

Offshore wind: Netherlands approach

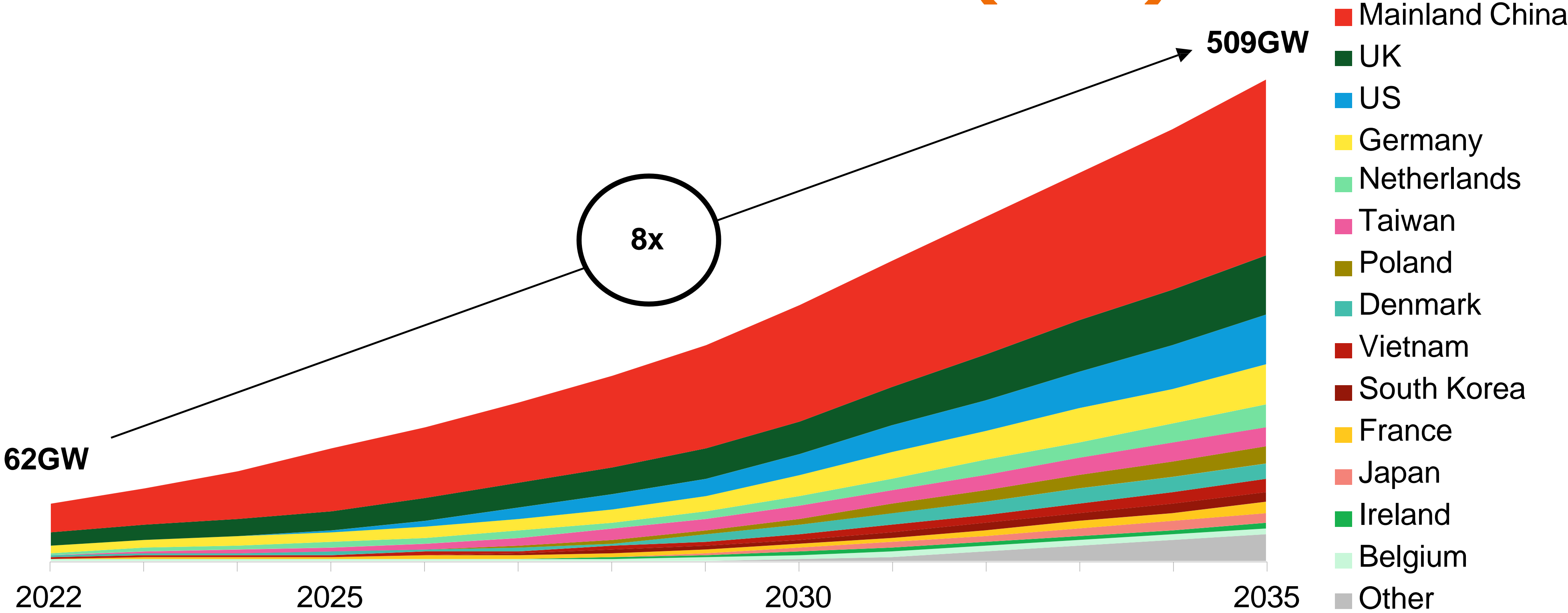
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Consigliere Affari Economici

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Cumulative installations (GW)



Source: BloombergNEF. Note: Other = India, Norway, Brazil, Sweden, Spain, Italy, Australia, Greece, Lithuania, Finland, Estonia, Latvia, Portugal, Colombia. Cumulative 2030 build is 271GW.



