

# Metocean buoys for bird monitoring

## High temporal resolution wildlife data for EIAs

### What is new?

First-of-its-kind FLD deployment to inform the EIA on a potential remote offshore wind farm, providing year-round environmental and metocean data incl. high resolution video-monitoring for birds:

- **Environmental data** (birds, marine mammals, bats and fish)
- **Traditional metocean data**



### Method design

Custom built floating lidar buoy with:

- 3 bird cameras (4K Axis dome)
- 2 bat sensors
- 2 hydrophones
- Tagged fish sensor
- Tagged bird antennae
- >100TB of data storage
- > 8 months of autonomy offshore

### Mobilization

- Towed 105 NM (180 km) into the North Sea
- 4K imaging of avifauna during daytime



Deployment from Mandal, Norway in October 2024.

### Bird data analytics

Using Spoor's novel software solutions incl. manual quality assurance:

- Ongoing data analytics.
- Informing the final EIA submission.

Flight behaviour:

- Directions & heights

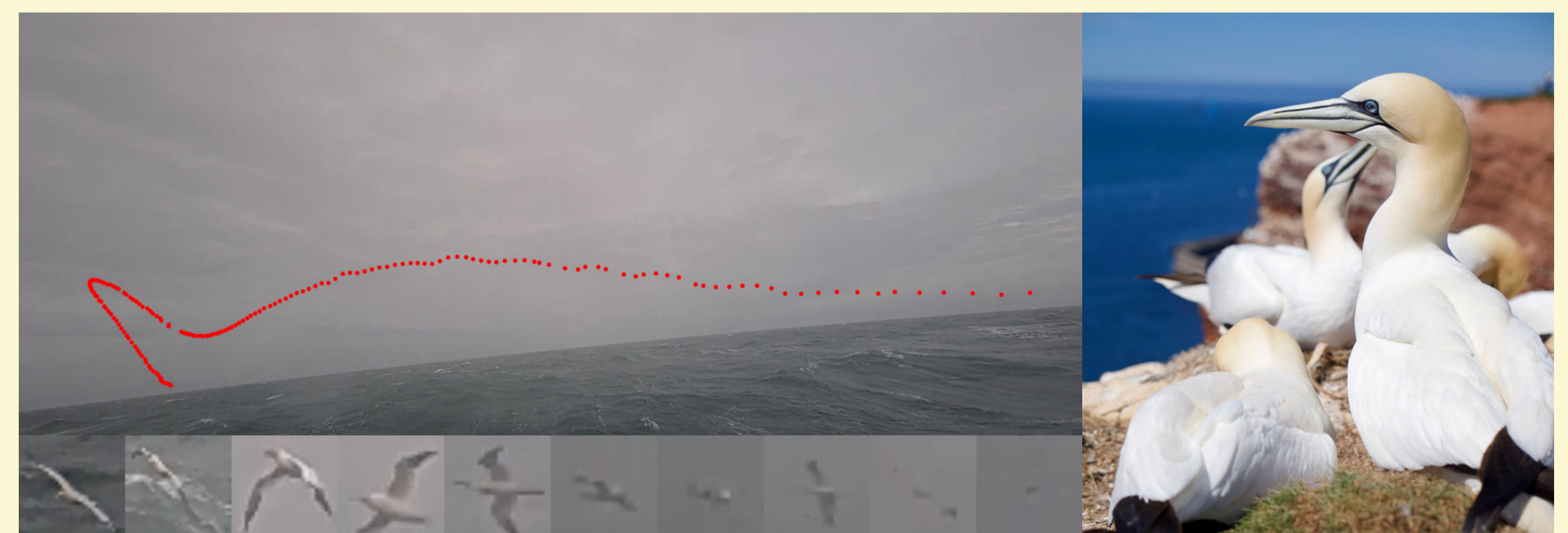
Abundance:

- Seasonal and daily resolution

Species:

- Manual identification incl. endangered species

Weather correlation: Data correlated with wind measurements for improved insights.



Buoy cameras tracking a Northern Gannet.

### Perspectives

- Combine campaigns to reduce cost and risk
- Access remote areas with high resolution data all year
- Improve understanding of environmental dynamics and reduce conservatism in EIAs