

OUR  
OCEAN  
WEALTH

# SUM MIT



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Our Ocean Wealth Summit: Investing in Marine Ireland



# INVESTING IN MARINE IRELAND

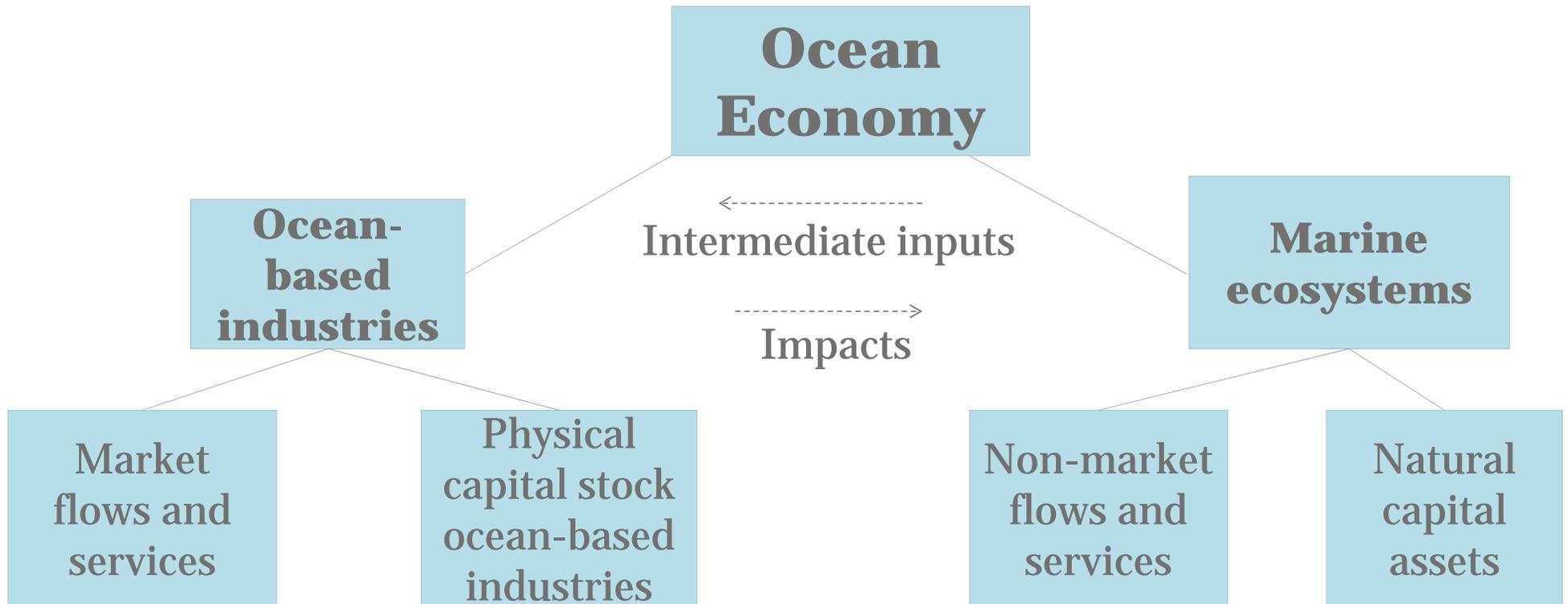
## Some OECD perspectives on The Ocean Economy

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Our Ocean Wealth Summit - Galway, 28-29 June 2018



# Today's Ocean Economy: An Interactive, Interdependent System



Source: OECD (2016), *The Ocean Economy in 2030*, OECD Publishing.