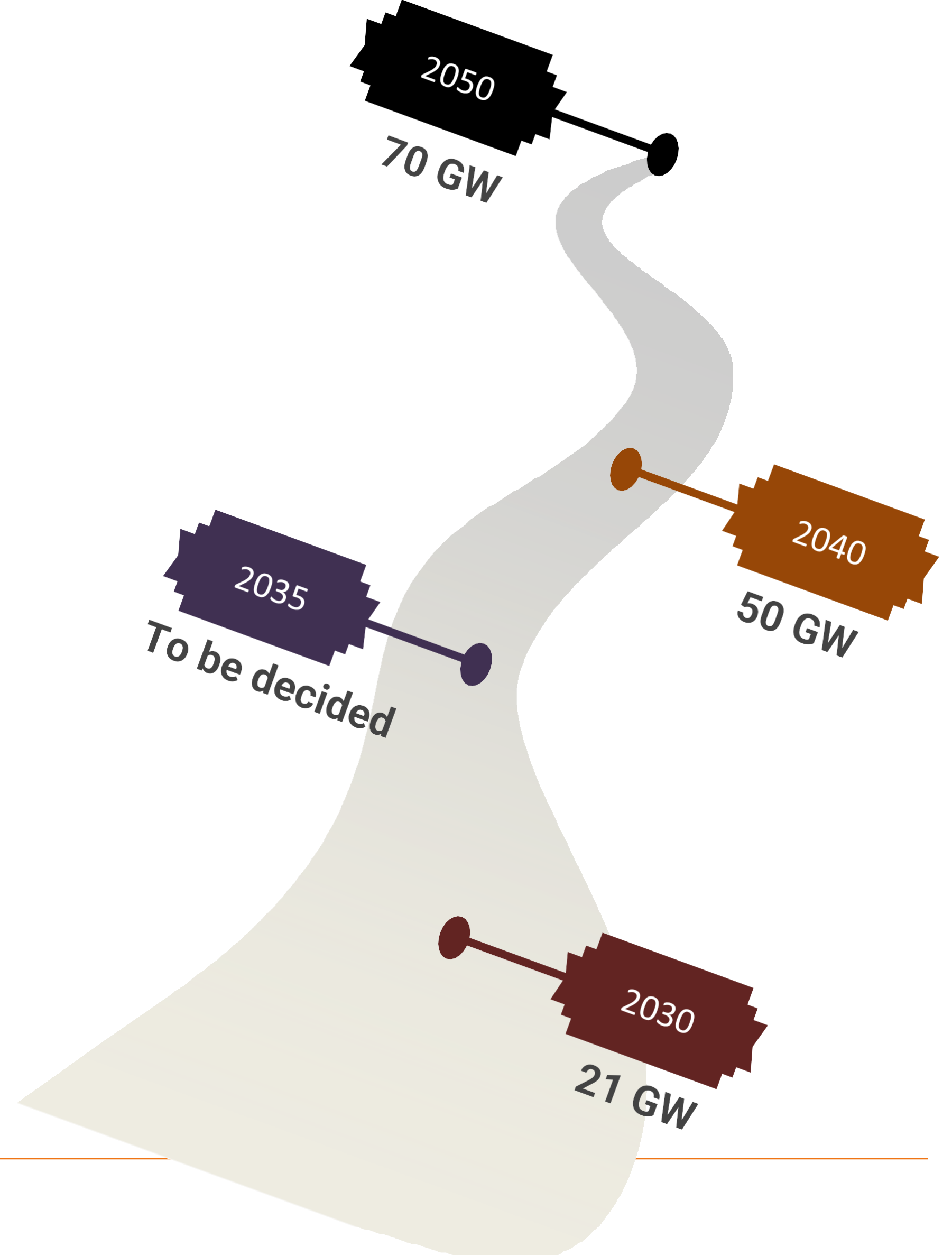
Dutch offshore wind Roadmap

Outline of policy started in 2014

- Target: 4.5 GW in 2023
- 40% cost reduction

Proactive government

- Derisking



Roadmaps 2023, 2030, 2030+

2016 - 2024	GW	Tender(s)	(Expected) commissioning
Borssele I + II	0.75	2016	2020
Borssele III + IV	0.75	2016	2020
Hollandse Kust (zuid) I + II	0.76	2018	2022
Hollandse Kust (zuid) III + IV	0.76	2019	2023
Hollandse Kust (noord) V	0.76	2020	2024
2024 - 2029	GW	Tender	(Expected) commissioning
Hollandse Kust (west) VI + VII	1.5	2022	2026
IJmuiden Ver I + II (80+ km)	2.0	2023	2029
IJmuiden Ver III + IV (80+ km)	2.0	2023	2028
IJmuiden Ver (noord) V + VI	2.0	2025	2029

2030+	GW	Tender	(Expected) commissioning
Hollandse Kust (west) VIII	0,7	2026/2027*	tbd
Ten noorden vd Waddeneilanden I	0.7	2026/2027*	(2031)*
Nederwiek (zuid) I	2.0	2025	2030
Nederwiek (noord) III + IV	4.0	2026*	2030/2031
Doordewind I + II	4.0	2027*	2031
Target: ~ 21 GW around 2030		*TBD	*TBD

