

HEREMA

HELLENIC HYDROCARBONS
AND ENERGY RESOURCES
MANAGEMENT COMPANY



Building a BRIDGE to a Carbon Free Future

Offshore Wind Farms
Towards a national plan

3 Strategic Pillars

“HEREMA’s STRATEGY”

**Accelerating
the
development
of Greece’s
upstream
sector**

**Expanding
HHRM’s
scope to
new energy
technologies
CCS
&
Offshore
Wind Farms**

**Strengthening
governance &
ensuring
HHRM has the
necessary
resources to
deliver its goals**

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AND ENERGY RESOURCES
MANAGEMENT COMPANY



HHRM

HELLENIC HYDROCARBON
RESOURCES MANAGEMENT

CCS



2015-2022

Hydrocarbons **exploration and production** rights management & offshore safety authority



+



2017

April 2022

Competent national authority for the licensing and monitoring of **CCS** & **UGS**

+CCS

July 2022

Competent national authority for the research & selection of areas for **Offshore Wind Farms** & management exploration rights



Expanding
HHRM's
scope to new
energy
technologies

Offshore Wind Farms

Actions taken by HEREMA since September 2022

1. **Strengthening the HEREMA team**
2. **Schedule and road map – towards a national plan**
3. **Transfer of knowledge (from the Ministry of Environment & Energy and its advisors)**
4. **Collection of previous work & expert opinion and knowledge**
5. **Formation of an external & independent Advisory Committee**
6. **Understanding the decisions and the uncertainties involved**
7. **Critical design parameters**
8. **Sensitivity testing**
9. **Philosophy of planning**
10. **Communicating publicly**