# Vibrant ocean-based industries

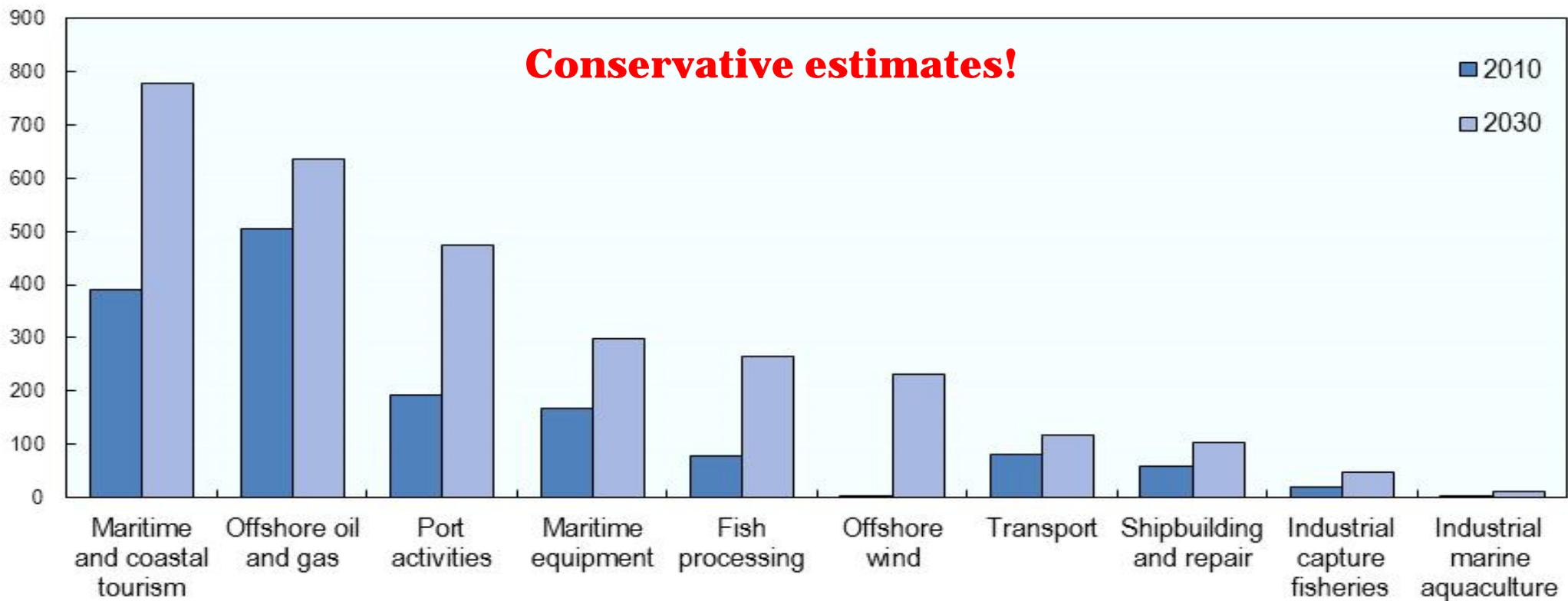
<b>Established ocean-based industries</b>	<b>Emerging ocean-based industries</b>
Industrial capture fisheries	Industrial marine aquaculture
Industrial seafood processing	Deep- and ultra-deep water oil and gas
Shipping	Offshore wind energy
Port activities	Ocean renewable energy
Shipbuilding	Marine and seabed mining
Offshore oil and gas (shallow water)	Maritime safety and surveillance
Marine manufacturing and construction	Marine biotechnology
Maritime and coastal tourism	High-tech marine products and services
Marine business services	Others
Marine R&D and education	
Dredging	

Source: OECD (2016), *The Ocean Economy in 2030*, OECD Publishing.



# Ocean-based industries' value-added to double (from USD 1.5 to 3 trillion) by 2030

USD billion



Source: OECD (2016), *The Ocean Economy in 2030*, OECD Publishing.



## Projections of selected sectoral growth rates 2010-2030

Sector	Compound annual growth rate in GVA
Maritime and coastal tourism	3.5%
Ports	4.6%
Marine aquaculture	5.7%
Fish processing	6.3%
Offshore wind	24.5%
<b><i>Average ocean economy</i></b>	<b>3.45 %</b>

Source: OECD (2016), *The Ocean Economy in 2030*, OECD Publishing.



