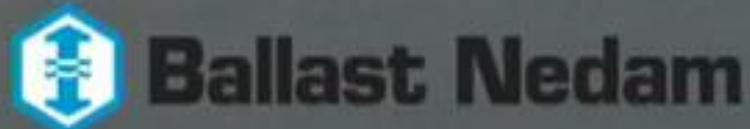
### Competitiveness

Source: FLOW

20 August 2014



And many more



Walney 2  
Offshore  
Windfarm

Irish Sea  
near  
Barrow in Furness







# R&D and demonstration

## R&D Themes

1. Support Structures

2. Optimization of the wind power plant

3. Internal electrical network and grid connection

4. Transportation, installation and logistics

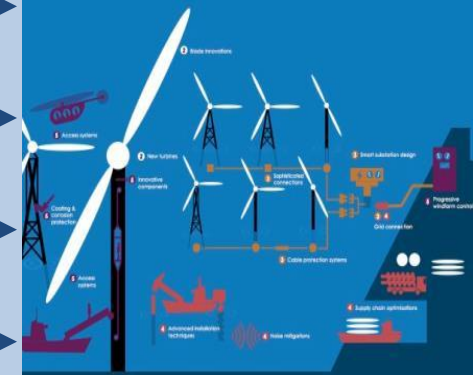
5. Operations and maintenance

## DEMONSTRATION FARM

**Leegwater**

Test- and demonstration site  
for next-generation  
offshore wind technology

The ultimate opportunity to demonstrate  
innovations in a realistic environment



## Gains insight in the effect of extreme waves on offshore wind turbines



GL Renewables Certification



# Blue Piling Technology

## Revolution in offshore pile driving

**BLUE**  
PILING TECHNOLOGY



**TNO** innovation  
for life

**Van Oord**   
Marine ingenuity

# What is in it for you?

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- Find support for your R&D challenges
- Demonstration
- Find your career in a growth market
- Make your innovation available to the market
  - The “innovationbroker”
  - [innovatiemakelaar@tki-windopzee.nl](mailto:innovatiemakelaar@tki-windopzee.nl)