

# Videowall for scientific data exploration and visualization

Jon Blower, Guy Griffiths  
Reading e-Science Centre, Department of Meteorology, University of Reading



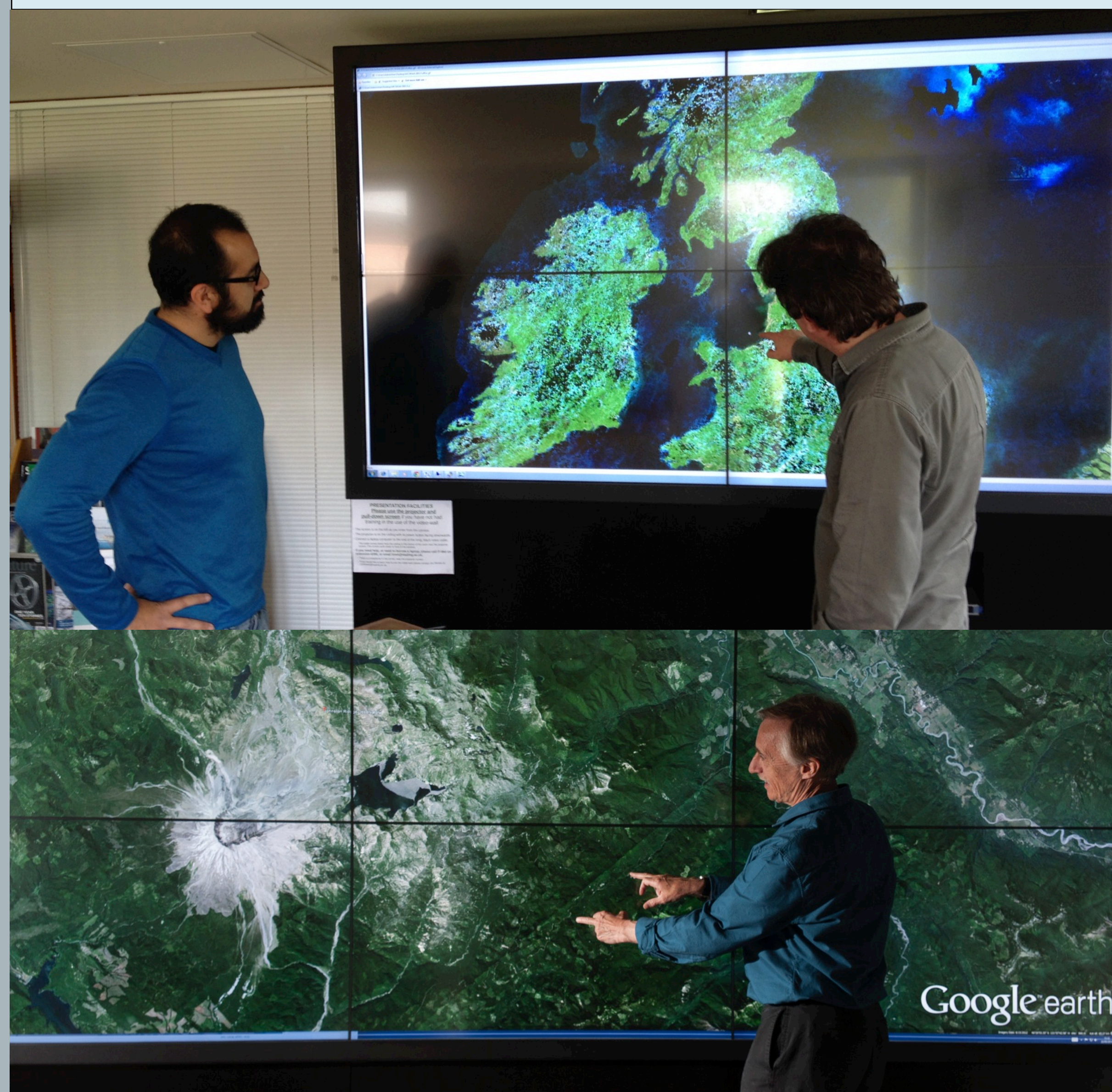
## Introduction

Visualization is a very important tool for helping scientists to understand the ever-growing volumes of diverse environmental data, and for communicating scientific results within and beyond the scientific community.

The videowall is a large, high-resolution multi-touch display that supports interactive exploration and visualization of many different kinds of data. It runs standard scientific software as well as specialist visualization packages and custom-built applications. It is available for use free of charge for research purposes.