Additional Roadmap Offshore Wind Energy


to achieve about 21 GW around 2030



Offshore Wind Programme

Policy & regulations


North Sea Programme
Designation
Wind Farm Zones



Roadmap
Planning




Development scheme
Offshore Grid



Implementation & roll-out offshore wind programme

Wind Farm Site decision
Site boundaries
Permit conditions




Site characterization



Tender



Offshore grid development



Enforcement

Inspection and enforcement



The party that can best manage the risk must bear it

In the Netherlands:

Government & TSO

- Consenting
- Site characterization
- Offshore grid

Developer

- Wind farm design, construction, O&M, decommissioning
- Procurement & contracting strategy
- Offtake



Why level playing field tender system NL

To promote price competition

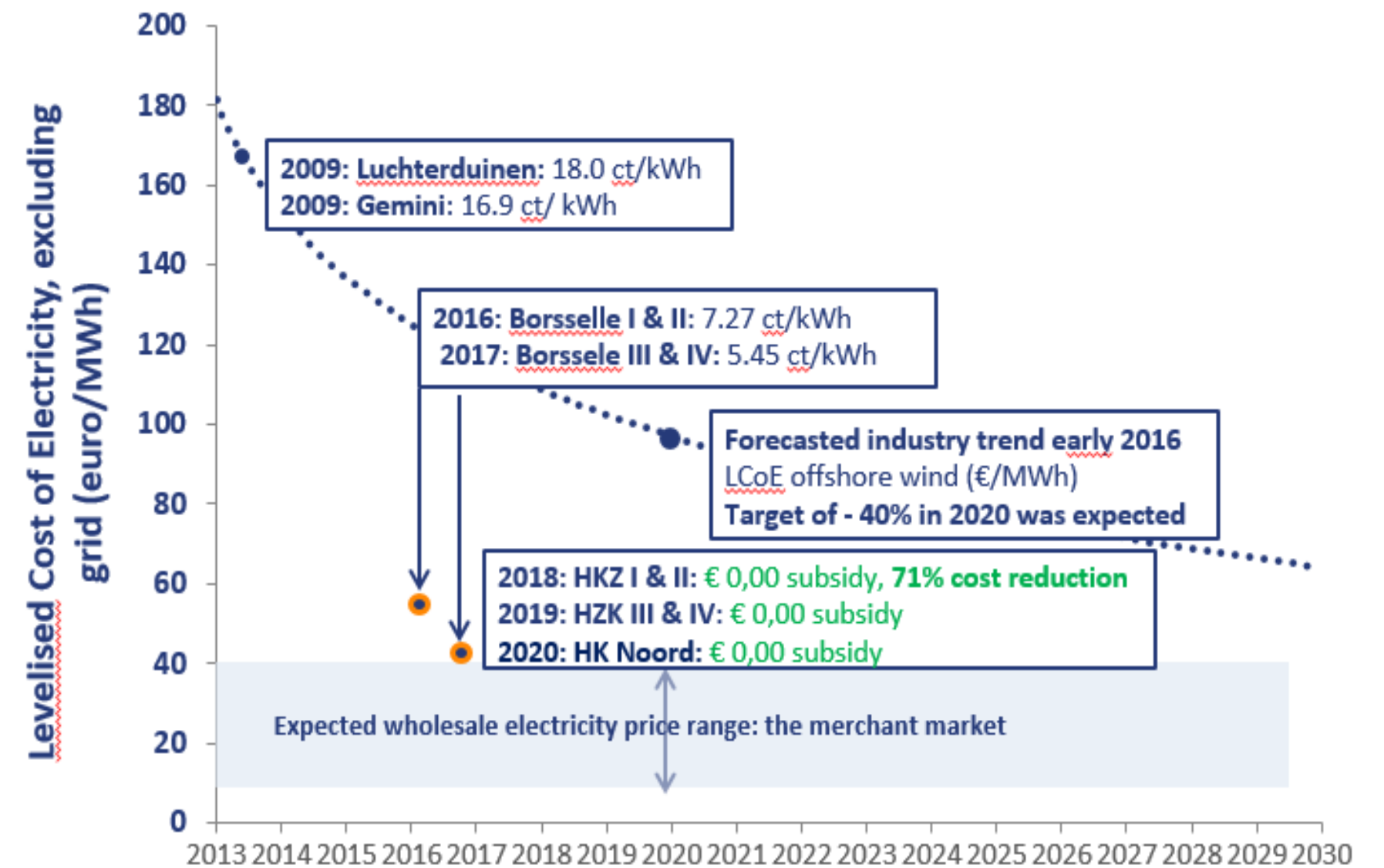
- Minimum tax payer money

To support robust sector growth

- No local content requirements
- Maximum focus on technology innovation
 - Also ecology protection, system integration