2. Road map towards a national plan

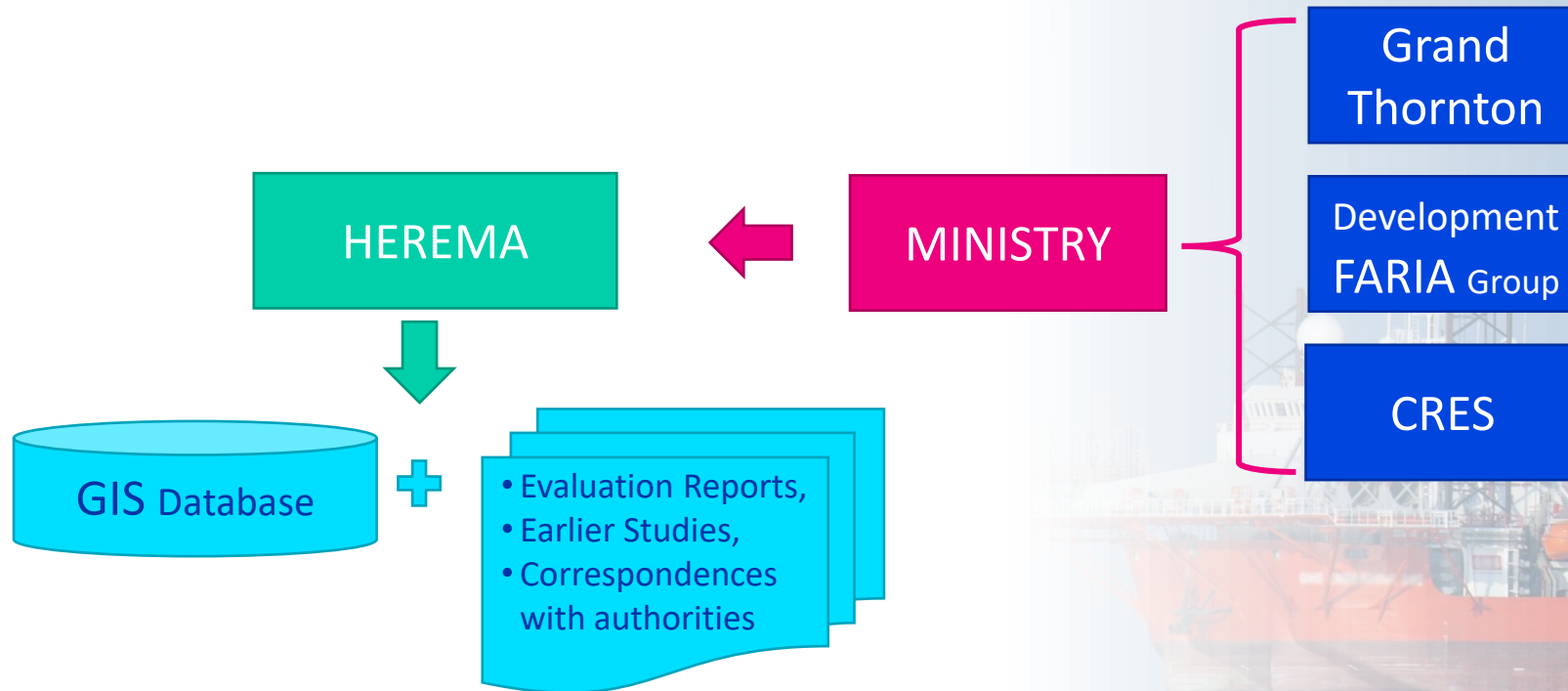
Implementation timeline



3. Transfer of knowledge

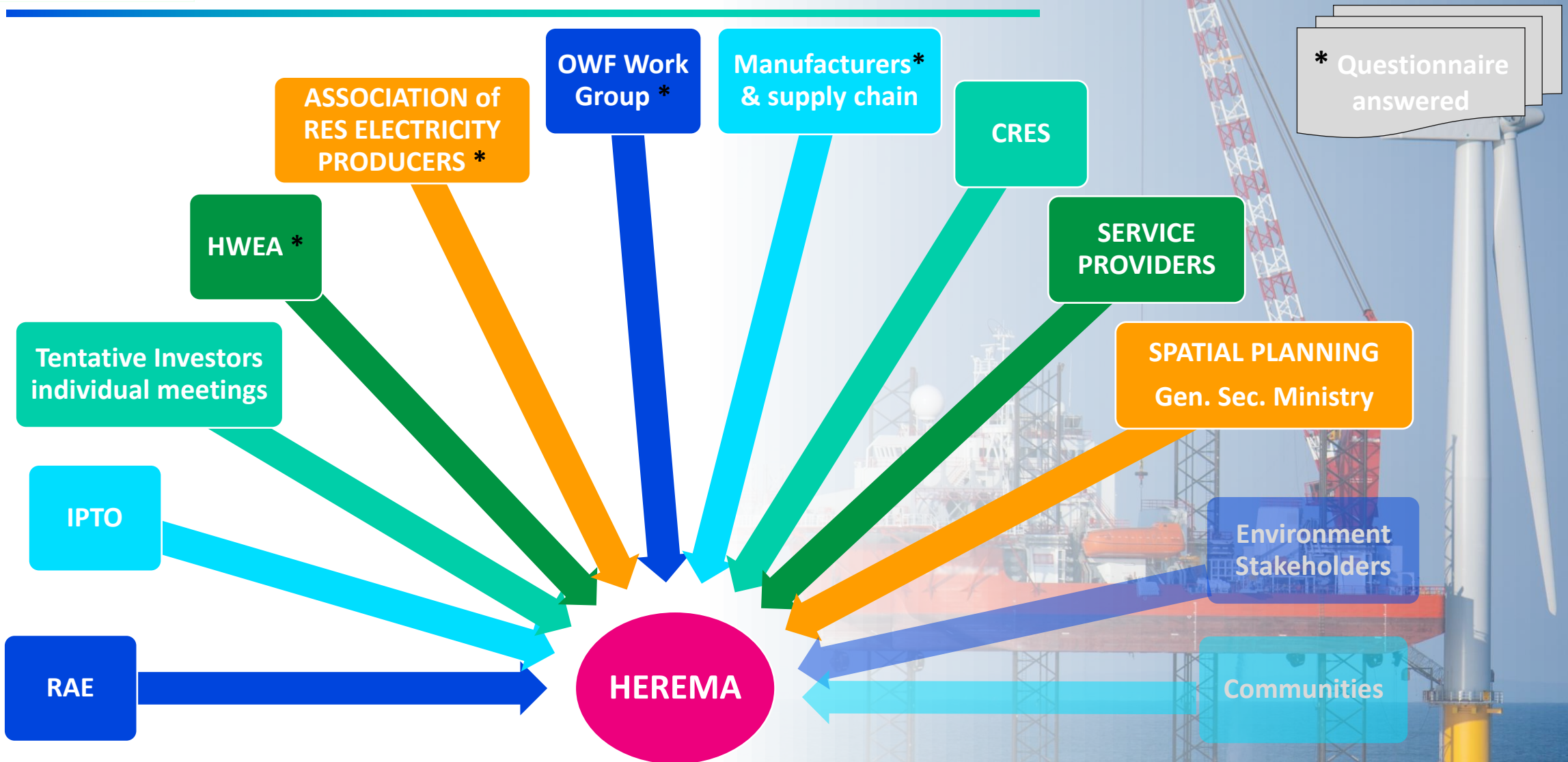
Actions taken & actions forward

Transfer of knowledge (from the Ministry of Environment & Energy and its advisors)



