

Research capabilities

	Idea	Short (< 1 year) Medium (1-2 yr) Long (2-5 yr)	NRI team
1	Building a true ACCESS community - annual workshops of the whole community facilitated by the NRI (a la CESM)	Short	User
	Building a true ACCESS community - facilitate community-wide agreed experiments and their shared evaluation	Short	User
2	A fast coupled model to study long time-scales	Medium	Coupled
3	Single Column Model	Medium	Atmosphere
4	Idealised global model versions - Atmosphere (Aquaplanet, COOKIE)	Short	Atmosphere
5	Idealised global model versions - Ocean	Short	Ocean
5	Idealised Land models	Short	Land
6	Simpler code, experiment and data interaction tools (GUIs?)	Medium	Software
7	Facilitation of research on the model (model development)		

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1	High-resolution coupled model community experiments	Medium	Coupled
2	Facilitation of cursing edge research interaction with modelling partners (UM, MOM) - co-design, access to and sharing of latest developments/codes	Short	Software
3	Enabling integration of latest software developments in computational science (Machine Learning, Linear algebra libraries,...)	Medium	Software
4	Facilitate sharing of diagnostic codes for model analysis	Short	Software
5	Standard tools to analyse standard experiments (ESMValTools)	Short	User
6	Idealised Coupled models	Short	Coupled
7	Visualisation – high quality for communication and interpretation	Medium	User

Any other notes

Numerical methods - synergy with simpler model versions - LFRIC is a big effort in this new library within LFRIC

What are the Australian capabilities to feed back into the models? - Pathways for taking model improvements and configurations - How do we make the partnerships work better?

What are the technical challenges in being up to date with what happens with the overseas models.

Can we even do model development here? What about model evaluation for the latest version?

Long time scale variability - Barriers: Model become slower and slower, which makes it hard to use them. Need a fast model version for long term variability - Need technical work - NRI

Easy code-management - User Interfaces

Relationship with MetOffice difficult - how do we get what we do back into the UKMO system

ACCESS not used by people because it's complex - to get people to use ACCESS it requires flexibility - produce versions that support current research topics (COOKIE as an example).

Any other notes

Single Column Model support - especially what goes on to set up

Tropical Atmosphere-Ocean interaction - Team effort for coupled modelling

ACCESS is not enough of a community model - easy interactions with model (community spirit) - community too small?

What flexibility does the community need - Code manipulation?

COSIMA is a good example for community building

Annual ACCESS conference

Research on the model vs research with the model

Australian research naturally focussed on our area - How well does our model do

Community experiments - something we all agree to do and then use it all contribute to its