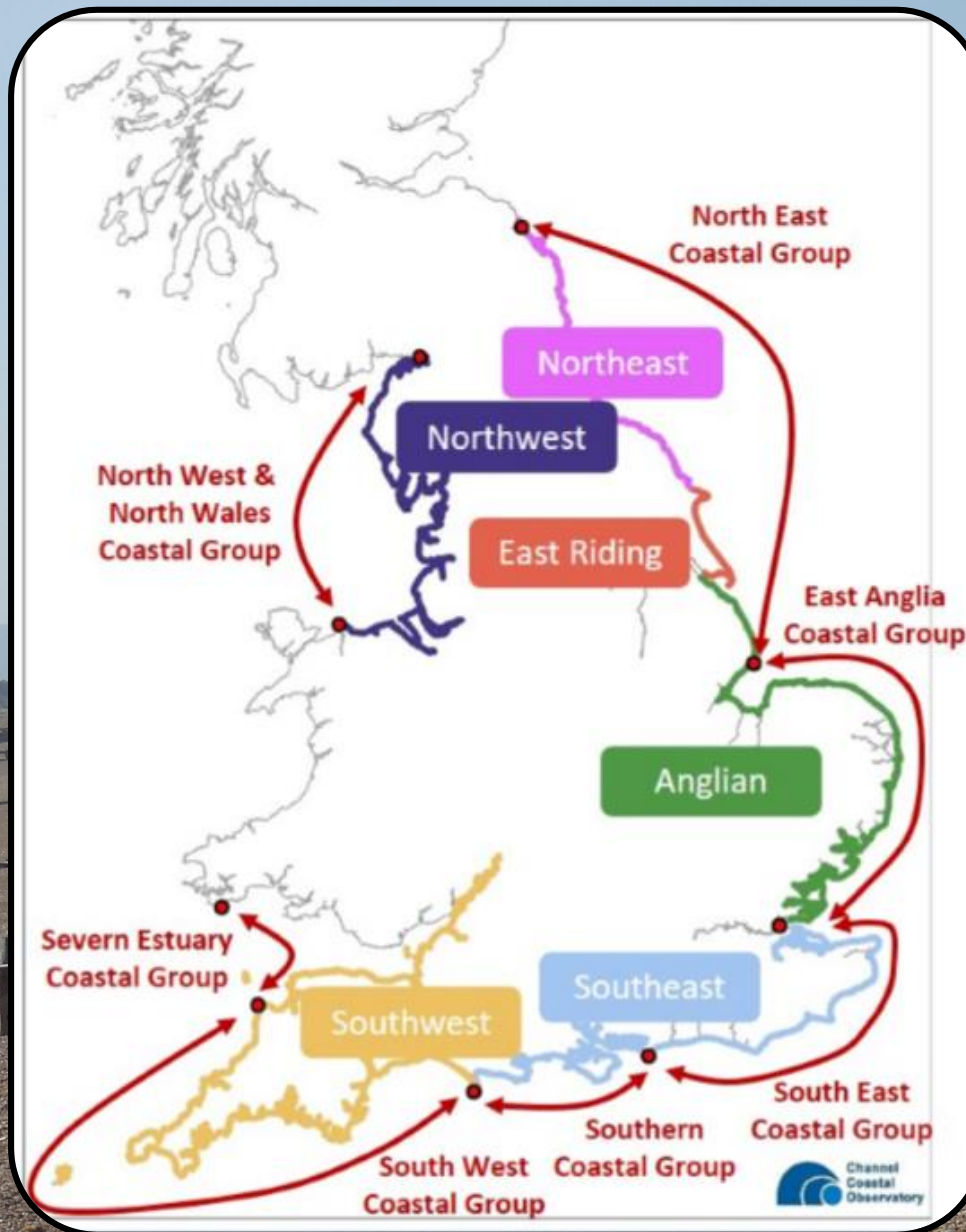




National Network of Regional Coastal Monitoring Programmes of England



Exploring Earth Observation for Coastal monitoring



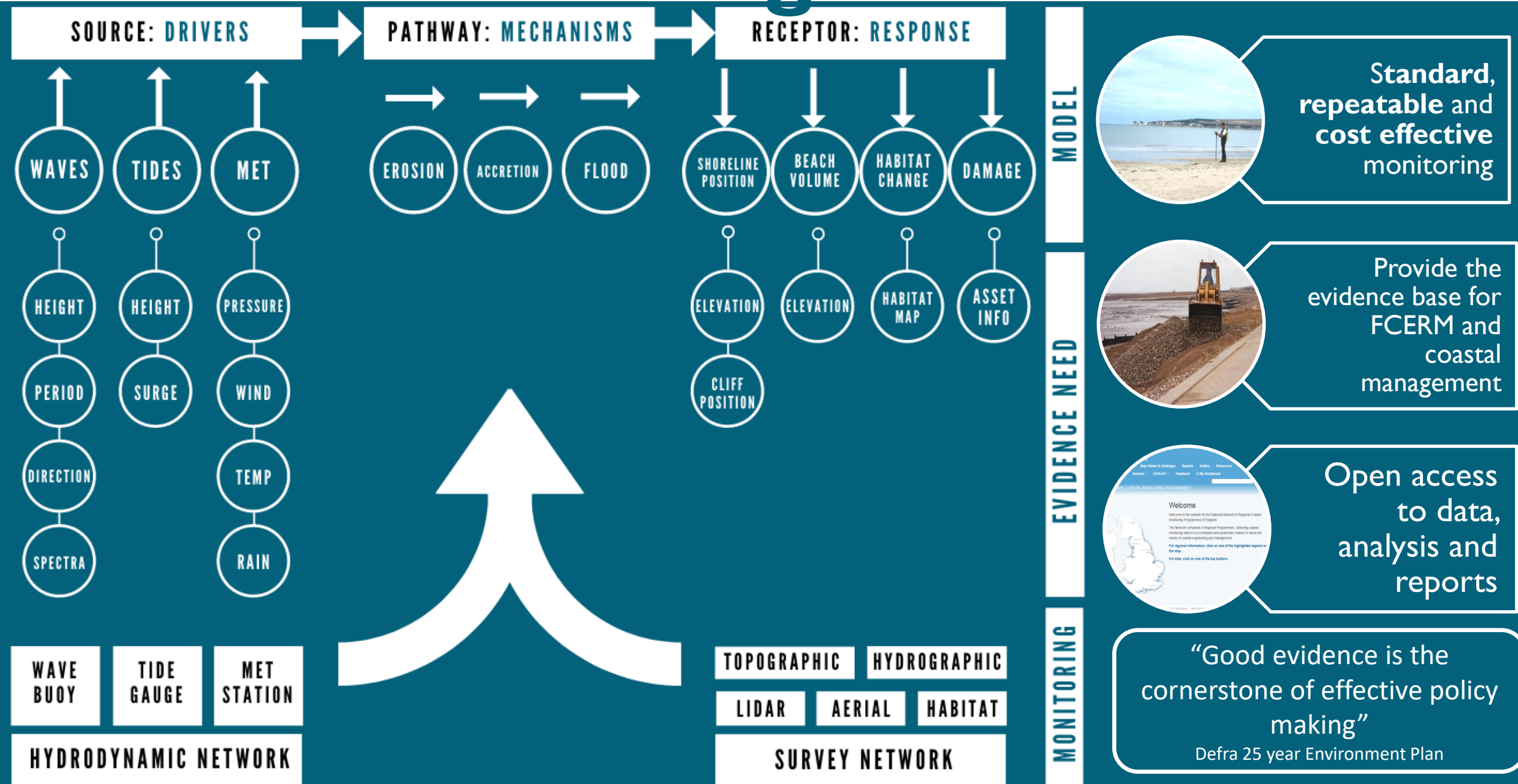
A BRIEF HISTORY OF STRATEGIC COASTAL MONITORING

The National Network of Regional Coastal Monitoring Programmes provides strategic monitoring to support FCERM. This is a brief history of the programme.

