

Columbus Conference

The UK Marine Knowledge Exchange Network

Building research impact capacity and stimulating research-driven solutions for the blue economy.

7th November 2017

Katherine Kennedy – MKEN Strategic Advisor

Marine Knowledge Exchange Network

Founded in 2015, MKEN is a vibrant and growing network of cross-sector marine stakeholders with mutually beneficial aims:



- To increase capacity in stakeholder relevant marine research
- To ensure marine research is delivering collaborative impact and application
- To help realise the social, economic and environmental potential of our seas and oceans
- The University of East Anglia (UEA) hosts MKEN.

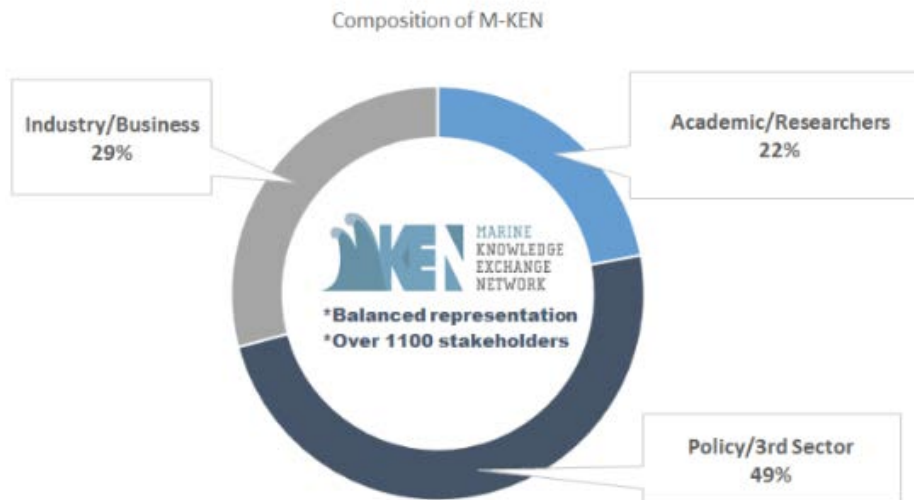


Blue Ltd.





**MARINE
KNOWLEDGE
EXCHANGE
NETWORK**



Anchor – UEA

Small and nimble - SMEs

- *Blue Ltd.*
- *MADE Agency*

People



Dr Martin Johnson
Director M-KEN, Cefas-UEA Senior Lecturer
Email: martin.johnson@uea.ac.uk



Dr Trevor Tolhurst
Director of Coastal Science, M-KEN
Email: t.tolhurst@uea.ac.uk



Dr Irene Lorenzoni
Director of Social Science, M-KEN
Email: i.lorenzoni@uea.ac.uk
Profile: .



Dr Gill Malin
Director of Marine Biology, M-KEN
Email: g.malin@uea.ac.uk



Dr Sophie Day
Senior Research Associate 'Blue Futures'
Email: sophie.day@uea.ac.uk

