



# TRANSECTS

Transitions in Energy for Coastal Communities  
over Time and Space

Dr Karen Alexander

[Karen.Alexander@hw.ac.uk](mailto:Karen.Alexander@hw.ac.uk)

Dr Daryl Burdon

[darylburdon@gmail.com](mailto:darylburdon@gmail.com)

Humber Nature Forum Meeting, 13:00-15:00 Thursday 1 May 2025



# The TRANSECTS Team



Karen Alexander  
HWU



Lauren McWhinnie  
HWU



Sandy Kerr HWU



Antonia Thomas  
UHI



Anne Bevan UHI



Jen Harland UHI



Dan Lee UHI



Daria Shapovalova  
UoA



Tavis Potts UoA



Kate Gormley UoA



David Atkinson UoH



Jim Gilbert UoH



Scott McGrane UoS



Daryl Burdon DB Ltd



Amy McCarron  
UoA (April 25)



Sofie Illemann Jæger  
HWU (April 25)



Jack Sheehy  
HWU (April 25)





# Stakeholder Partners



Marine  
Management  
Organisation

marine  
scotland



NatureScot  
NàdarAlba



Historic  
England



ORKNEY  
ISLANDS COUNCIL

œUK OFFSHORE  
ENERGIES UK



National  
Museums  
Scotland



Hull Museums  
& Gallery



Hull History Centre

areg  
Aberdeen Renewable Energy Group



# Project Aims

TRANSECTS will:

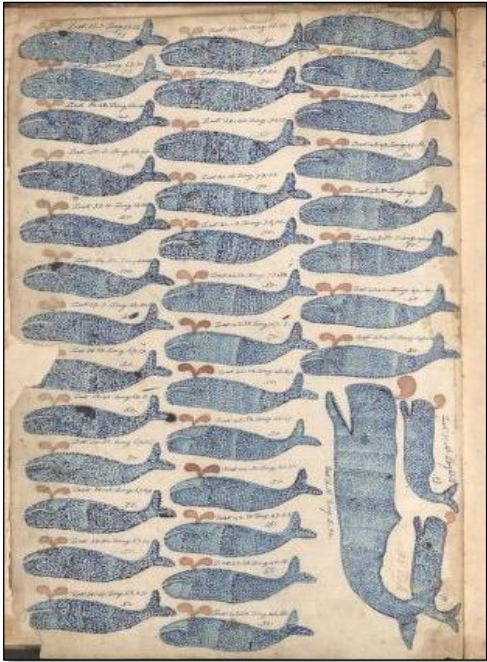
- **Collate a new body of information** relating to Marine Energy Transitions.
- **Develop novel transdisciplinary research methods** and techniques to inform energy transitions (and other natural resource transitions) in the future.
- **Contribute to policy and practice** in Marine Energy Transitions.
- **1 April 2024 to 31 March 2028.**







# Focus: Marine Energy Transitions...



Whaling (Whale oil)  
1740s-1860s



Offshore Oil & Gas  
1964...



Offshore Renewables  
1991...



# Whale Oil Era (18th to 19th Century)



- Whale oil: a key fuel in the industrial revolution.
- Older whaling – sailing ships, rowing boats, hand-thrown harpoons, catching 'Right whales' in the Arctic.
- Later whaling – coal-fired steamships, harpoon cannon, more species caught.
- Ended in 1880s with Edison's public electric lighting systems.



# Oil and Gas Era (1960s Onwards)

- Oil steadily replacing coal (particularly for transportation).
- 1964: gas discovered in the southern North Sea.
- 1969: oil discovered in the central North Sea.
- By 1984, UK: world's 5<sup>th</sup> largest oil producer.
- But now an industry in decline.







# Renewable Energy Era (1990s Onwards)



- First offshore windfarm: Denmark, 1991.
- First UK commercial offshore wind farm: North Wales, 2003.
- First floating wind farm: North coast of Scotland, 2017.
- Now: 43 offshore wind farms around the UK.
- Current plan: to quadruple offshore wind energy by 2030.



