



## **Adapter Scheme**

### **Information for Applicants**

### **Updated for the Q1 2023 Call**

This document outlines the purpose and role of NCI's merit-based Adapter resource allocation scheme, along with eligibility criteria, details of the available resources and details of how to apply.

This document should be read in parallel with the **Dates and Important Information** document pertinent to the relevant quarter of the Adapter Scheme.

**Note that in Q1 2023, a number of changes have been made to the application requirements compared to the previous calls. A list of these changes is provided on page 3.**



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## Changes to the Application Requirements for the Q1 2023 Call

A number of changes have been made to the application requirements for the Q1 2023 call. Applicants are advised to read this document thoroughly to familiarise themselves with the current application requirements. Changes include:

- Postdoctoral researchers are now eligible to apply as Lead Chief Investigator on an Adapter application regardless of funding status. Where previously they were required to have received a grant directly attributable to them to be eligible, it is now sufficient for postdoctoral researchers to name their supervisor and the grant funding supporting them (page 5).
- The use of references, figures and graphs in applications is encouraged and welcomed.

Earlier changes included the following:

- Updated details and weightings of the assessment criteria (page 6).
- Additional information (in particular about track record) required from applicants in their proposal (page 6).
- Applicants who applied in a previous Adapter call will be expected to show that they have taken into consideration the feedback provided by assessors when writing a subsequent application (page 6).
- A proposal template is now available as a Word document. Applicants are strongly encouraged to use the template when drafting their application (page 6).

## Adapter Scheme Background

The [Adapter Scheme](#) has been funded for two years by the Australian Government's Department of Education, Skills and Employment under the NCRIS initiative.

This new scheme will facilitate access to data, enable high-throughput compute, and support other new and emerging ways of engaging with Tier-1 high-performance computing and high-performance data resources. The Adapter Scheme is intended to identify meritorious research projects and provide them with flexible access to NCI's Tier-1 HPC system, including cloud services and storage.

Adapter is designed to identify meritorious research projects that need flexible compute access over a short period. This scheme caters for those users who need smaller compute and data resources in short bursts, rather than those who need millions of compute hours over the course of a whole year.

Adapter Scheme allocations will be up to 250 kSU per project, valid for a 3-month period from when the grant is awarded. Calls for applications will take place at the start of the quarter preceding the quarter the grant will be allocated in. Applicants may receive a maximum of 2 Adapter allocations per year.

All fields of research are eligible to apply.

## Facility Overview

NCI is Australia's national research computing service. Home to Gadi, the nation's most highly integrated and highest performance supercomputer, NCI provides innovative, world-class services to Australian researchers. NCI's infrastructure was established through Commonwealth Government funding.

Adapter allocations for 2023 will be on NCI's petaflop-scale supercomputer Gadi, Nirin Cloud computer, and on the Gdata filesystems.

The Gadi system comprises 3,024 Intel Xeon Cascade Lake compute nodes, with 24 x 2 cores per node, configured with 192 GB RAM per node. Gadi also provides 50 Cascade Lake nodes with 1.5TB of memory, and 640 NVIDIA V100 GPUs in 160 nodes.

The Nirin cloud comprises 18,496 Intel Xeon Broadwell and Sandy Bridge CPU cores, as well as 40 NVIDIA K80 GPUs. The 1,856 Broadwell cores are available with 22TB of memory in a high-availability zone and the 16,640 Sandy Bridge cores are available with 32 TB of memory in a high-capacity zone. The Nirin cloud also has 6 PB of dedicated high-speed Ceph storage.

NCI also offers persistent data storage with capacity in excess of 70 petabytes. Data holdings include significant national and international data collections in the fields of climate, weather, astronomy, earth observation and genomics.

### **Available Resources**

In 2023, the scheme will provide up to 20 MSU per quarter (80 MSU per annum) to be used for computing and cloud resources and supporting storage.

***Storage-only or cloud-only requests will not be accepted.***

Requests for storage to support the project's computations are made at the time of application.