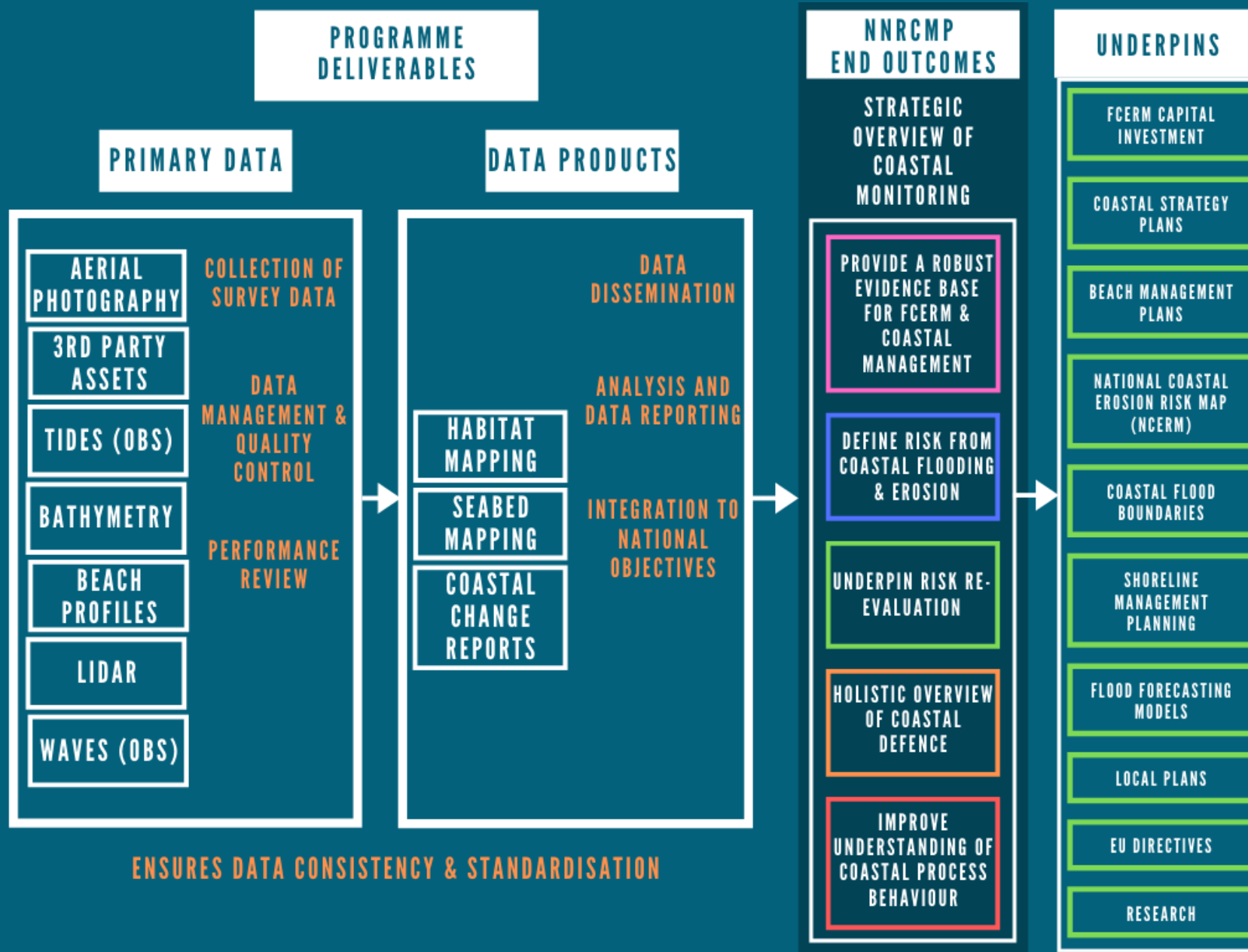
- 1950'S**
East Riding of Yorkshire initiates cliff and beach monitoring, using photography and tape measures, in response to the management challenges of a rapidly eroding coastline. A period of local and regional ad-hoc coastal monitoring.
- 1987**
The **Anglian Coastal Monitoring Programme** originated as the "Anglian Sea Defence Management Study", the first regional scale monitoring programme, and forerunner to the development of **Shoreline Management Plans (SMPs)**.
- 1990's SMPs Established**
- 2002**
Andy Bradbury establishes the **Southeast Strategic Regional Coastal Monitoring Programme (RCMP)** to provide a standard, repeatable and cost-effective method of monitoring the coastal environment.
- 2006**
Strategic monitoring is extended to the **Southwest RCMP**.
- 2006-2011 SMP2**
- 2007**
The Cell 11 (**Northwest**) Regional Monitoring Strategy is approved, expanding the regional monitoring ethos northwards.
- 2008**
The **Northeast Coastal Observatory (NECO)** completes the regional monitoring coverage of England.
- 2011**
The initiation of **Phase I** of the **National Network of RCMPs of England** brings together the regions and establishes strategic monitoring in its current form.
- 2016**
The success of the first 5 years of strategic monitoring secures continuation into **Phase II**.
- 2018**
The **Welsh Coastal Monitoring Centre (WCMC)** is funded by Welsh Government, modelled after the RCMPs.
- 2019-2020 SMP refresh**
- 2021**
Phase III