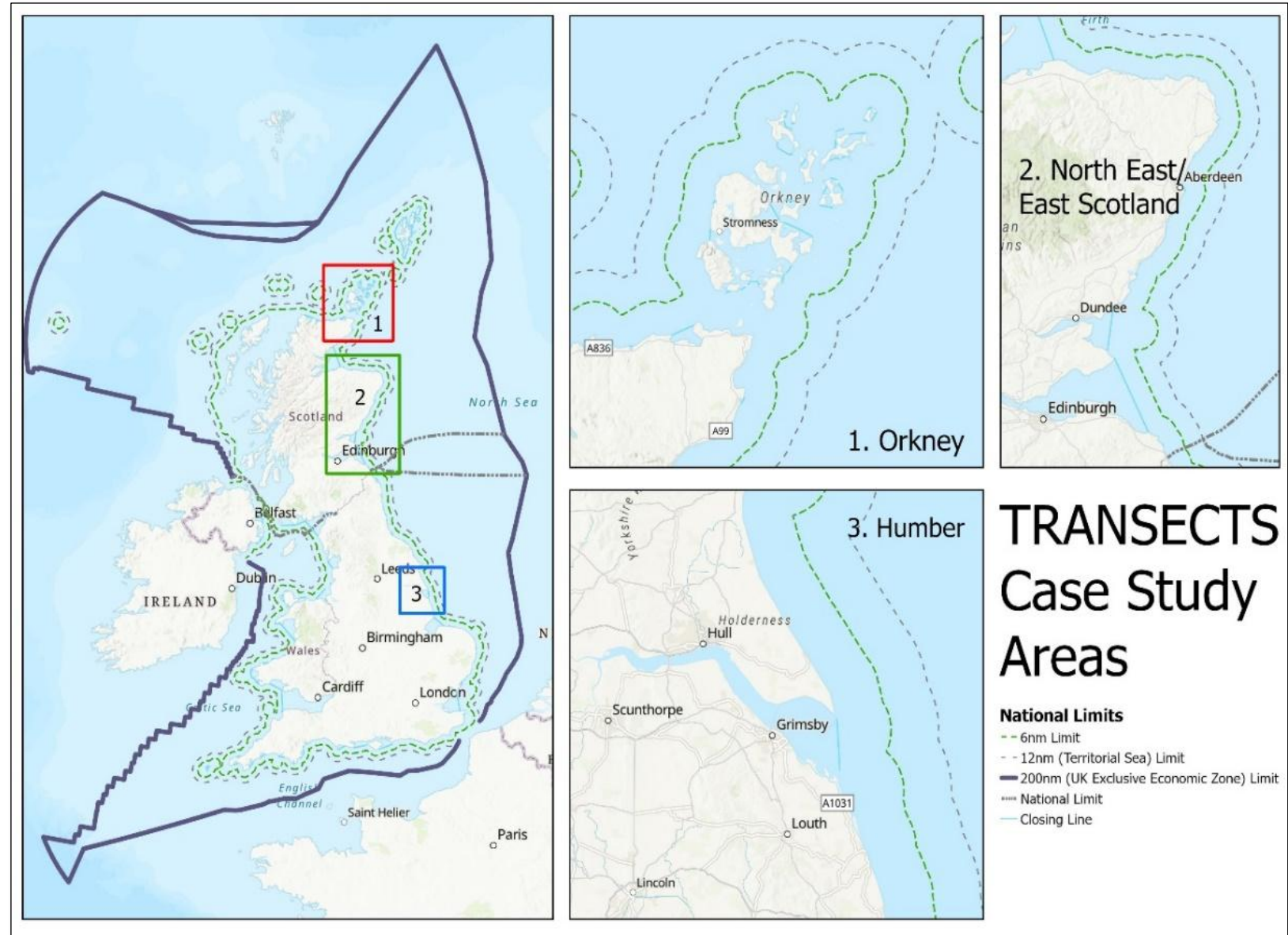


# Three case study locations:

1 – Orkney

2 – Northeast / East Scotland

3 - Humber





# The TRANSECTS project has four interlinked research areas:

Our 4 research areas ➔



**1. Natural Capital Stocks,  
Flows and Values**



**2. 'Re-Peopling'  
the Past**



**3. A Just  
Transition**