4. Collection of previous work & expert opinion and knowledge

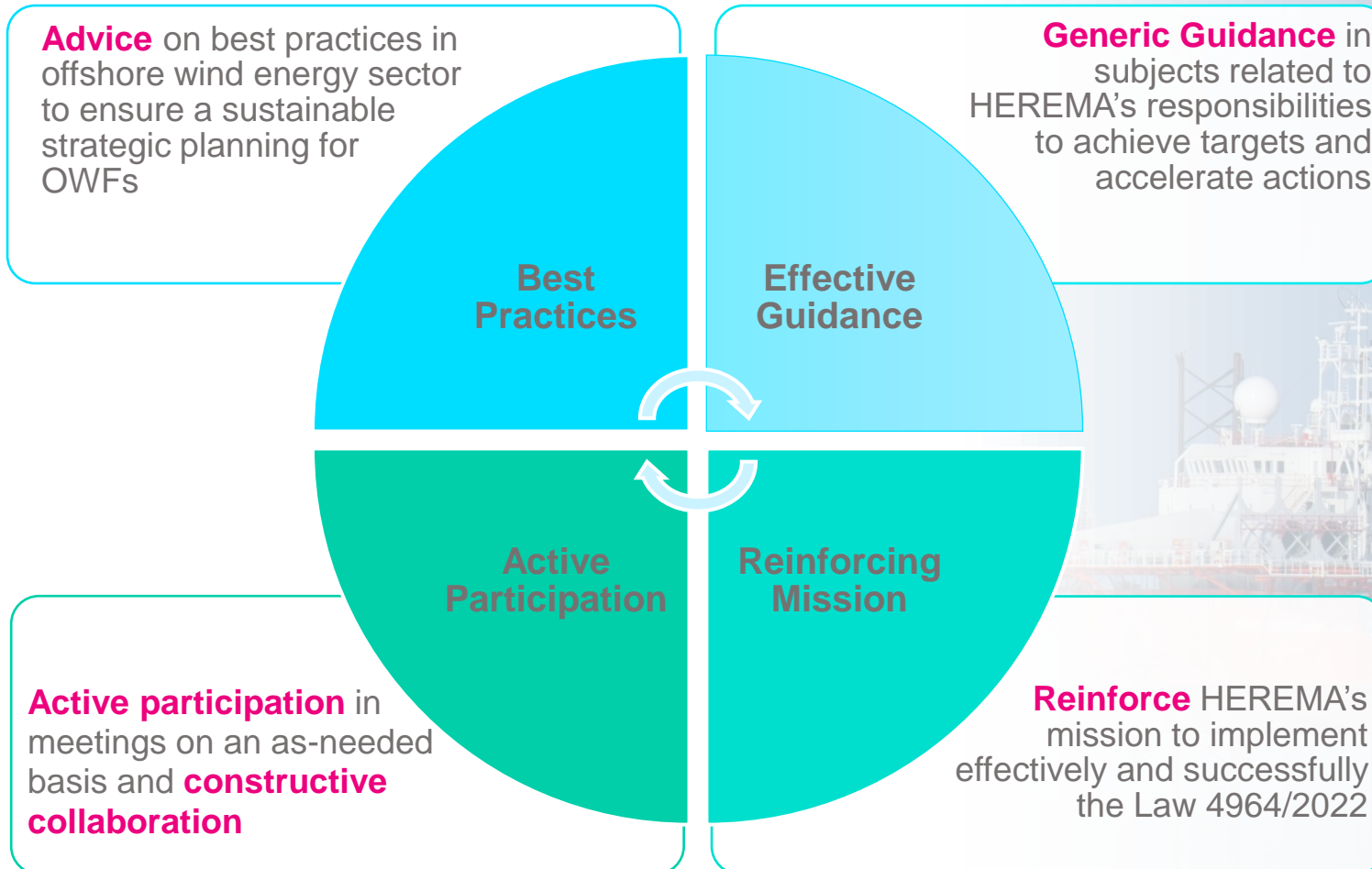
Actions taken & actions forward



5. Formation of an external & independent Advisory Committee

Actions taken & actions forward

The Role of the Committee



6. Understanding the decisions and the uncertainties involved

Actions taken & actions forward

Decisions: Any decision we are ready to make based on full or sufficient understanding

Uncertainties: Decisions we need to make despite having limited & insufficient understanding or the risk of change

Decisions

Exclusion zones based on interference with human activities and/or environment sensitivities

- Airport corridors
- Distance from shore
- Archaeological sites
- Endangered habitat sanctuary
- Etc ...