## Measuring the value of the ocean economy in 2018...

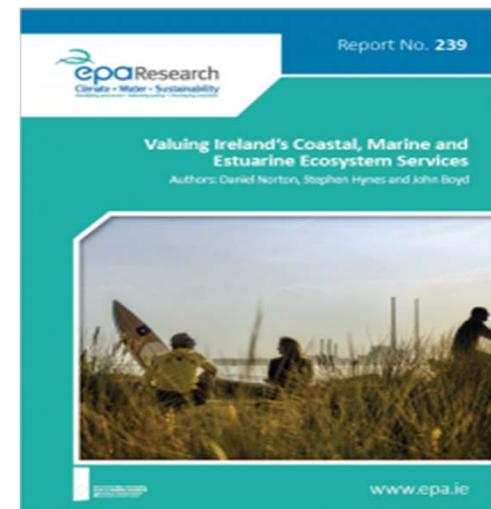
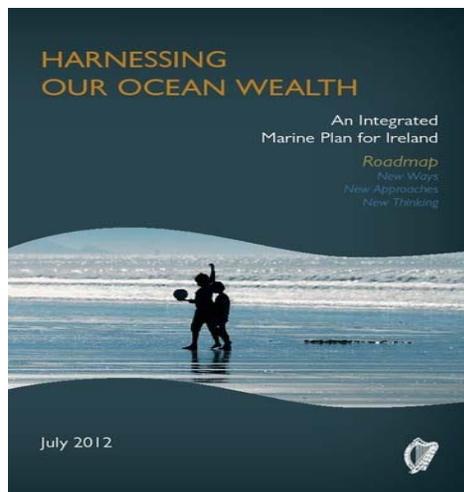
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- Measurement remains tricky for many reasons:
  - Official economic data not always disaggregated between land and ocean
  - Difficult to define precisely what activity qualifies as ocean-based
  - Much of the economic value of marine ecosystems is not observable through market transactions
- **Positive momentum!**
  - OECD countries moving towards representation of ocean economy in National Accounts (e.g. Portugal's Satellite Account for the Seas)
  - Could be extended to include accounting for marine ecosystems (e.g. Australia's Great Barrier Reef experimental accounts)



# Ireland's approach to valuing the ocean economy is inspiring

- Effective measurement requires **institutional capacity** at the appropriate levels
- Bearing in mind that no two country is the same, Ireland's approach is yielding results **that inspire other countries...!**





# Expected increase in value-added comes from growth in economic activity and innovation...

## Shipping and port activities



## Cruise tourism



## Industrial marine aquaculture



## Offshore wind



*Sources: Siemens, Lockheed Martin, Florida-Caribbean Cruise Association.*



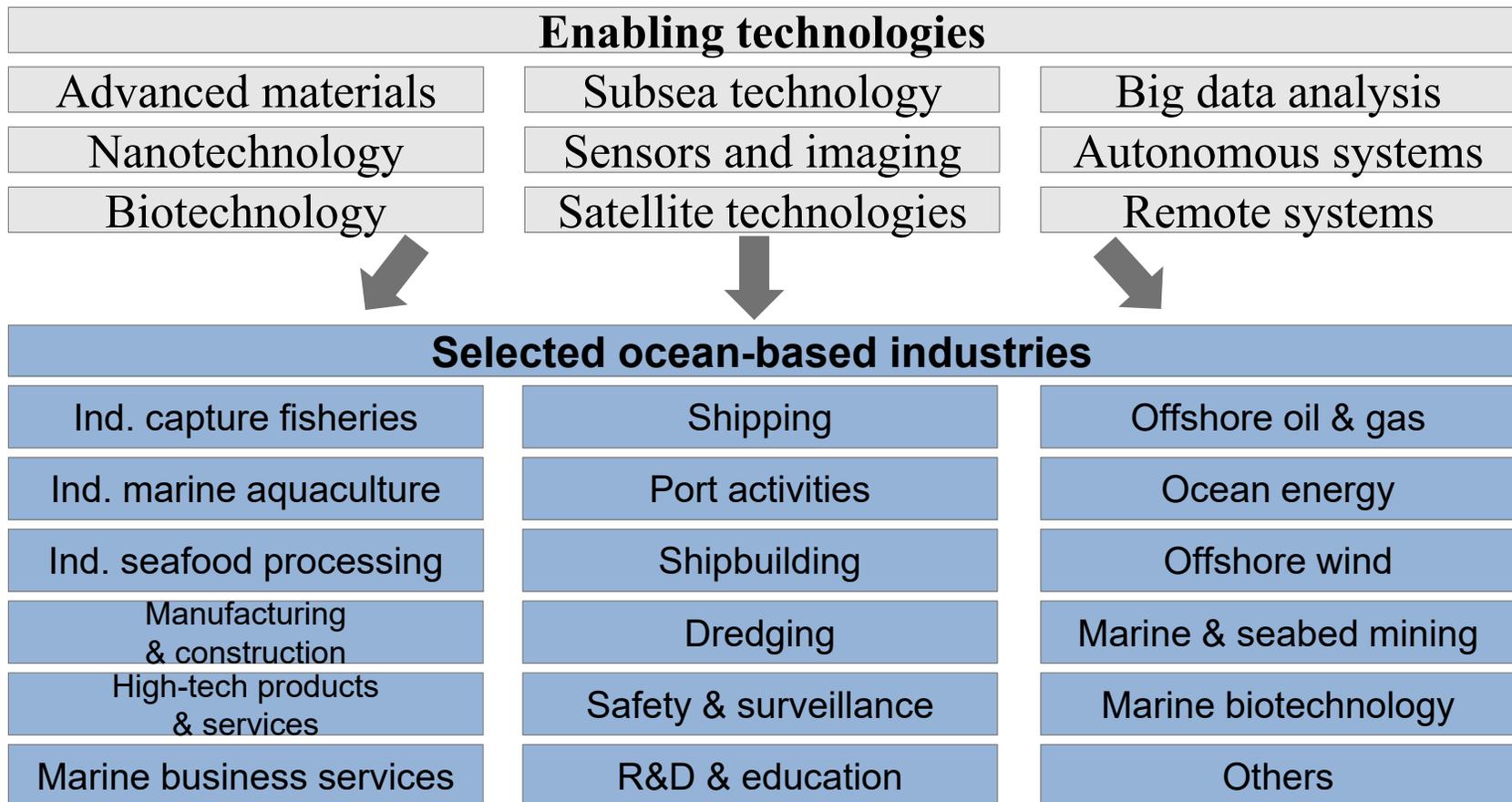
## Science, technology and innovation in tomorrow's ocean economy: some drivers