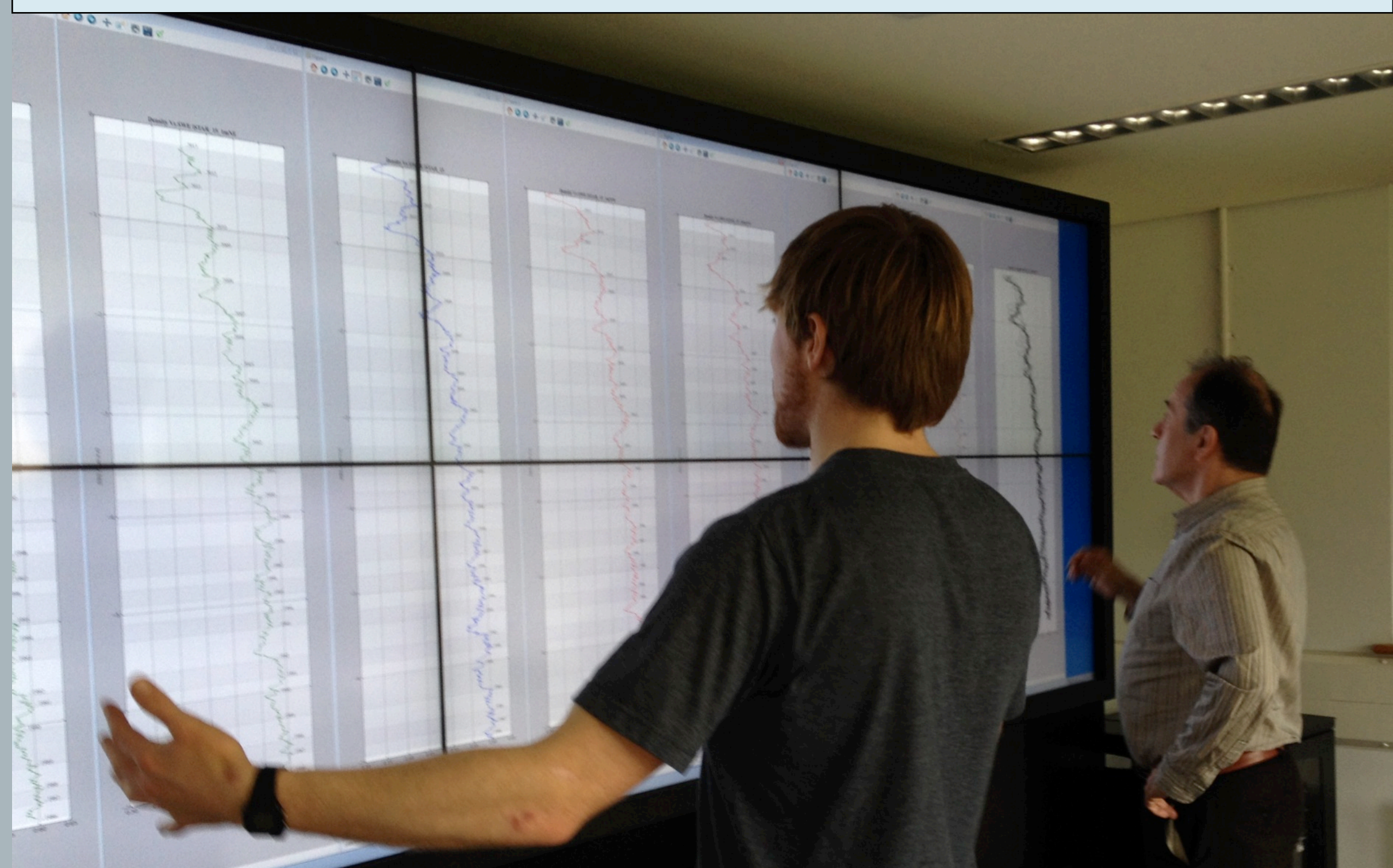
## Explore high resolution imagery

The videowall's high resolution (16 megapixels) allows detailed imagery to be explored, using the multi-touch interface to pan and zoom in an intuitive fashion.



## Look for patterns in your data

Sometimes the human eye is the best tool for spotting interesting features and patterns in your data. In the picture below, several profiles of snow density are being examined to look for relationships between snow age and depth across a transect.