Requests can be made for a mix of HPC, cloud and storage resources according to the following conversion formula:

1 KSU on Gadi is equivalent to 500 core hours.

1 KSU on Nirin is equivalent to occupancy of 0.36 virtual cores for one quarter.

1 KSU on Gdata is equivalent to 0.16 Terabytes of storage for one quarter.

Any data stored through the course of the Adapter project will need to be transferred to an institutional repository or a continuing active project at the conclusion of the grant period.

### **Minimum and Maximum Allocations**

	<b>Minimum Allocation (kSU)</b>	<b>Maximum Allocation (kSU)</b>
<b>Combined compute, cloud and storage</b>	100	250

### **Software**

NCI maintains many software packages for use on its systems. The NCI software catalogue is available online at <https://opus.nci.org.au/display/Help/5.+Software+Applications>.

### **User Support**

NCI operates an expert Service Desk for users during normal business hours, Mon-Fri between 9am and 5pm Australian Eastern time. NCI Staff Scientists can provide assistance with user and project registration and operational issues, and can provide advice on code development and performance, and the use of scientific software in NCI HPC environments.

## Eligibility Criteria

Lead Chief Investigators (Lead CI) of Adapter projects must hold at least a 0.2 FTE research-active position at an Australian higher-education institution or research institute and be based in Australia.

- If a Lead CI holds a **continuous or fixed duration** contract at an Australian higher-education institution or research institute of at least 0.2 FTE for 2022, they are eligible to apply.
  - Emeritus faculty meeting this criteria are eligible to apply.
  - Honorary faculty who do not hold at least a 0.2 FTE contract at an Australian higher-education institution or research institute are not eligible to apply.
- Researchers employed at publicly funded research agencies are not eligible to apply.

Chief Investigators (CI) must hold at least a 0.2 FTE research position at an Australian higher-education institution, research institute or publicly funded research agency, and be based in Australia.

Lead Chief Investigators and/or Chief Investigators on an application must provide evidence of:

- current independent research funding, for example, grants from the ARC or NHMRC, or
- a fellowship at an Australian university (this could be either an independently-held research fellowship awarded to the applicant, or a research fellow appointment supported by another researcher's grant), or
- be a postdoctoral researcher supported by current grant funding for their supervisor/research group.

Any grants referenced by a Lead CI or CI must name that applicant – or in the case of postdocs, their supervisor – as a primary recipient. Applications citing grants on which the applicants are not primary (named) grant recipients will be disqualified for non-compliance.

A person undertaking a higher degree by research is not eligible to be a Lead Chief Investigator on an Adapter application.

An individual may be named as a Chief Investigator or Lead Chief Investigator on:

- **Only one** Adapter project at a time.
- **Only two** Adapter projects in a calendar year.

Individuals with research needs that are greater than what Adapter can accommodate should consider applying instead under the [National Computational Merit Allocation Scheme](#).

Note however that if any member of the project team is currently a member of an active NCMAS project (not only as Lead CI but in any capacity on the NCMAS project), the project for which the Adapter application is being made must be distinct from the NCMAS project.

An Adapter application must demonstrate a requirement for a scalable or high-throughput computational workflow on one or more HPC systems, or a requirement for cloud resources adjoining NCI's datasets, filesystems, or HPC systems.

Successful applications will be set up as new, dedicated Adapter projects on NCI systems. Adapter allocations are not allowed to be used to top-up existing projects funded through alternate sources. Adapter allocations can only be applied to **new projects**, or projects which received Adapter allocations in previous calls, in accordance with scheme eligibility requirements.

## Assessment Criteria

### Details of Criteria and Scoring

Applications will be assessed by the Allocation Committee using the criteria listed below.

#### **Project**

- Weighting: 40%
- Quality, innovation, and significance of the research aims.
- Originality and innovative nature of the computational methods and workflows.
- Advancement of knowledge through the goals of the proposed research.
- Potential for the research to contribute to [Australian Science and Research Priorities](#).

