

Vindskaber was an inquiry into how the use of Virtual and Augmented Reality might impact on our perception and understanding of the landscape in the future. The project explored the wind as a lens through which to understand landscape, the relationship between people and nature and the immaterial cultural heritage of a geographic region.

Using atmospheric and anthropological methods to understand the wind and its impacts, the project developed a virtual reality intervention that rendered the wind visible. Using drone and ground based photogrammetry, the project created an accurate 3D model of a section of the coastal landscape near Hvide Sande in Denmark. This was used as a foundation for a computational fluid dynamics simulation of the movement of air, to create a three dimensional matrix of wind velocity at every point in space with a resolution of a few centimeters. This velocity field was used to drive a particle simulation that simulated the movement of millions of particles in the virtual wind, rendering visible the flow of air as it swirled and eddied around the surface of the dune landscape.

A public outdoor installation was developed in which participants could wear a VR headset while walking around the same area of the dunes that was simulated. The experience of walking through the dunes while literally seeing the air moving around you was the basis of the project.

The installation was developed in the dunes at Lyngvig Lighthouse for 'Rethinking Tourism in a Coastal City - Design for New Engagements', an Innovation Fund Denmark interdisciplinary investigation and collaboration with anthropologist Britta Timm-Knudsen. It was commissioned by Aarhus University, Aarhus School of Architecture, Ringkøbing-Skjern Council, Naturkraft, VisitAarhus and Danish Coast-and Nature Tourism. Supported by The European Centre for Medium-Range Weather Forecasts (ECMWF) and Sheffield Hallam University