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Which way is the wind blowing?

A global outlook on trends in innovation

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(22), 23 & 24 OCTOBER 2018
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‘’Ingeteam Targets Next-Generation Turbines with New Converter’’ **September 2018**

‘’Van Oord and Eneco on North Sea Biodiversity Mission’’ **September 2018**

‘’Catapult’s Levenmouth Turbine Secures Lifetime Extension’’ **September 2018**

‘’Norwegians Pitch Hywind Tampen Floating Wind Project’’ **September 2018**

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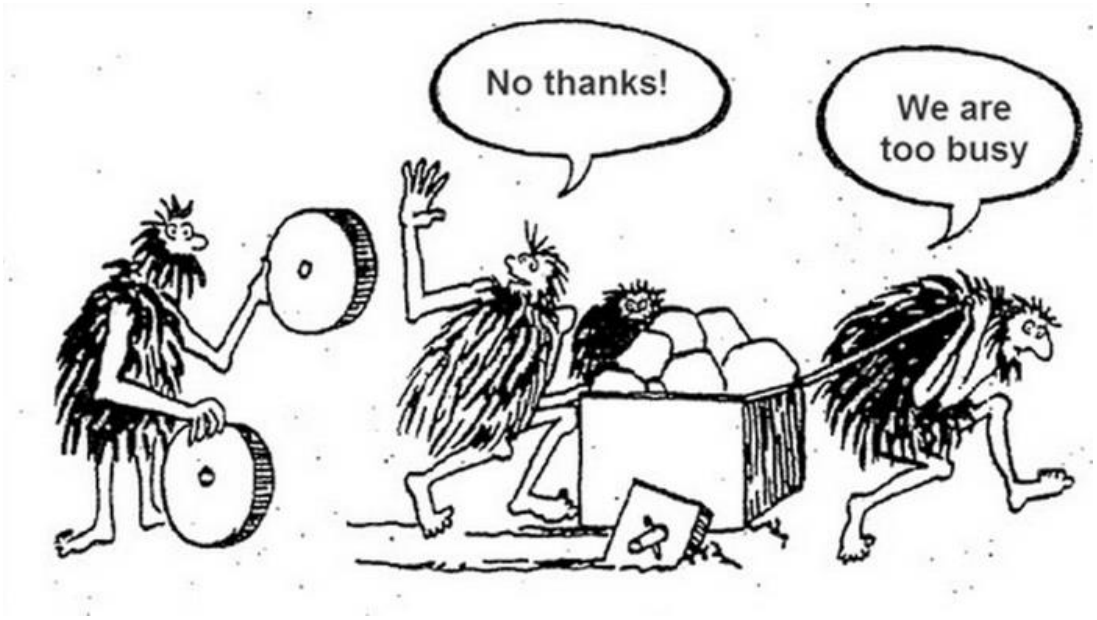
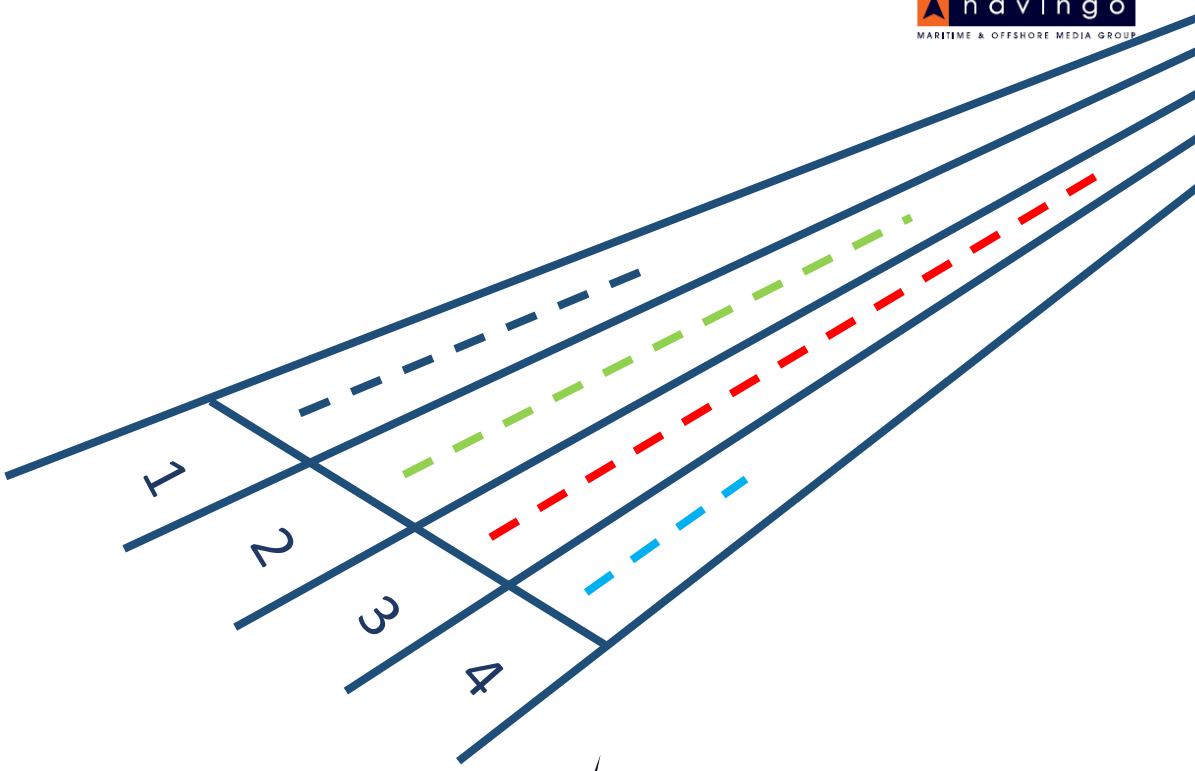
- Innovation starters
- Macro trends: past, present and future
- Micro trends: continuous process or set in stone?
- Editor’s pick