#### **Investigators**

- Weighting: 30%
- Research record and performance relative to opportunity (publications, research funding, recognition and esteem metrics).
- If the the project is to be performed by a team, justification of the contributions of the team members to the project and the expertise of the team in the field of research specific to the project.

#### **Feasibility**

- Weighting: 20%
- Adequacy of the time commitment of investigators to undertake the research and utilise the resources successfully.
- Capacity to realise the goals of the project within the resources requested and, where relevant, demonstration of growing expertise in use of the systems.
- Appropriate track record demonstrating a capacity to use high-performance computing systems effectively at scale.
- Suitability of the system to support the research, and an appropriate and efficient use of the system.

#### **Benefit and Impact**

- Weighting: 10%
- Ability of the project to generate impactful outcomes and produce innovative economic, environmental and social benefits to Australia and the international community.

### Track Record

The Lead CI (applicant) is expected to provide evidence of current research funding and/or a fellowship at an Australian University in support of their research through a link to their ORCID ID and research grant IDs. It is not necessary for applicants to submit a separate list of their publications; such information is provided to assessors via applicants' ORCID listings.

Please note that the research track records of Chief Investigators (CIs) on your project will also be considered by the Allocation Committee. ORCID IDs of CIs should also be provided in the application portal. Lead CIs and CIs should ensure that their ORCID profiles are up to date before submitting an application.

Applicants are expected to explain the composition, roles, and expertise of the project team and how they will contribute to the project. Applicants are encouraged to provide information about any relevant aspects of performance relative to opportunity if they wish.

## Improving Applications in Response to Previous Assessor Feedback

Assessors are looking closely for evidence of improvements in application quality over time. Applicants who applied in previous Adapter calls (regardless of whether or not they received an allocation) will be expected to show that they have taken into consideration the feedback provided by assessors on their previous application and have addressed that feedback in their new application.

## Application Requirements

An Adapter application consists of:

- (i) a proposal uploaded as a PDF, and
- (ii) other information uploaded directly into the online application form.

The assessors will evaluate proposals based solely on the information supplied directly by applicants in the proposal and online application form (items (i) and (ii) above) and the information contained the applicants' ORCID records. Any references to other sources of track record data (e.g. Google Scholar or personal websites) will not be used as part of the assessment process.

## Proposal Components

Applicants are strongly encouraged to compose their proposal using the proposal template, which is available as a Word document on the [NCI website here](#). The template lists the sections and information required in the proposal. The completed proposal should be converted to PDF before uploading it into the Adapter Scheme Application Form.

The recommended length for the body of an Adapter proposal (i.e. sections 3–6 of the list below) is 1000 words, with a maximum limit of 1500 words. Figures and references do not count towards the word limit.

The proposal must include the following sections:

1. Lead CI name
2. Proposal title
3. Project description:
  - a) a brief description of the project,
  - b) justification of the significance, originality and innovative nature of the project,
  - c) an explanation of demonstrable contributions to economy, society, environment and culture beyond the contribution to academic research
4. Information about investigators:
  - a) a brief description of team members' roles and expertise in the specific field of research specific to the project, including details of their expertise in running the types of jobs to be performed,
  - b) any relevant details of track record relative to opportunity (do not include a list of team members' publication outputs in this section; that information will be available to assessors through the ORCID profiles of the Lead CI and any CIs)
5. Technical plan:
  - a) details of the code(s) to be used,
  - b) an execution and workflow plan, and
  - c) a well-justified resource budget outlining the types and costs of resources requested
6. Data plan:
  - a) a plan for managing project data during the project,

- b) indicative plans for data management at completion of the Adapter allocation period. The data plan can include descriptions of data repatriation, archiving, or deletion on project completion.
7. If any member of the project team is currently a member of an active NCMAS project (as Lead CI or in any other capacity), describe how this Adapter project is distinct from the NCMAS project.