www.coastalmonitoring.org

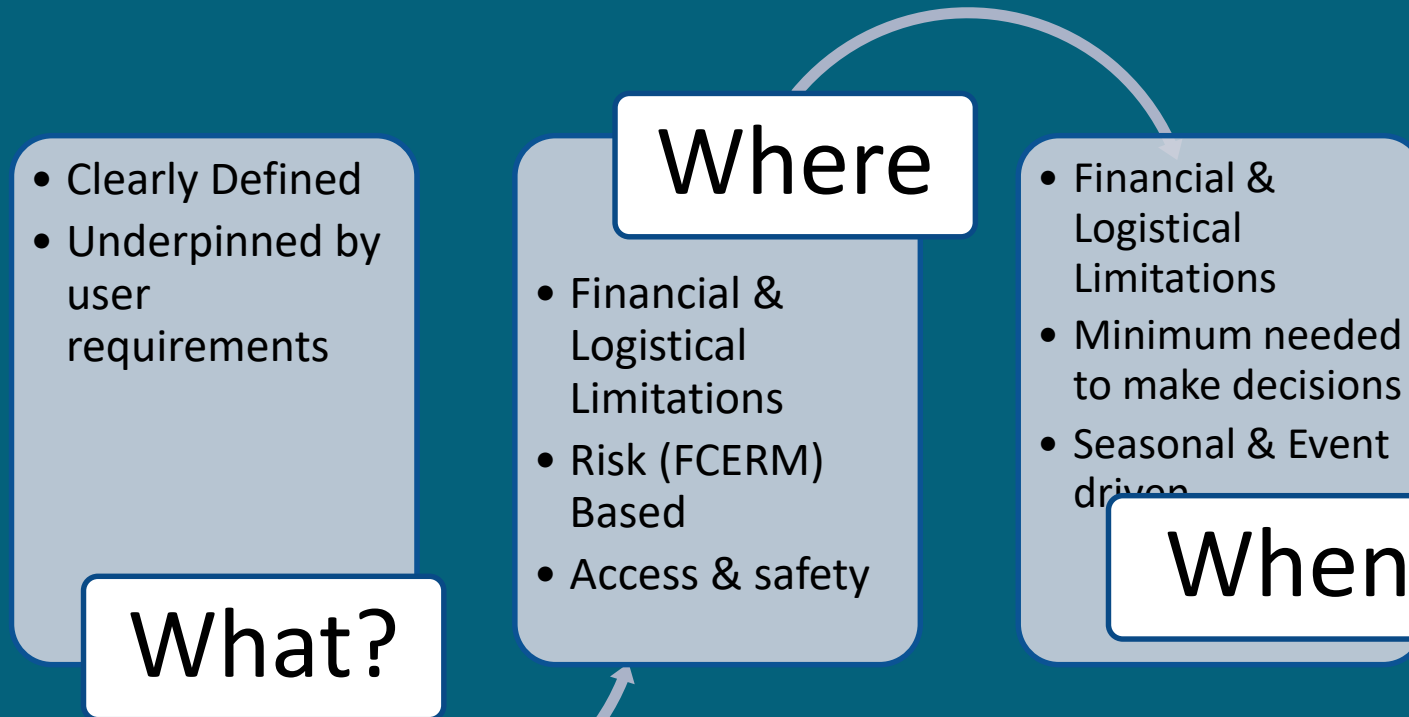
Coastal Monitoring Evidence



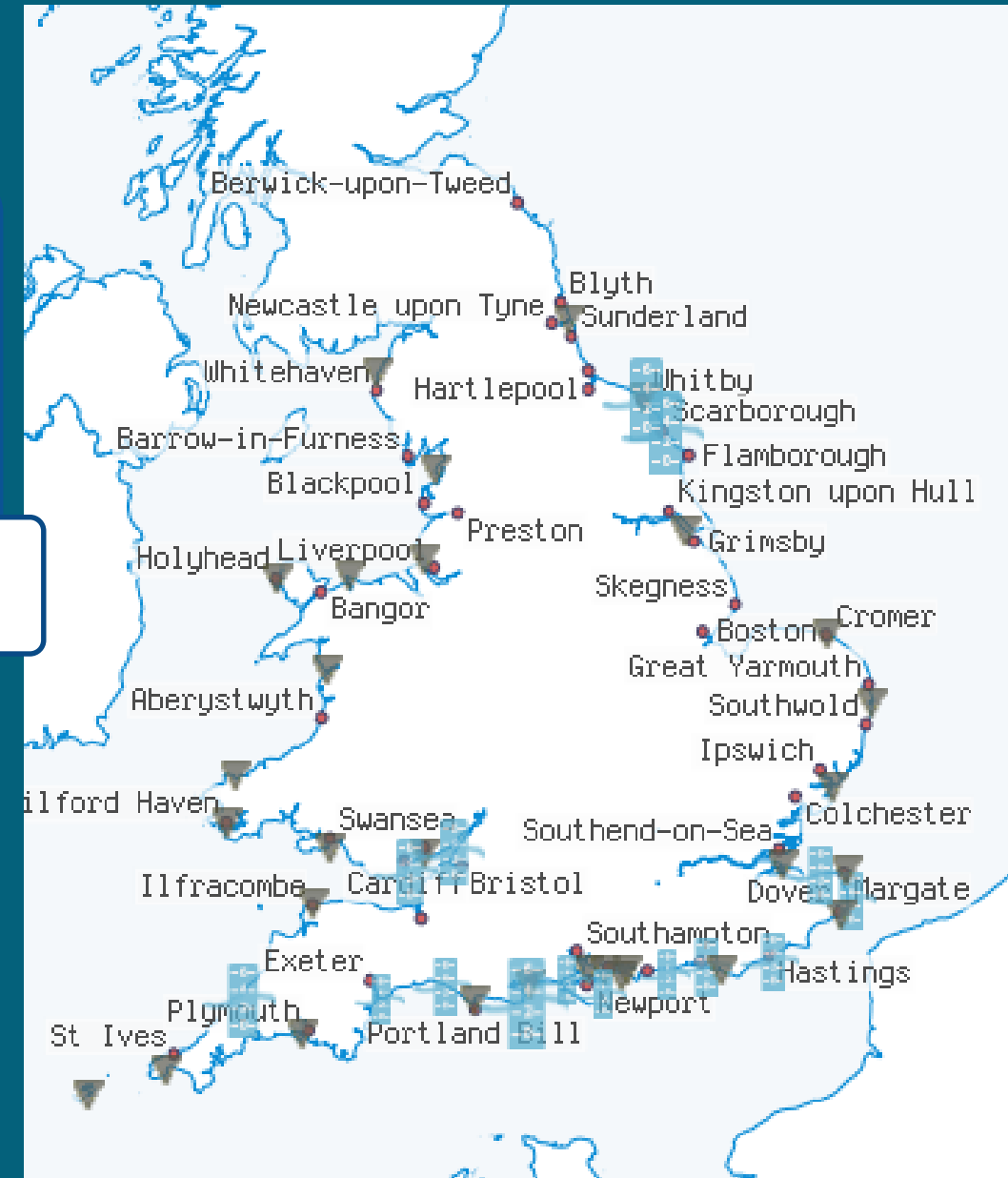
Integrating EO - Where