No thanks!
We are too busy

1. Government
2. Industry organizations
3. Offshore Wind supply chain
4. Cross sector involvement



Innovation on Government level

- EU's Horizons 2020
- Japan's New Energy and Industrial Technology Development Organization (NEDO)
- UK's InnovateUK
- Dutch allocation of innovation site on Borselle project

Innovation on Industry Organization level

- Carbon Trust and Offshore Wind Accelarator programme
- Offshore Wind Innovation Hub
- PortXL
- NYSDERA and National Offshore Wind Development Consortium

Innovation on Supply Chain level

- Senvion 10+ turbine / Haliade-X 12 (GE)
- Siemens Offshore Transmission Modules (OTM’s)
- Service Operation Vessels
- Offshore Access Systems
- And so on……

Innovation through cross sector involvement

- Oil & Gas: Maersk & Vestas lifting solution
- Maritime industry: ‘An Oceanic Awakening Initiative’

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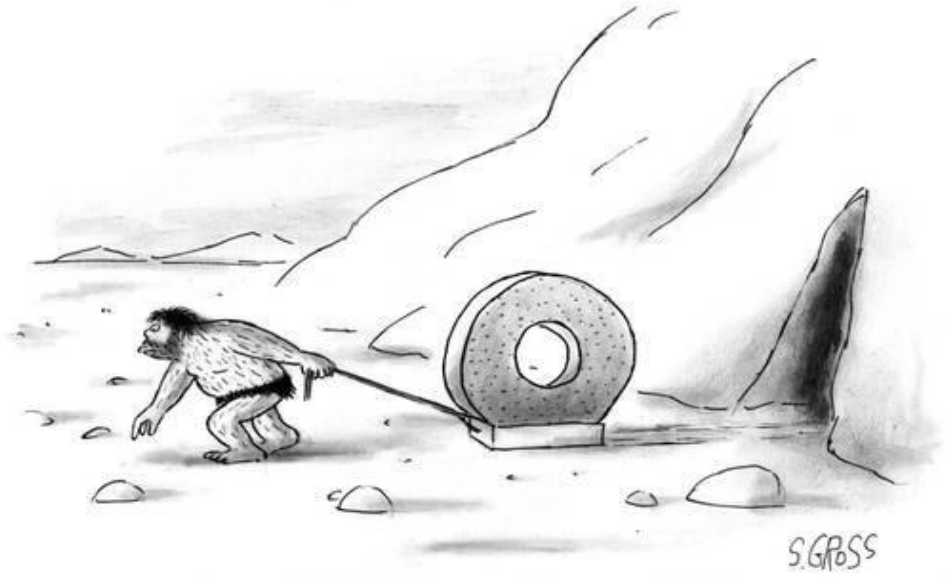

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Innovation starters

Feasability

Cost reduction

Installation

O&M

‘Everyting else’: Decommisioning + Product Life Time + HSE + Sustainability +……+…..

Feasability: from fixed to floating

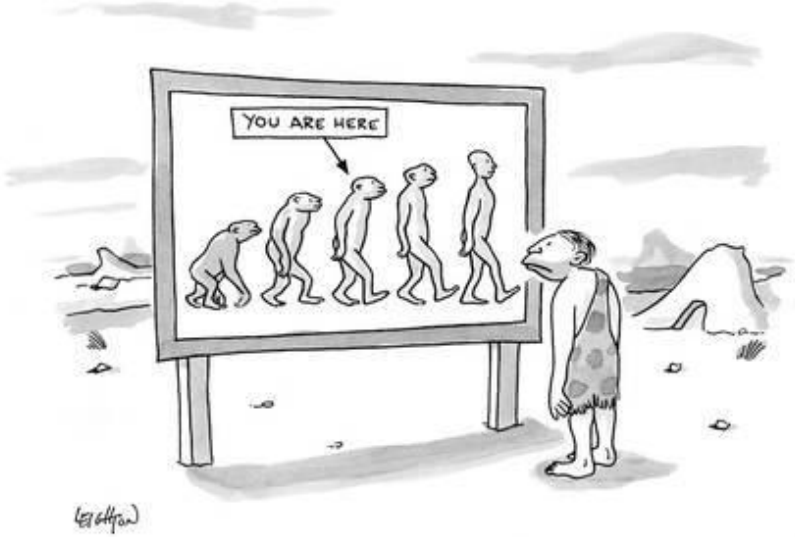
Cost reduction: bigger turbines, mass production, improved output

Installation: specialized vessels, sound mitigation, Jones Act compliant

O&M: walk-to-work solutions, CTV improvements, drone and active monitoring

And again ‘everything else’…….

- New convertor for next generation turbines – **Ingeteam, Spain**
- ‘Self installing’ Offshore Wind turbine – **Elican Project, Spain**
- Offshore Wind working together with Oil & Gas platforms – **Equinor, Norway**
- Offshore Energy storage using compressed air – **Flasc, Malta**
- Improved smart monitoring of subsea cables – **EMEC, UK**



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