### Proposal Formatting Guidelines

- The recommended length for the body of an Adapter proposal (i.e. sections 3–6 of the list above) is 1000 words. Proposals significantly in excess of this length will be viewed unfavourably. Applicants are advised to check the length of their proposal body before uploading it into the Adapter Scheme Application Form.
- Applicants are welcome to include references, graphs and figures in their applications as required.
- **Do not** list all of your publication outputs in the application form.
  - Your ORCID ID will be used for viewing publications.
- Proposal PDFs uploaded into the Adapter Scheme Application Form must be given a descriptive filename that clearly identifies the Lead CI's surname and the proposal title according to the template "CILASTNAME\_Adapter2023Q1.pdf".

### Application Procedure

Applications to the Adapter scheme are submitted through the online [Adapter Scheme Application Form](#).

An Adapter application must be submitted by the Lead Chief Investigator of the project.

#### To apply:

Go to the online Adapter Scheme Application Form:

[https://anu.au1.qualtrics.com/jfe/form/SV\\_0968oHPXQcOWYce](https://anu.au1.qualtrics.com/jfe/form/SV_0968oHPXQcOWYce).

1. Fill in your personal details
  - a. Name, NCI user ID (if applicable), current position and title, institution, email address
  - b. ORCID ID – **Applicants should update their ORCID IDs as soon as possible.**
  - c. Current grant reference number
2. Fill in similar details for up to three additional Chief Investigators to be listed on the application
3. Upload your clearly named PDF proposal
4. Fill in your resource request breakdown across compute, cloud and storage.
5. Acknowledge the Adapter Scheme and NCI's Terms and Conditions of Access.

**All submissions are final.**

**No applications will be accepted after the advertised application deadline for each call.**

## Timeline for the Application, Assessment and Allocation Process

The Call for Applications allocation process comprises the following stages:

	<b>Process</b>	<b>Responsible Party</b>
1	Call for Adapter applications announced	Secretariat
2	Applications accepted	
3	Administrative assessment: eligibility and compliance	
4	Merit assessment of applications	Committee, supported by Secretariat and NCI Technical staff
5	Allocation Committee meeting	
6	Notification of outcomes	Secretariat

The Secretariat will review all applications for compliance as soon as possible following the submission deadline. Applications that are deemed non-compliant will be rejected and the Lead CI notified. Applications that are non-compliant will not progress any further in the application process. Feedback will be provided to allow the applicant to apply in the next Adapter round.

NCI will assess each application for suitability for its systems in the technical assessment. NCI may contact an applicant for further information as part of the technical assessment before the application is considered by the Committee.

### Assessment and Allocation Protocol

Assessment of proposals will be based on a combination of technical and research merit (see the section above on selection criteria) based on material provided in the proposal. All applicants are expected to provide a justification of the resources requested and are expected to demonstrate the capacity to use the requested resources effectively. The Committee reserves the right to allocate all or part of the resources available, and all or part of any specific request.

Assessment and allocation decisions are made by the Allocation Committee with support from NCI staff.

Applicants will be notified of the outcome via email, with instructions on how to set up their projects and access the system.

## Successful Applicant Requirements

### Acknowledging NCI

A condition of accepting an Adapter allocation is that the Project must acknowledge the NCI resources that they have used in all publications and presentations of the associated work. The following is standard acknowledgement wording:

*This work was supported by the NCI Adapter Scheme, with computational resources provided by NCI Australia, an NCRIS-enabled capability supported by the Australian Government.*

The Lead CI also must agree to provide input, if asked, to assist NCI Australia in communicating (via research highlights, case study videos, articles and interviews) the importance of NCI's computational research environments to Australian research.

### Project Completion Survey

Lead CIs of successful applications will be required to complete a project completion survey. Project completion surveys will involve providing progress details and basic user experience information to assist NCI's reporting to the Department of Education, Skills and Employment on its use of NCRIS funds to support the Adapter scheme, and to inform future improvements.

### Appeal Process

**All decisions of the Adapter Scheme Allocation Committee are final.** Appeals will be considered only against administrative or procedural issues and not against decisions of the Committee, assessor ratings or comments.

### Getting Help

Make sure to read all supporting documentation if you have any questions. Contact [help@nci.org.au](mailto:help@nci.org.au) if you require further assistance with your application.