

# Andy Hogg (ACCESS-NRI)

## ACCESS as a National Research Infrastructure

### Abstract:

ACCESS is Australia's weather, climate and Earth system modelling framework. ACCESS is used across the research sector – to make predictions across timescales that range from days to millennia and spatial scales from local to global. Historically, ACCESS has been supported by research agencies and universities, but there has been no single coordinated investment strategy.

In late 2021, the ACCESS-NRI (National Research Infrastructure) was established as Australia's newest National Collaborative Research Infrastructure Scheme (NCRIS) facility. Based at the Australian National University, ACCESS-NRI now has a strategic plan and governance mechanisms and is working to recruit the staff that can help fulfil this plan. As an NCRIS facility, ACCESS-NRI has a mandate to coordinate the maintenance and future development of the ACCESS framework for the benefit of researchers and their end users. The establishment of ACCESS-NRI provides an opportunity to unify the climate, weather and Earth system research community around common approaches – in terms of the flavour of model, the methods to diagnose and evaluate model output and the standard of software engineering, documentation and user training that supports ACCESS users.

In this presentation, I will outline initial progress that ACCESS-NRI has made and revise our near-term plans, including the establishment of our documentation hub, the definition of our Model Evaluation and Diagnostic toolbox and the model configurations we will (initially) support. I will also highlight the challenges that our national community faces in determining the future pathways from model development through to applications. A particular challenge is how we can support the translation of fundamental research innovations into enhanced skill in weather or seasonal forecasts, or into future climate projections on the decadal or centennial scale. In particular, I will make the case that we can use research software engineering as a mechanism to unite the scientific community around their common goals.