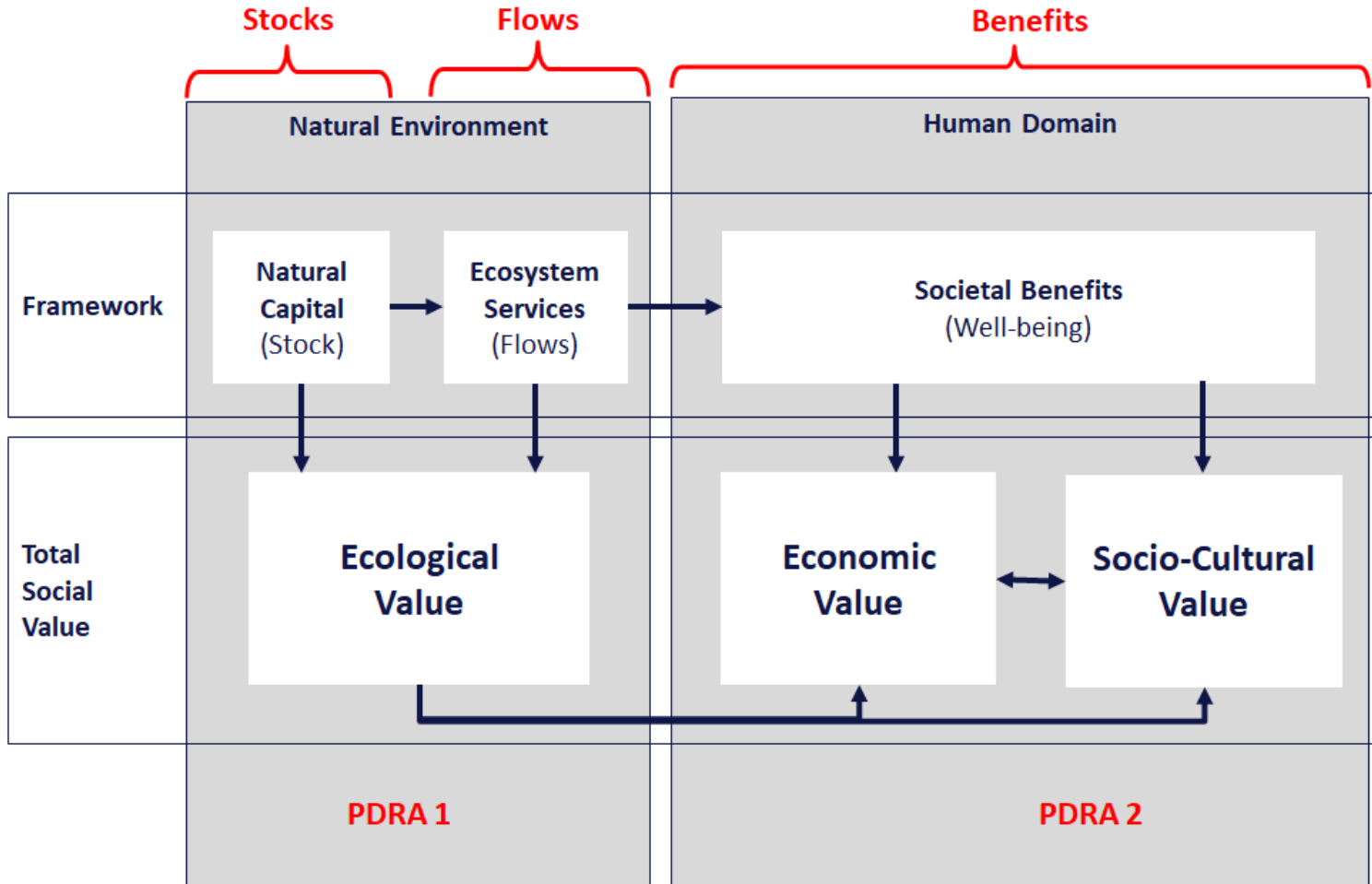


**4. A Theory  
of Change**

[www.transects.org.uk](http://www.transects.org.uk)



# 1. Assessing Natural Capital



We will identify:

- Stocks, flows, and benefits linked to Marine Energy Transitions.
- How they are interlinked.
- How they have affected coastal community resilience.