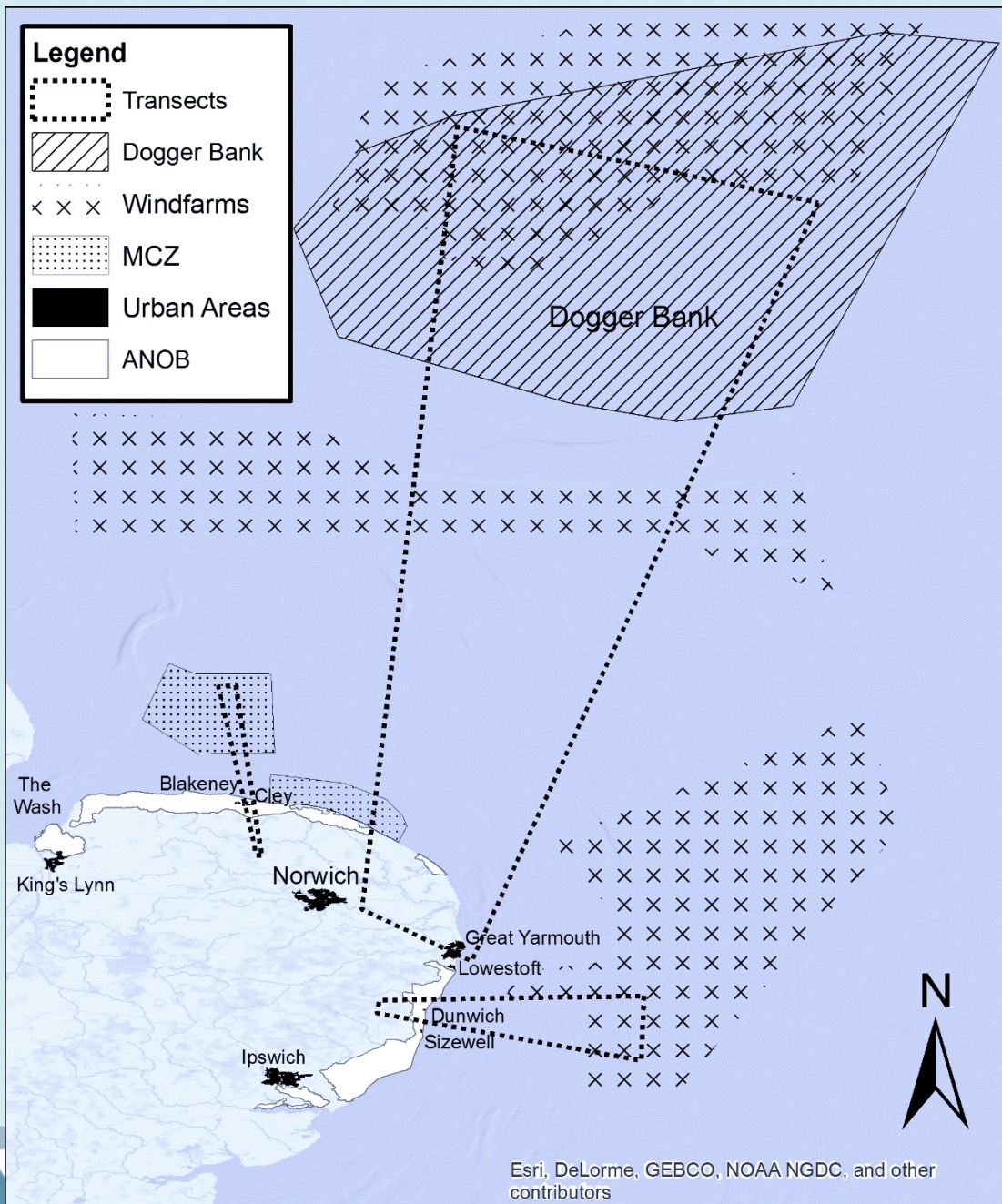


Ongoing projects

Project 1 - Services & Opportunities from the marine environment (ESRC IAA)

Stimulating research-driven solutions for the blue economy by bringing diverse research expertise together with local innovative businesses to spin up novel entrepreneurial ideas with the aim of facilitating the transition towards a more blue (marine) economy in the region. This objective was executed via a series of dynamic 'Ideation Workshops' on:

- Blue Growth and Statutory Obligations
- Ecosystem Services & Natural Capital
- Our Future Coast: Envisioning a 100 year future
- Seaweed and Algal Aquaculture: Opportunities and Challenges



Project 2

Anglian Blue Futures NERC innovation Grant

Cross boundary planning
and futures analysis
+100 years
Drawing on existing UEA &
Tyndall Centre Research



Realising East Anglia's blue growth
ambitions – from land to sea

Developing and
applying regional
future scenarios

Blue Ltd.