Gaps and Challenges

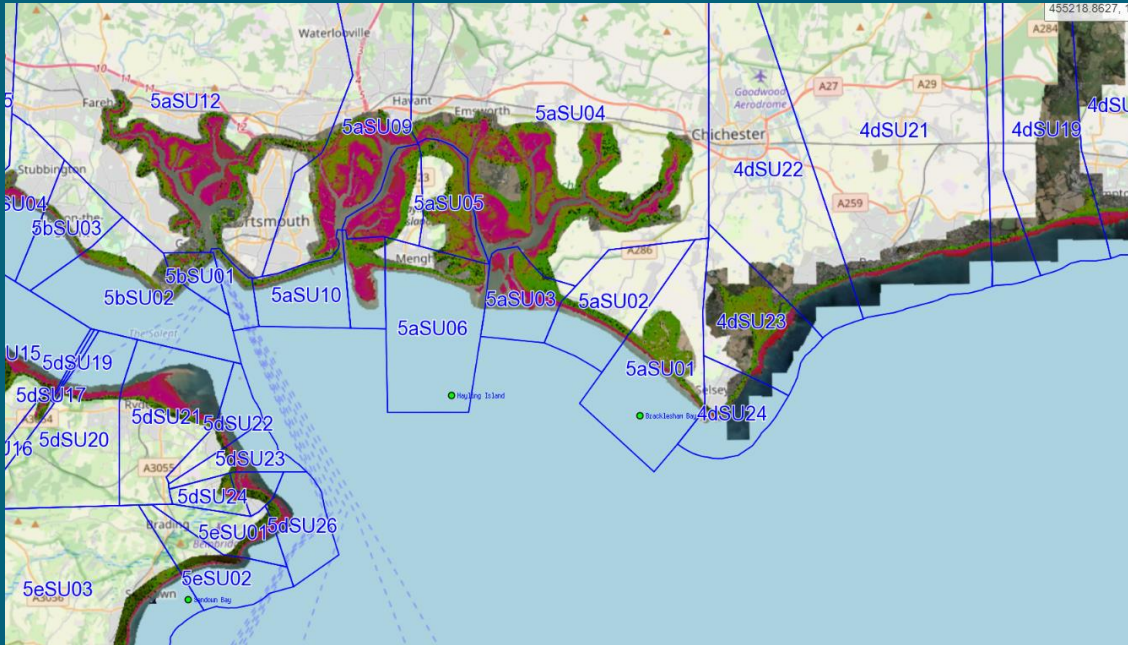


Variable data capture spatially: dependent on risk analysis
Variable data capture frequency: 1 second (waves) to once per 6 years (habitat mapping)
Event driven data capture reliant on requests
Limitations to predictive capability, especially as management priorities change