# 1. Natural Capital Example Indicators

MET	Natural Capital Stocks	Ecosystem Service Flows	Societal Benefits	Societal Disbenefits
Whale Oil	Whale populations (numbers)	Whales landed (numbers per port per year)	Energy (GW/hr)	Health impacts
			Fertiliser (tonnes)	Pollution
			Raw materials	Shipwrecks
			Jobs (number)	Loss of life
			Infrastructure	Boom and bust economy
			Ancillary industries	



## 2. 'Re-peopling the past'



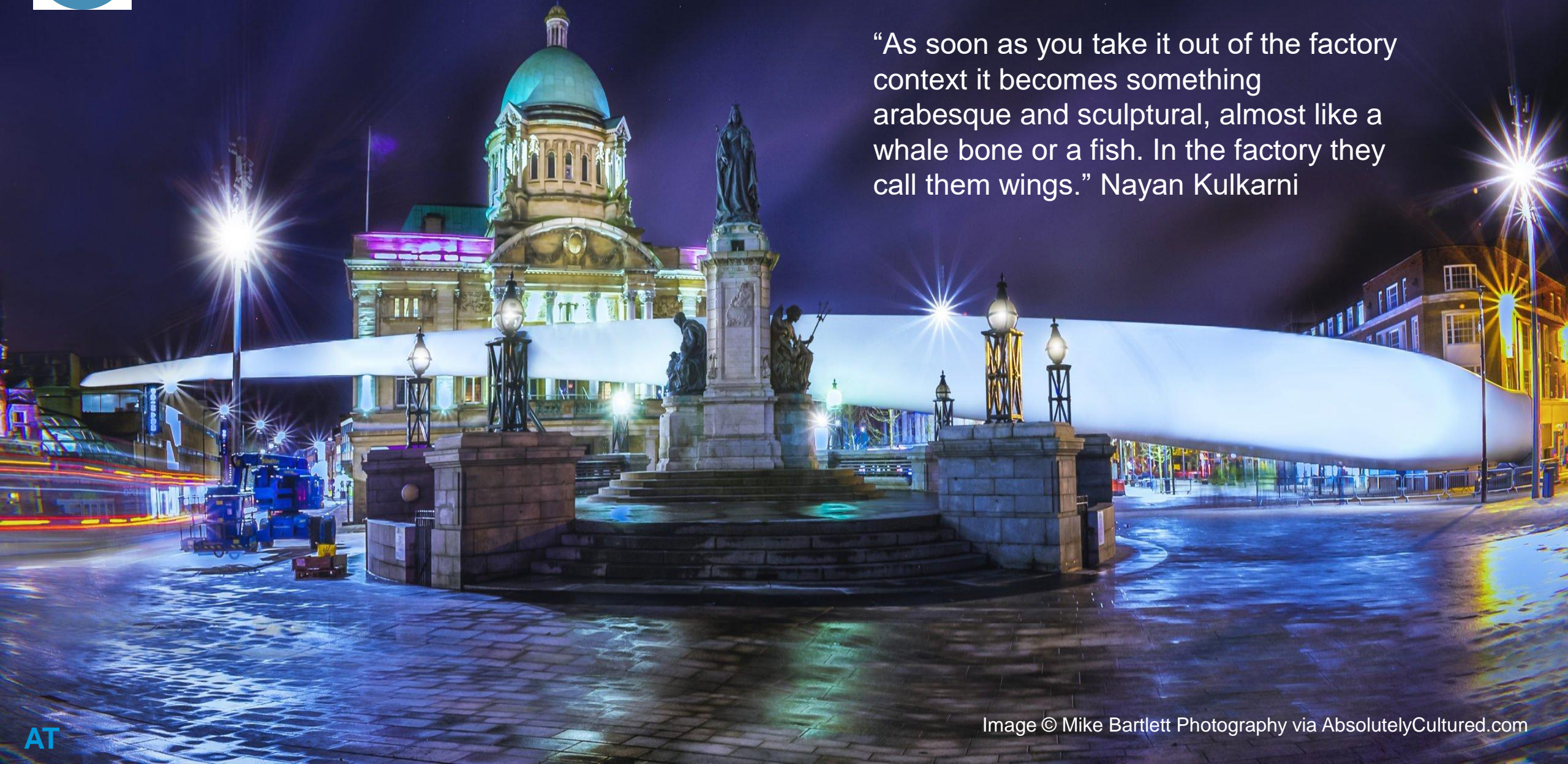
- Linking **energy heritage, oral histories, personal stories, popular culture and creative responses** to METs in the past, present, and future.
- Place-based participatory creative practice, 'walkshops' and community exhibitions.
- Understanding the history of our present to visualise different futures – through heritage, art, and creative practice.
- Activities programme (storyline events followed by walking workshops for each energy regime) launching in the Humber later in 2025, with events planned for Spring/Summer 2026.





