Summary of recommendations from NCMAS Subcommittee meetings

An NCMAS subcommittee was formed in Feb/March 2026 to address concerns raised

- by members of the Scientific Advisory Committee (SAC) during the last "NCMAS-SAC Ranking and Allocation Meeting" (held in Melbourne in December 2025)
- by members of the HPC community about the outcomes of NCMAS 2026

Members of NCMAS subcommittee

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This document outlines some of the decisions made during the subcommittee meetings. The decisions can be categorised into the following five major areas

- Timelines for NCMAS 2027
- Changes to the application process
    - Further details of the new (Minimum Resource Allocation, MRA) scheme
    - Expected Maximum Allocation (per application) information to guide applicants
    - Slight change to Assessment Criteria 2
- Ranking Model
- Allocation Model
- Processes for Days 1 and 2 of the SAC meetings

Timelines for NCMAS 2027

One of the concerns raised is the insufficient time members of the SAC have had in 2025 to assess the NCMAS 2026 applications. For NCMAS 2027, we decided to have an earlier call for applications to allow us to provide the applications to SAC members earlier.

The subcommittee has decided to introduce a new element for the activities assessment of NCMAS 2027. Pre-meeting discussions will be held between 20th Nov. – 3rd Dec. 2026. The primary objective of this new activity is to facilitate discussions on applications that exhibit significant score discrepancies. The mechanisms associated with the pre-meeting discussion are as follows

- Discussion Leaders will be assigned to applications assessed by multiple SAC members
- These leaders will be given the normalised scores/ranking for their assigned proposals to identify outliers and large discrepancies
- Discussion leaders will contact individual assessors as needed to discuss the proposals; if needed, online meetings with all relevant SAC members will be called to discuss the proposals
- SAC members may adjust and finalise their proposal rankings and scores based on these discussions

Changes to the application process

Further details of the new (Minimum Resource Allocation (MRA)) category

For NCMAS 2027, we decided to have a new MRA category. This category is for all applications that have requested 1,000 kSUs per annum. Any eligible CI can apply in this category, but we will still identify each application as ECR, Emeritus etc. Proposals in this category are only allowed two pages to address the following criteria

- Criterion 1: Project quality and innovation (40%)
- Criterion 4: Benefit and impact (40%)

The quality of the investigators will also be assessed, but only from data in the online form.

- Criterion 2: Investigator records (20%)

Scores will be allocated to each criterion.

Indicative Maximum per Proposal (for Standard Applications)

We decided that an indicative maximum (per machine per application) will be published in the "NCMAS 2027 Call for Applications" document. This is to give applicants an idea about how much they can ask for and how many CIs should participate in one application. No single application will be allocated more than 3-5% of the total resources for each machine (absolute cap). The *indicative* maximum for each machine (from 2026 data), per application, is published in the "NCMAS 2027 Call for Applications" document.

Slight Change in Assessment Criteria 2 (for Standard Applications)

There was a concern with the NCMAS 2026 SAC that it was unclear whether CIs should be judged based on their HPC usage track record or their general research profile. For NCMAS 2027, we made explicitly clear that the quality of the applicants will be assessed based on their track record as a user of HPC resources ***for their research activities (research/publications based on HPC for the entire team)***. This decision has resulted in a slight change in Criterion 3 (see table below), where the roles and HPC experience of all applicants must be made explicitly clear.

The following changes have been made in the "NCMAS 2027 Call for Applications" document. Changes indicated in the table below.

Current Criteria (for standard proposal)	Revised Criteria (for standard proposal)
2) Investigator track records (30%) Research record and performance relative to the opportunity of the entire team, primarily through publications and research funding, and to a lesser extent via recognition and esteem metrics.	2) Investigator track records and their roles (30%) High-performance computing research record and performance relative to the opportunity of the *entire team*, primarily through publications and research funding, and to a lesser extent via recognition and esteem metrics.

Ranking Model

For NCMAS 2027, all total scores for each individual assessor will be ranked and redistributed according to a Gaussian density distribution with a mean normalised score (0-1) of 0.5 and a standard deviation of 0.5. This is to ensure that all applications for each assessor are normalized to the same scale and ensure homogeneity in the scores when they are combined to produce the final ranking of the applications. Whereas we do acknowledge that this is not perfect, as some assessors may be assigned better proposals than others, on balance, it is a fairer approach compared to individual assessor scale variations in mean and variation we have observed in the past. It is similar to the ARC approach to rescale grades for general assessors, but with a few improvements, e.g., we do take into account assessor confidence in their assessment.

Allocation Model

For the allocation of SUs, two models will be considered. The standard (proportion of requested SUs) and new "maximum" model (maximum based on where each application ranks; the philosophy is that it is ok to give full allocation to small requests even if they are not at the very top, as we do with ERC). We agreed that both models have merits, and that the outcomes of both models will be presented for discussion and for a decision by SAC during the December NCMAS meeting. The final decision of which model will be adopted and which hyperparameters will be used will be decided collectively by the SAC, and the decision will be made based on the objective of NCMAS

"... to maximise research outcomes by supporting high-quality projects with a strong likelihood of success that make appropriate and efficient use of national facilities."

We plan to also test these models based on anonymized data from past years to check the impact of the new models and being able to assert community consistency or necessary change of process. Application of model hyperparameters to past and raw new data may be provided to SAC in advance to accelerate the decision process during the meeting.

Processes for Days 1 and 2 of the SAC meetings

The committee reflected on the processes of Days 1 and 2 of the SAC meeting. It confirmed that Day 1 should be used for ranking the applications and the discussions for allocation of resources should be on Day 2 after all the rankings are confirmed.

The following general principles were agreed upon for processes in Days 1 and 2.

- For Days 1 and 2
    - Panel members will decide and vote on ranking model and hyperparameters to use. All SAC members to consider and agree on a strategic approach to allocation (i.e., the parameters of the allocation algorithm) at the outset of

deliberations, by presenting a range of algorithmically-modelled potential outcome scenarios, considering the impacts of each scenario on the ability to achieve the scheme's stated aims, and selecting an agreed option by committee vote.
    - All SAC members have an opportunity to flag any application for discussion on which they have no conflict.
    - All SAC members will have the opportunity to be part of the discussion for all applications (apart from the ones where they have a conflict of interest) before they finalize their assessment.
    - After the ranking has been finalised on Day 1, outcomes of select hyperparameter models will be presented before the start of the Day 2 meeting. SAC panel members will be asked to review these before the commencement of the Day 2 meeting.

- For Day 2
    - Panel members will have the opportunity to flag proposals for discussion of individual proposals by non-conflicted members to overwrite automatic allocations by the model. The panel will pass a final vote to accept all allocations.