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- **Enhancing competitiveness** via efficiency gains/cost-saving (*e.g. autonomous ships*)
- **Expanding technological frontiers** (*e.g. complex subsea engineering*)
- **Responding to climate change and sustainability challenges** (*e.g. biotechnology, traceability, green technologies*)
- **Improving knowledge of the ocean** environment, bio-diversity and marine ecosystems (*e.g. new sensors, sea-floor mapping, satellites*)



# OECD examining (1) incremental technologies that improve efficiency, productivity & cost structures





## (2) Disruptive innovations that fundamentally shift knowledge acquisition and industry practices...

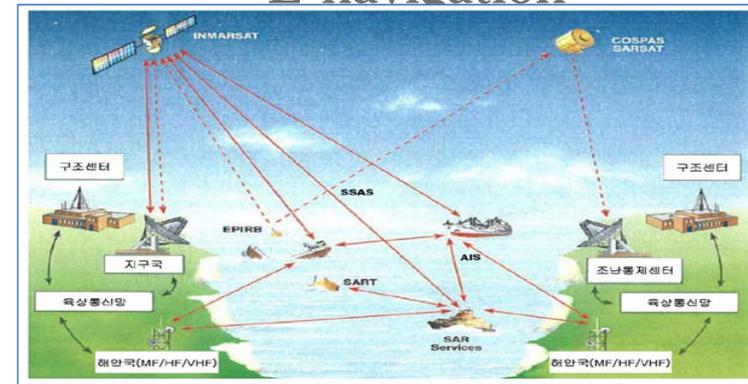
### Tomorrow's intelligent ship



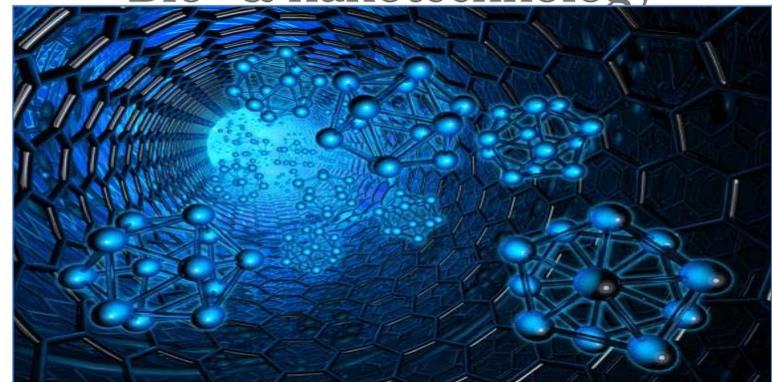
### Subsea robotics



### E-navigation



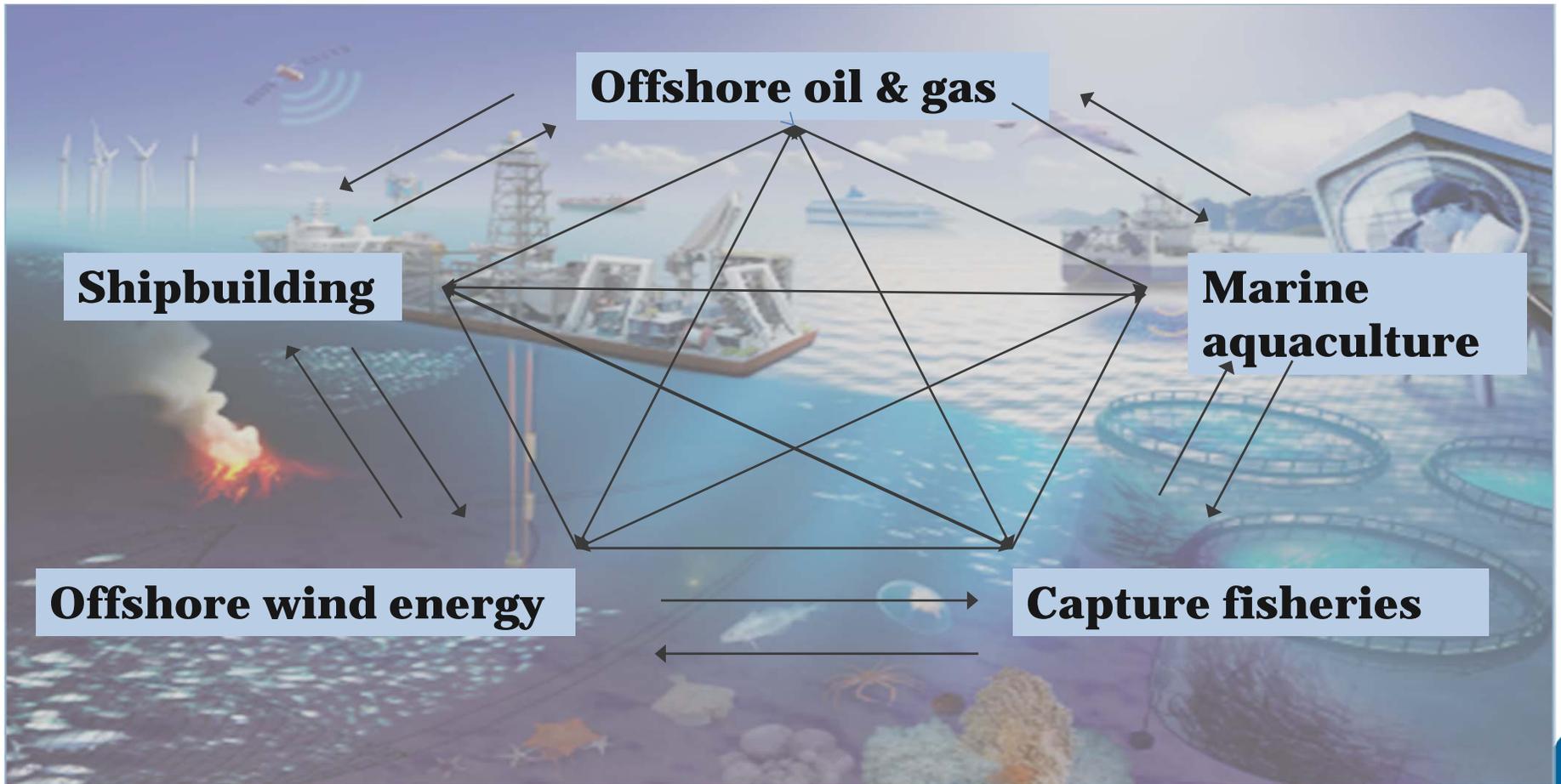
### Bio- & nanotechnology



Source: Rolls-Royce, SINTEF, Subsea robotics, Society Biological Engineering .

