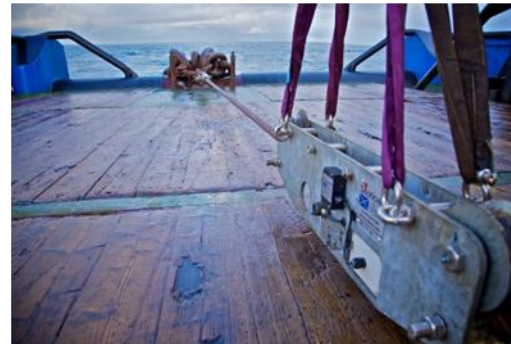


Maritime clusters delivering innovation

Orkney case study with reference to Wales

Gareth Davies and Michael Holgate (Aquatera)



Critical success factors

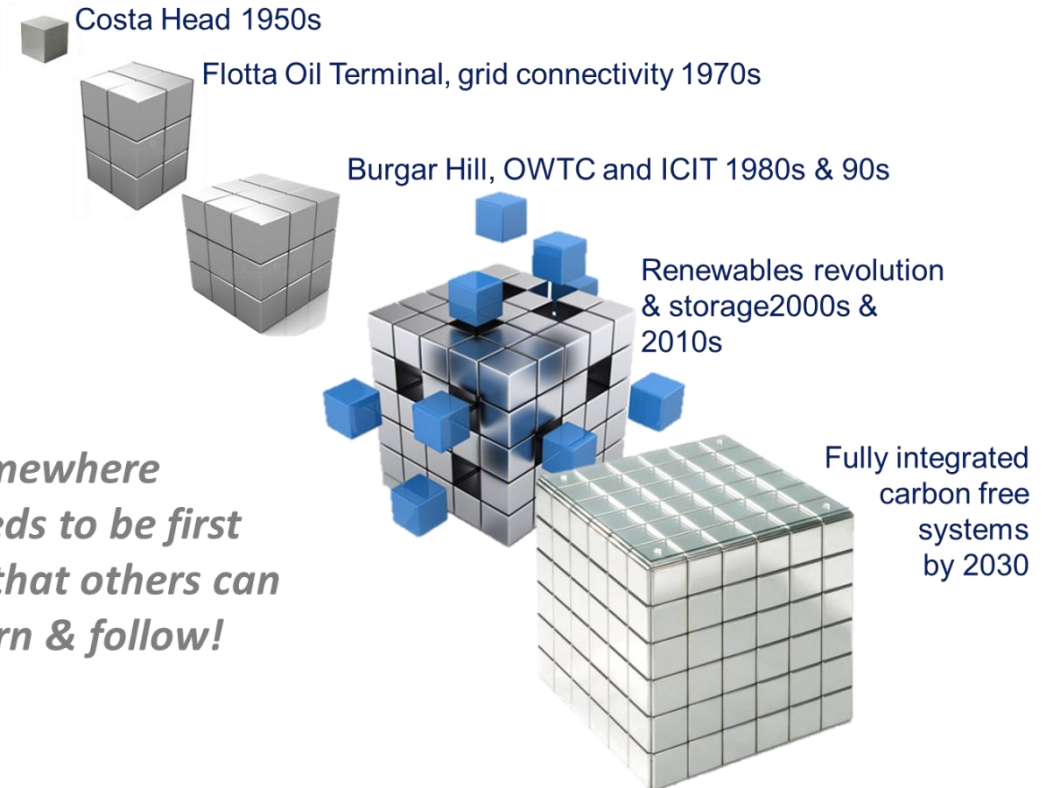
- Location
 - Shelter
 - Water depth, access and tidal restrictions
 - Opportunities / Constraints for expansion
 - Proximity to resources (marine, hydrocarbons, container distribution etc)
- Sustainable commercial opportunities
- Broad skills base
- Shared vision and values: appetite, enthusiasm & flexibility
- Local people and business commitment
- Governmental support – Orkney/Holyrood/Westminster/Brussels



The Orkney story

- Ingredients
 - A world class port with a rich maritime pedigree
 - Innovative and adaptable supply chain
 - World class wave, tidal & wind resources
 - Academic research and teaching centre (Heriot Watt, ICIT – 1990s)
- Orkney chosen as site location for EMEC – the catalyst for sustainable innovation (2001)
- Commitment of local entrepreneurs & community: OREF / Renewable Realities (2002)
- EMEC testing (2005 onwards)
- Oversupply and grid constraints leads to new solutions (2010 - now)
 - Active network management
 - Battery storage
 - Hydrogen generation and applications
 - Accelerated decarbonisation of demand
 - SMART energy management – holistic low carbon transition

Over 60 years of building energy capacity



Commitment and the prize

- Commitment

- People willing to become champions for the cause and the cluster
- Hard earned local cash and borrowing – over £300 million spent, £75 million from local players
- Weathering the storm – 2014-2016 over 100 jobs lost 30% of marine workforce

- Prize

- Up to 300 jobs again and growing
- Over £700 million spent across all renewables
- Spin-of benefits into energy systems, maritime trade, international exports, community wide confidence and innovation



Learning points

- Shared cultural values
 - A way of working – unwritten rules for balancing co-operation & competition
 - Contributing as well as taking, helping start-ups
 - A history of self sufficiency and innovation
- Needs strong community and government support at all levels: bottom up and top down
- Collaborate with innovators – academia to entrepreneurs
- Advertise achievements – conferences, hosting visits
- Play to strengths and be distinctive
- Learn don't copy, collaborate don't duplicate

Clusters of clusters and global impact