## 2. Case study: 'Blade' artwork

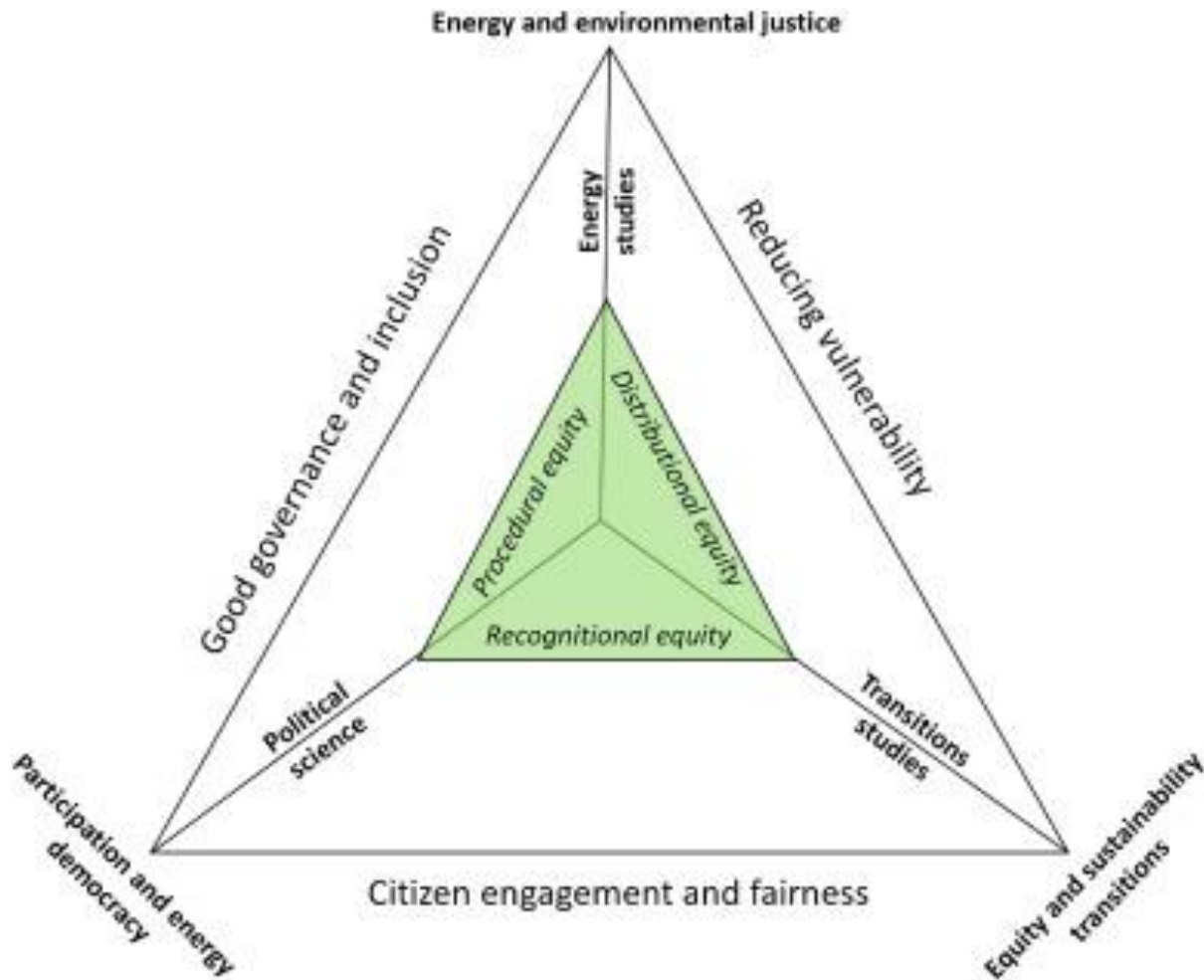
"As soon as you take it out of the factory context it becomes something arabesque and sculptural, almost like a whale bone or a fish. In the factory they call them wings." Nayan Kulkarni







### 3. What is a 'Just Transition'?



Just Transitions are:

- equitable, inclusive, and do not burden vulnerable communities.