Results 1st Roadmap (2016 – 2023)

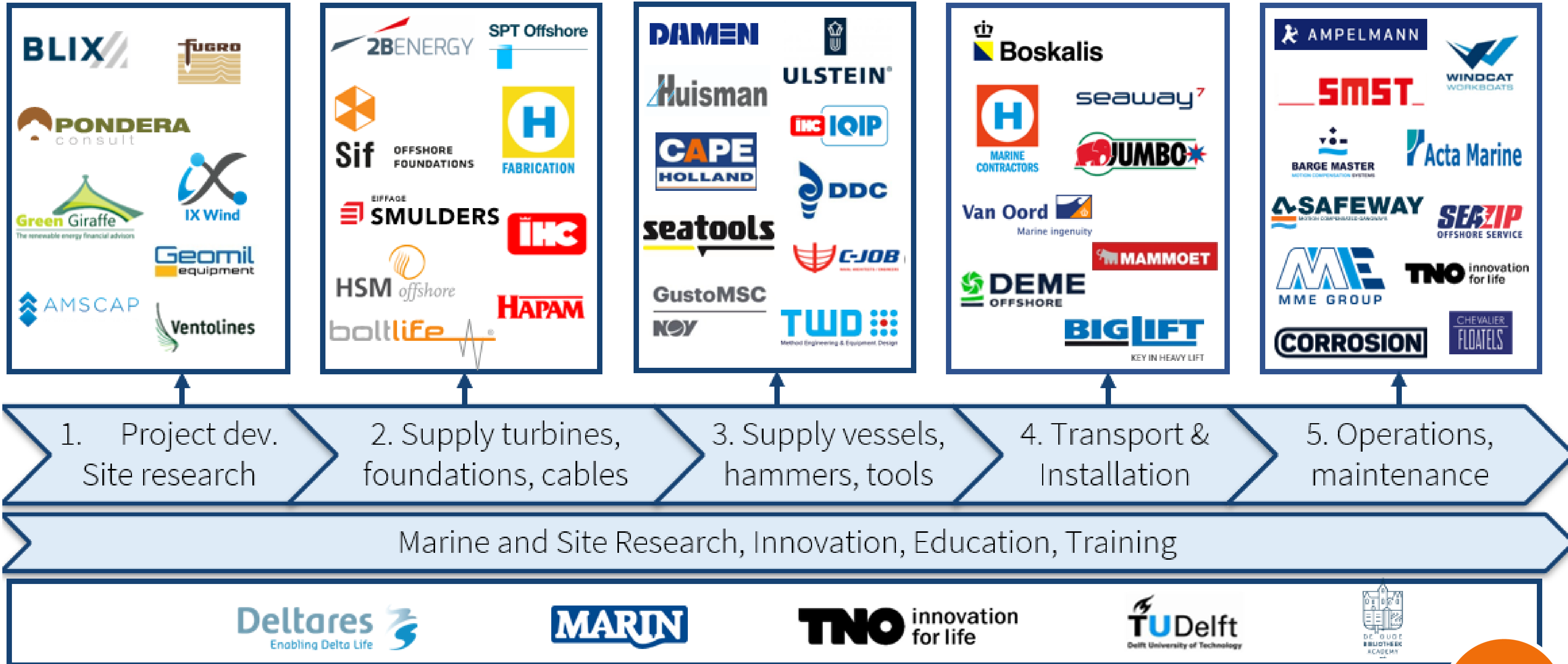
- Successfully completed:
 - 3.5 GW tendered in 5 years
- Netherlands Court of Audit:
 - within budget, 80% LCoE reduction



Inaugurazione Hollandse Kust Zuid: raggiunto traguardo 4,5 GW nel 2023



NL supply chain competences



More info:

**Dutch Offshore Wind
Guide:
windandwaterworks.nl**

Dutch Offshore Wind Innovation Guide

Your guide to Dutch offshore wind policy,
technologies and innovations
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