Uncertainties

Exclusion zones based on unknowns and/or ill-defined parameters due to limited/unreliable/evolving data

- Wind speed
- Wind speed threshold
- Water depth/seabed dip
- Type of seafloor (geological, geotechnical characteristics, etc)

Constrain by
data acquisition



Allow for
surprises

7. Critical design parameters

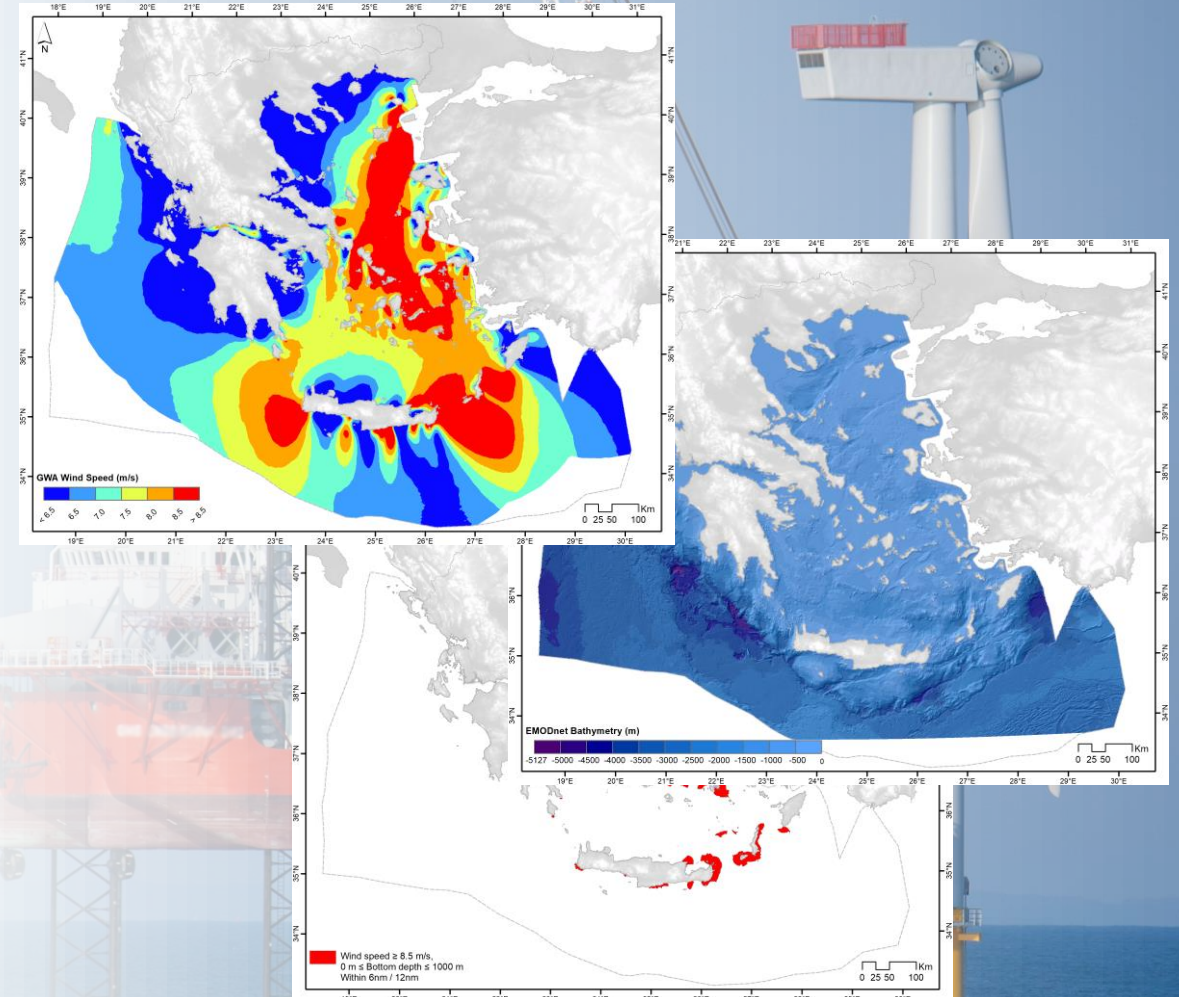
Actions taken & actions forward

Wind Speed Characteristics & Threshold

Seabed Topography & Morphology

Minimum required area

Electrical Grid Infrastructure



8. Sensitivity testing

Actions taken & actions forward

- ☐ Without reliable field data, on the wind which database shall we use and how much can we trust it ?
- ☐ Is there a minimum required area that could be used as exclusion criteria ?
- ☐ How accurate is our understanding of the seabed and can we use the existing databases to extract useful conclusions ?
- ☐ Are there likely critical future developments we should consider ?

9. Philosophy of planning

Actions taken & actions forward

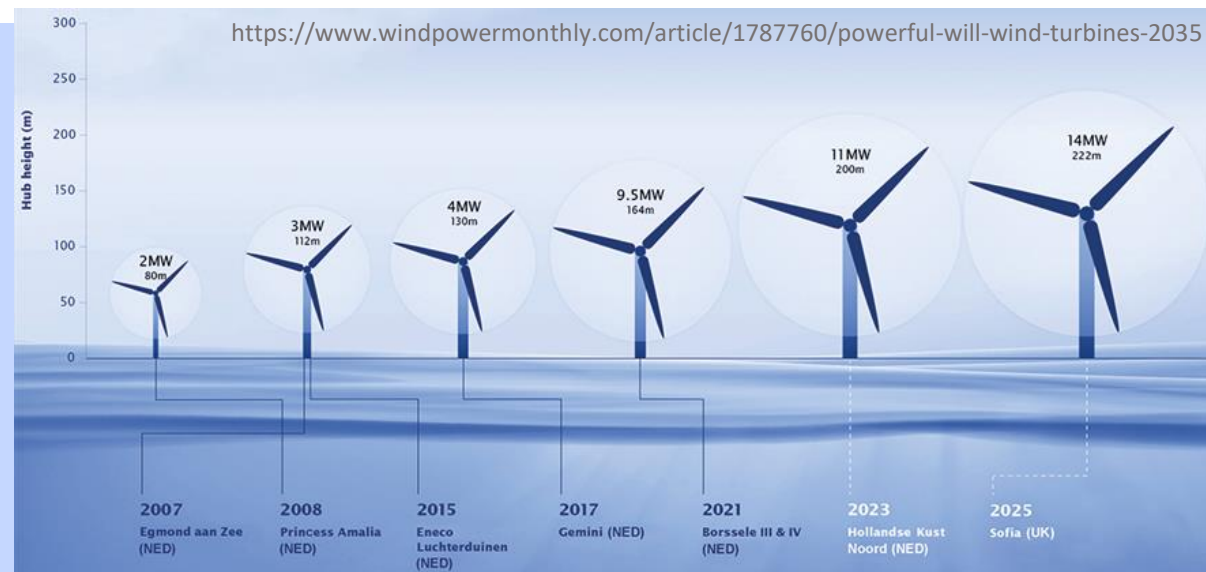
- **Plan for commercially viable and competitive projects**
- **Utilize the valuable prior work by the Ministry of Environment and Energy**
- **Ensure areas that satisfy all the exclusion criteria**
- **Expand around minimum core areas (that could permit the development of >200MW farms, with conservative thresholds e.g. >8.5m/s)**
- **Expand the areas enough to allow for uncertainties, future developments and operational flexibility**



10. Communicate publicly

Actions taken & actions forward

- A. Present our approach, progress and be transparent**
- B. Follow up, with Confidential one-to-one meetings with the industry**
- C. As soon as the area selection is finalized:**
 - Contact neighboring local communities**
 - Engage with local stakeholders**
 - Explore the possibility for HEREMA organizing early data acquisition**
 - Explore possibilities for a local supply chain**



Committed to our mandate for net zero emissions by 2050

Acceleration of our work & expansion of scope



Building a vigorous & sturdy energy system

while protecting our strategic interests



Delivering a robust National plan for OWF

with the highest possible environmental & safety standards



Realizing our country's potential in RES

as a leader into renewable energy



Attracting leading international investors

focused on our alignment with the energy transition

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