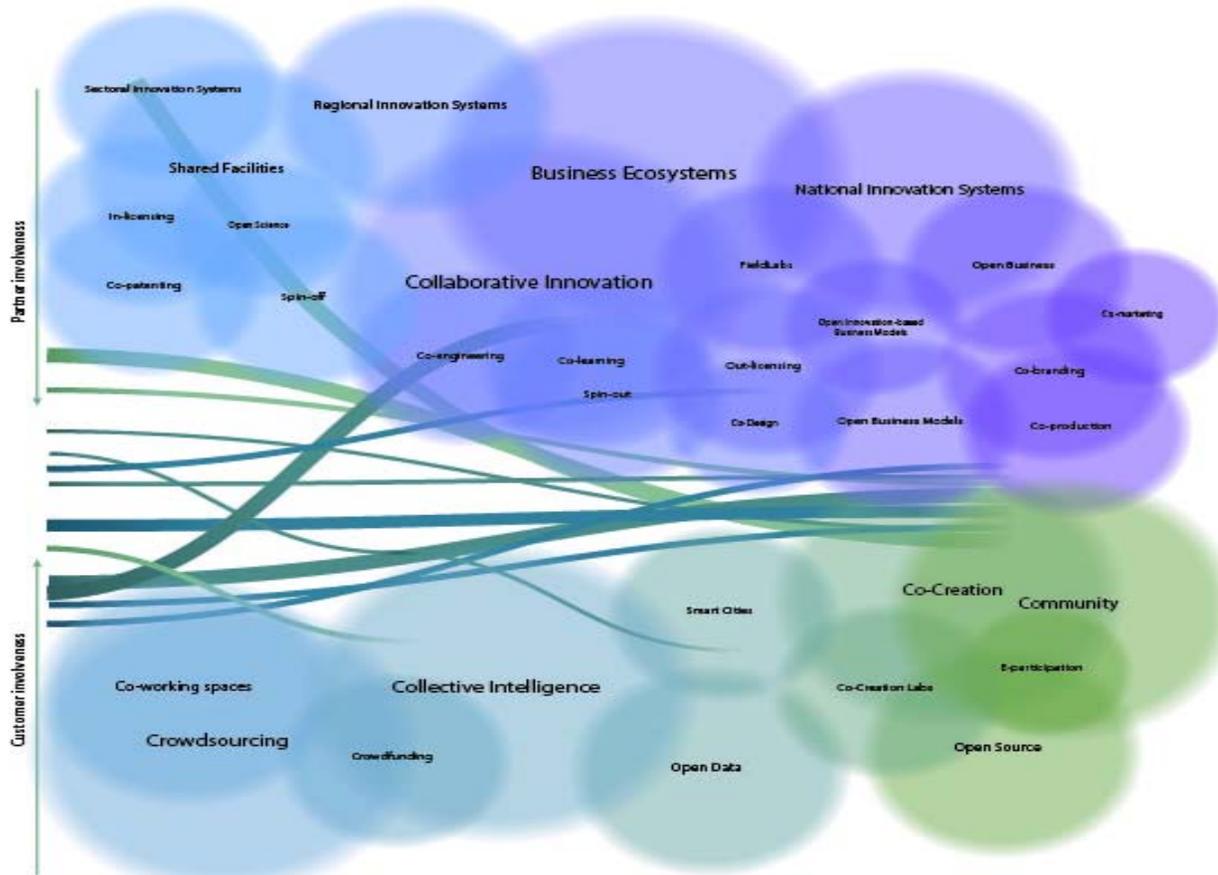


### (3) Technology synergies among sectors that triggers new innovations...





## (4) Emerging and new patterns of collaboration in ocean R&D appearing...



Ongoing original  
OECD survey  
of innovation  
networks in the  
ocean economy

Source: OpenInnovation.eu, 2017



## Preparing the next wave of innovation for the ocean economy... 4 messages!

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- I. The Ocean Economy makes a **significant contribution** to the economy and in meeting global concerns. By 2030, the Ocean Economy is likely to more than double.
- II. Increasing ocean-based activities add to already existing **pressures** on the health of the marine ecosystems.
- III. **Innovation holds one of the keys** to the economic success of a sustainable Ocean Economy and can help in reducing ocean health issues.
- IV. Governmental role in **fostering science, innovation and strengthening integrated ocean management** towards a more sustainable approach to managing the Ocean Economy will be essential.



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Thank you for your attention.

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