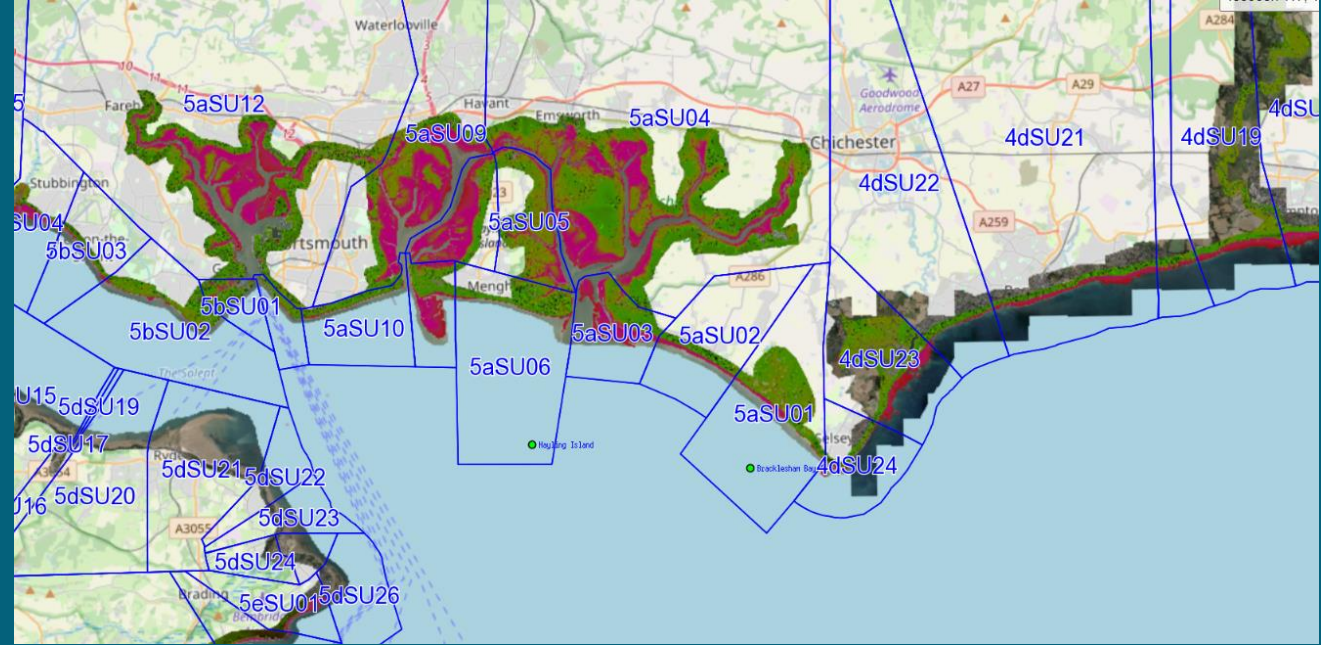


Gaps and Challenges

2013/14



2017/18



Risk Based Monitoring

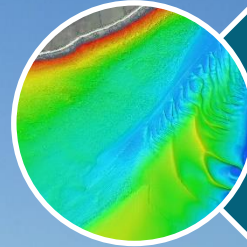
Assets (Properties and infrastructure),
Exposure (waves, tidal range),
Geology & Geomorphology (erodibility),
Management Policy (Informing management decisions)

Max:

Yearly Baseline and Profile surveys, Lidar (~2yrs)

Min: Lidar (~2yrs) – **Chichester Harbour,
Hayling Island East, Langstone Harbour +
Estuaries**

Challenges



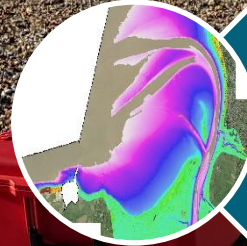
Scaling from local trials to national application



Establishing workflows and best practice



Expertise, Infrastructure and costs



Internal vs External / Replacement vs Supplemental



End Users: Requirements, Training, Expectations and Trust