## More information

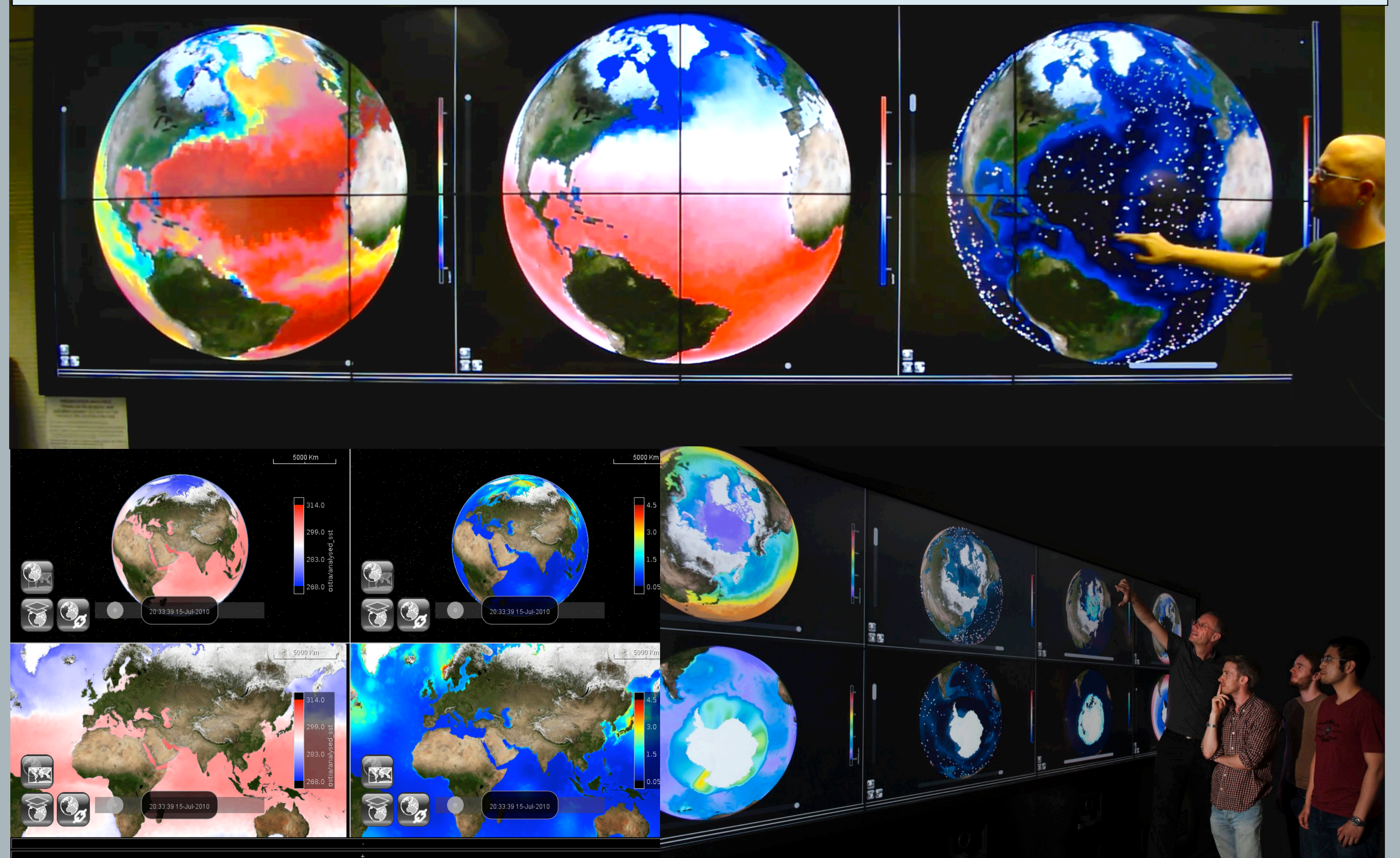
Please email [resc@reading.ac.uk](mailto:resc@reading.ac.uk) with any enquiries.

Visit <http://www.resc.reading.ac.uk/videowall.php> for more information and demonstrations.