Benefits include:

- jobs, skills transfer, revitalising communities, community benefits and wellbeing.



## 3. A Just Transition

Demonstrated by a range of indicators including:

- Employment / unemployment patterns.
- Skills, earnings, social mobility.
- Housing, deprivation, life expectancy.
- Access to green spaces, sustainable travel.
- Community owned energy.
- Informed perspectives on climate change.
- More trust in local government...

### Measuring Just Transition

Indicators and scenarios for a Just Transition in  
Aberdeen and Aberdeenshire

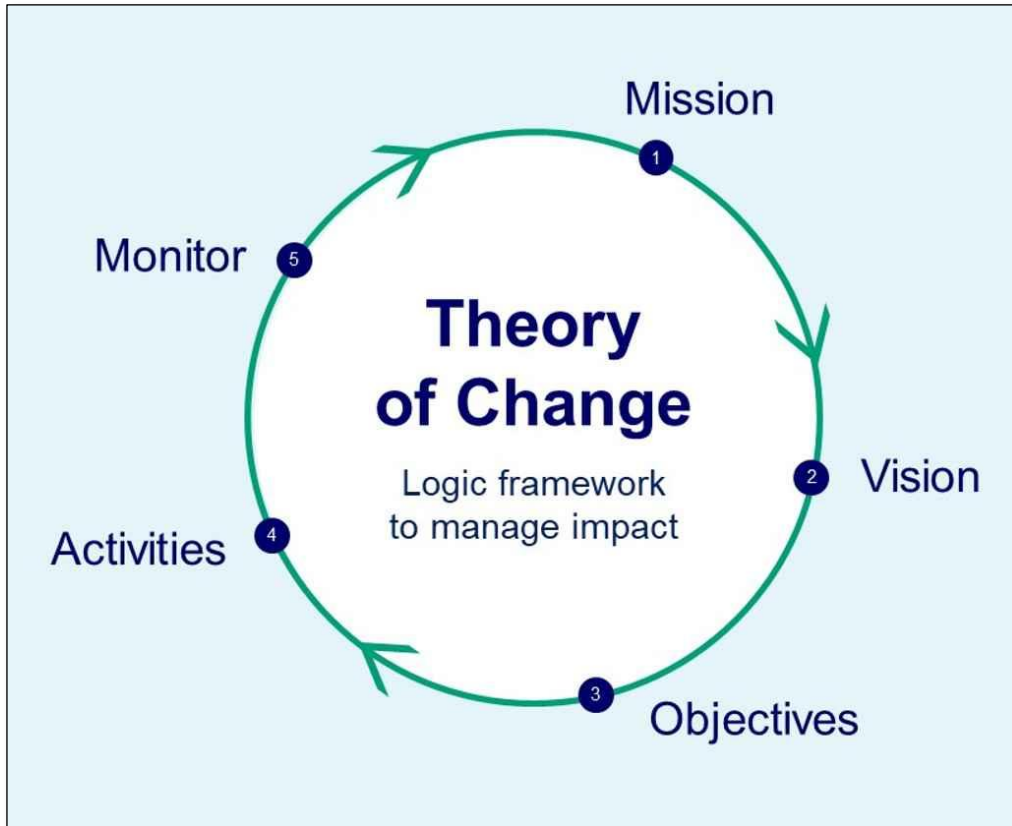


Just Transition Lab, University of Aberdeen, October 2023

Daria Shapovalova, Tavis Potts, John Bone, Keith A. Bender



## 4. Co-creating a Theory of Change



- We will support local communities to articulate a vision for their own equitable and just Marine Energy Transition.
- To do this we will:
  - Provide information packs based on study findings.
  - Undertake stakeholder workshops.
  - Promote dialogue / sharing of information.





# TRANSECTS Outputs:

- Nine **peer-reviewed publications** will target academic researchers.
- **Advisory briefs for industry and government** will identify planning changes to enhance community resilience in Marine Energy Transitions.
- An **Energy Transitions Atlas** will present the evidence and human stories for Marine Energy Transitions in our case studies.
- A **Transitions Blueprint toolkit** will outline how to enhance community resilience and equitable decision-making.
- **Mini-exhibitions of co-produced, creative work** on each Marine Energy Transition will be co-produced with, and tour, local communities.