UEA
University of East Anglia

EXCHANGE
NETWORK

Global

**Regional
depopulation
Offshore super-tech
Corporate is key**

**Influx of new people
Fossil fuel
renaissance
Extended families**

**Controlled
climate
change**

**Dangerous
climate
change**

**Eco renaissance
Global village
Urban dystopia**

**Collective ownership
Nationalised services
Biologically rich**

Local

Blue Futures scenarios - elements

Eco-renaissance

Global village

Urban dystopia

Influx of new people

Carbon renaissance

Extended families

Global, national and regional picture: Dangerous Climate Change / Global scenario

The population of New Anglia is rising very fast. Low cost housing development across higher

A letter from the future

Dear Ann

I do hope
still been
home, but

Business is great to think all of
official Follow-up of London and
working alone symposium. The
day. Already transaction in
with Azimera i
twenty minutes
great to go into
into the exhibit

I need to me
most this a
really as far
picked up a
have to pay
Frankie and
My only 25
copper is a

Meanwhile I am
vegetable garden
Don't they look
something similar

Do take care Ann

Love Winston xx

This is confident



MARINE
KNOWLEDGE
EXCHANGE
NETWORK



Project 3 - Alternative Framework to Assess Marine Ecosystem Functioning in Shelf Seas AlterECO

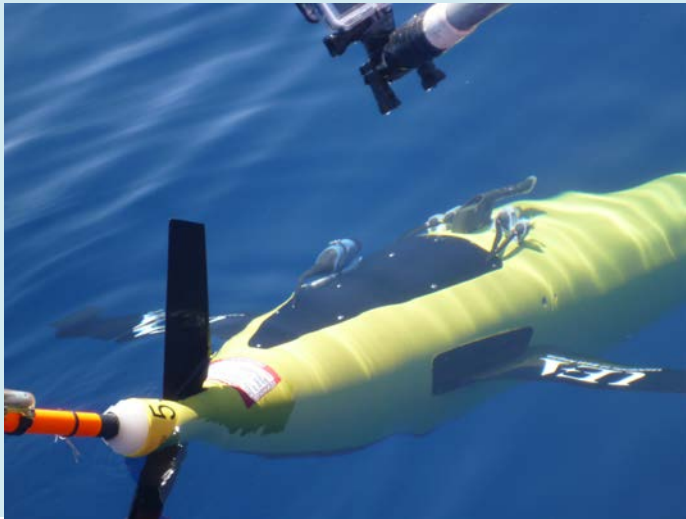
2018 – 2020

30 scientists, 5 missions, 17 Robots, 25,000 miles

NOC, SAMS, PML, Cefas, Liverpool, UEA

Programme Aim

- Develop a novel monitoring framework to deliver improved spatio-temporal understanding of key shelf sea ecosystem drivers.
- This is the first time all the UK glider teams have worked collectively on a NERC programme?



- **Budget- £1.8m**
- Core funders; NERC, Defra, WWF
- Help in kind; DSTL, UK Met Office, Marine Scotland, JNCC.
- [this is 'half the call'].

Study area

Focus area provides seasonally stratifying region and a dynamic tidal mixing front.