## Explore multiple datasets

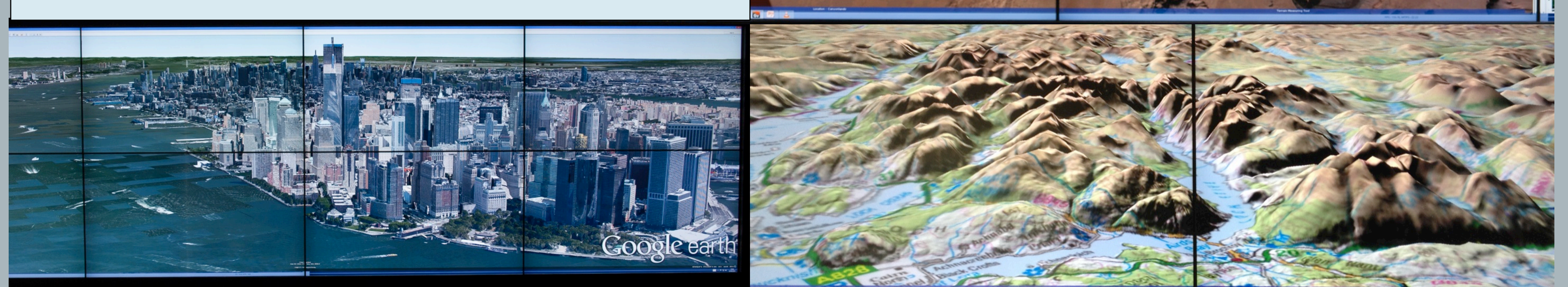
Our custom-built open-source software enables multiple datasets to be brought together and explored in an interactive, synchronized fashion. The pictures below show Earth Observation, model and in situ datasets being compared, using the touch-screen to move smoothly through the data. This software also works on laptop and desktop machines.

Up to four laptops can be plugged in to the videowall, enabling project partners to collaborate on data intercomparison and interpretation.



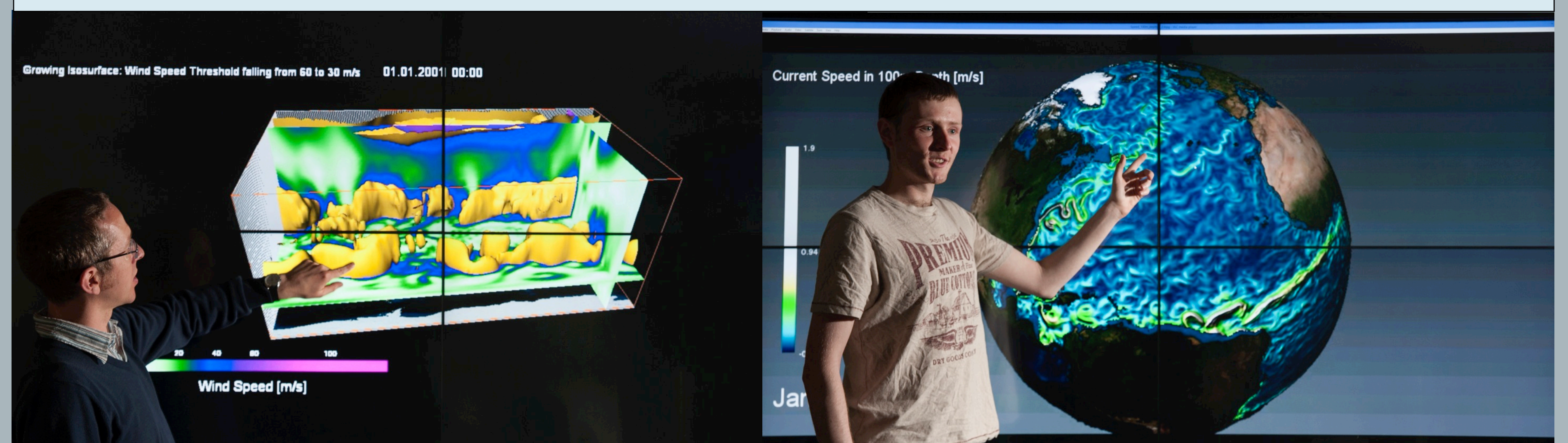
## Explore landscapes and cityscapes

Using the videowall's powerful graphics cards and software such as Geovisionary and Google Earth, you can "fly through" high resolution landscapes and cityscapes using highly accurate digital elevation models, imagery and 3D models.



## Give high-impact presentations

The videowall is ideal for giving eye-catching and memorable presentations to students, external stakeholders or the public.



## Acknowledgements

We gratefully acknowledge funding from the UK Natural Environment Research Council (NERC), through the Big Data Capital call.