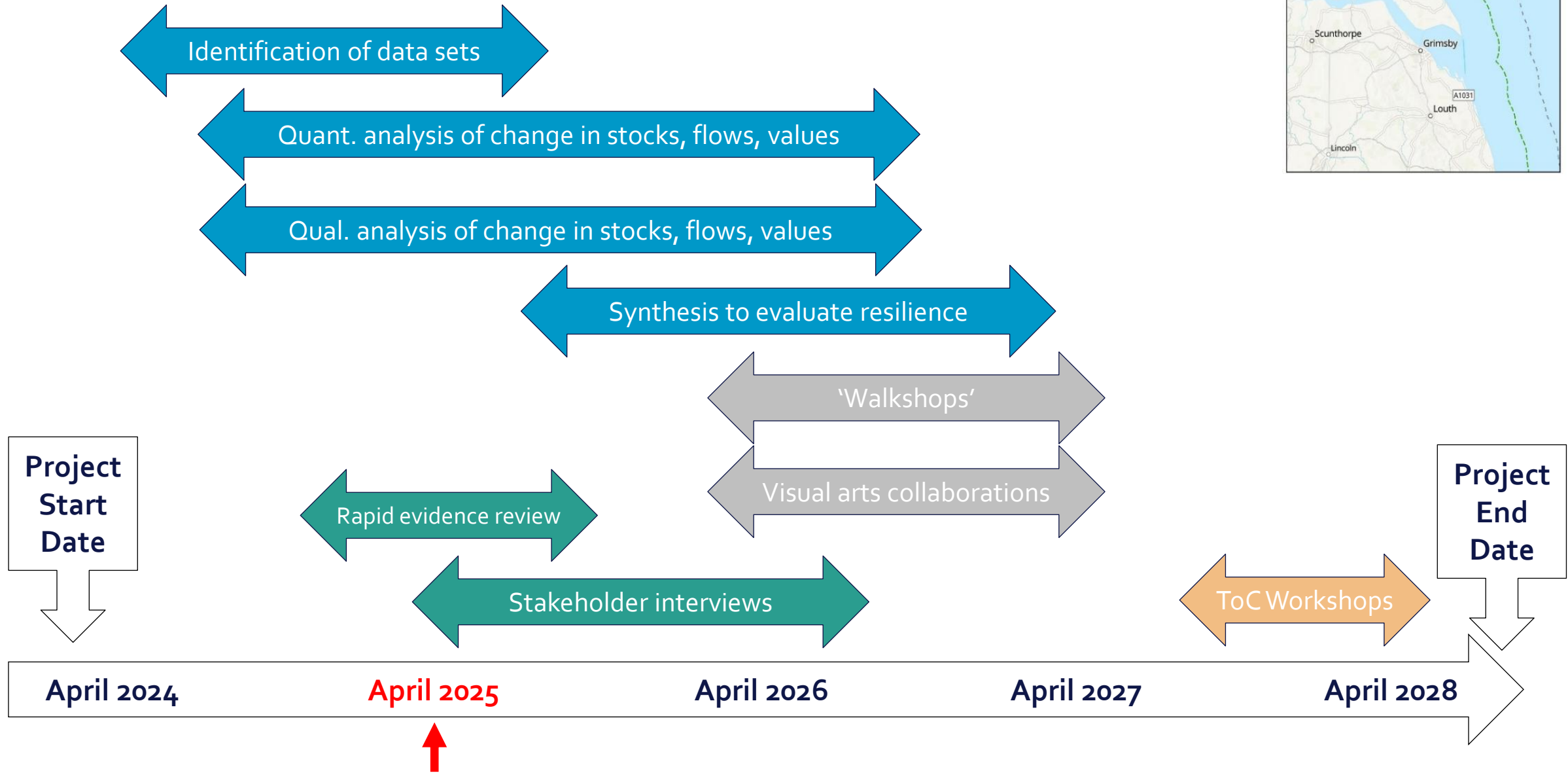
# Humber Relevant Project Activities

- **Natural Capital Approach** – stakeholder support with identification of data; provide feedback on map outputs.
- **Re-Peopling the Past** – collaboration with visual arts practitioners, contemporary archaeology ‘walkshops’.
- **Just Transition** - stakeholder support with identification of data and stakeholder interviews.
- **Theory of Change** - stakeholder workshops to co-create a theory of change equitable and just marine energy transition.





# Timeline







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