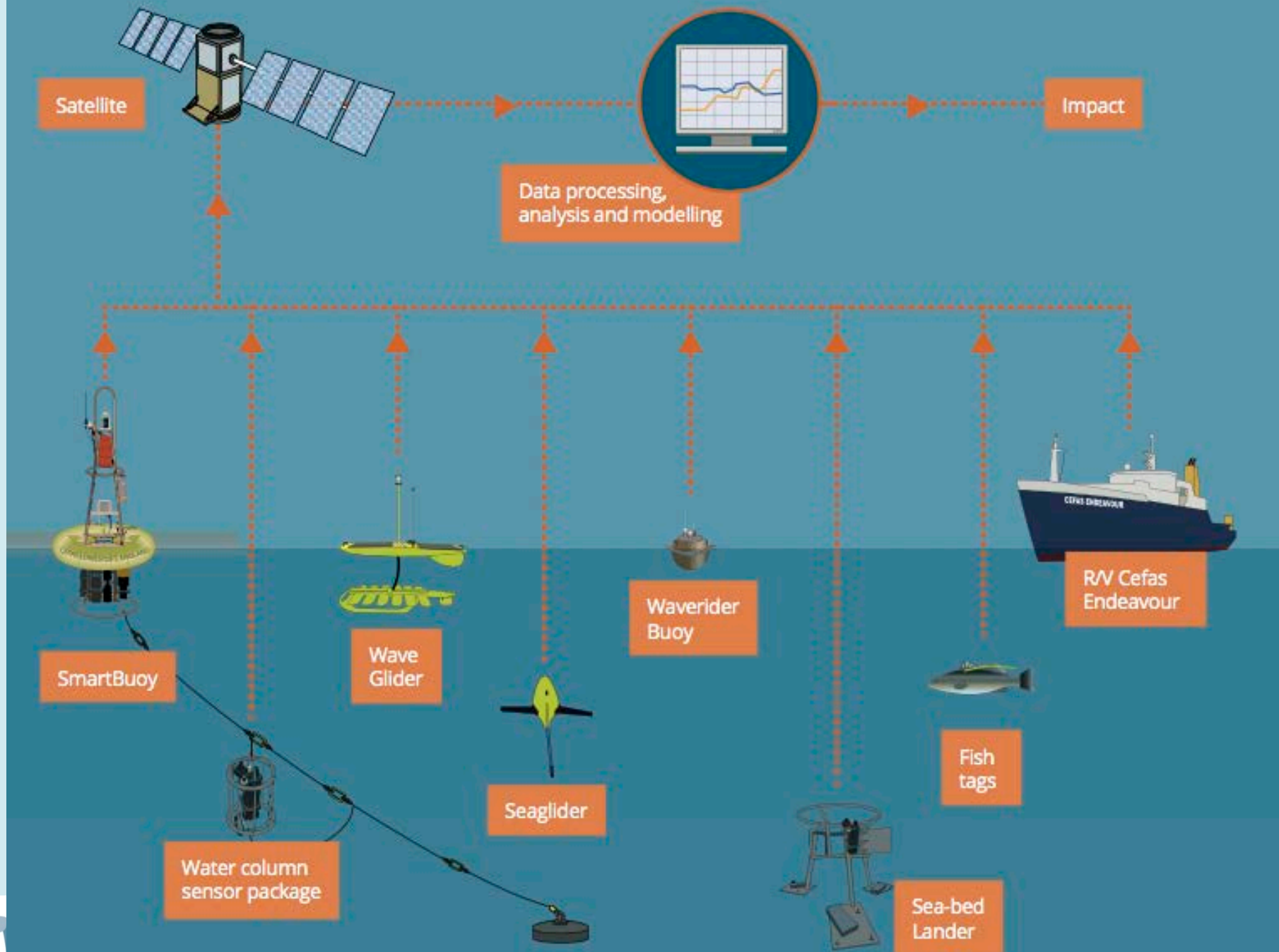


- AlterEco will investigate the seas off the East Coast of the UK, along a vertical North-South transect located to the north of Dogger Bank
- a range of latitude equivalent to Newcastle to Dundee, around 150 km offshore.
- It will comprise five 3-month long 'robot missions' using 17 robots.

Programme Objectives

- Use the latest robotic technology to provide measurements of ocean processes in time and space to better understand the impacts of variability on the functioning of the shelf sea ecosystem in different years.
- Provide the tools necessary for informing ocean forecasting models of the stressors on and consequences of the environmental status of shelf seas.
- Trial a modular integrated framework for a new efficient, diagnostic monitoring system for the sea that has global transferability.





Pathways to Impact programme

Impact plan objectives

- Demonstrate to stakeholders how autonomous systems can help gain a more complete understanding of the role of physical and biogeochemical processes in establishing ecosystem health in shelf seas.
- Maximise the impact of the project on marine and climate policy and management
- Document and report the generated impact back to NERC



Building capacity

Building capacity for effective marine research impact

- Universities are bureaucratic places
- To assure personal effectiveness, build impact capacity from early research career stage (small grant → H2020)
- No impact: No funding?
- Effective project and financial management systems are critical
- Build impact into the research plan from day one – allow policy makers to help shape your programmes
- Multidisciplinary professional teams; designers, economists, science communicators, scientists, coders.

- Don't be a honey bee...



- Be a honey badger...



A close-up, low-angle shot of a massive blue wave crashing. The water is a deep, vibrant blue, and the crest of the wave is breaking into a thick, white foam. The spray of water is captured in mid-air, creating a dynamic and energetic scene. The background shows the continuation of the ocean surface with smaller ripples.

THANK YOU...

katherine@blueconsulting.co.uk