Quick Reference

Please note that you must read the full Call document for guidance before submitting your proposal

ARCHER2 Pioneer Projects

Call type: Invitation for proposals

Closing date for technical assessments: 16:00 on 7 September 2020

Closing date for full applications: 16:00 on 12 October 2020

Funding Available: Through this call you can apply for computational time on ARCHER2, UKRI's Tier-1 High Performance Computing (HPC) service. An approximate total of 3,350,000 CU (ARCHER2 Compute Units) will be available as a sum for all projects supported through this call. Requests for allocations must be for a minimum of 165,000 CU per year, and for up to a maximum of 24 months.

How to apply: A two-stage application process will be used. Stage 1: applicants must submit a Technical Assessment to the ARCHER2 service. Stage 2: applicants must then submit all relevant documentation via the embedded form on the EPSRC Call page.

Assessment Process: Applications to this call are not subject to postal peer review. The proposals will be reviewed and prioritised directly by the panel.

Key Dates:

Activity	Date
Technical Assessment deadline (Application stage 1)	16:00 on 7 September 2020
Closing date for applications (Application stage 2)	16:00 on 12 October 2020
Panel meetings	25-26 November 2020
Expected project start dates	From 7 December 2020

Additional information: This call is only open to proposals where the focus of the proposed research falls (minimum 50%) within the remit of the Engineering and Physical Sciences Research Council (EPSRC).

Contacts: For any queries please contact: Rebecca How, Senior Portfolio Manager, Research Infrastructure, EPSRC
researchinfrastructure@epsrc.ukri.org

ARCHER2 Pioneer Projects

Call type: Invitation for proposals

Closing date for technical assessments: 16:00 on 7 September 2020

Closing date for full applications: 16:00 on 12 October 2020

Related themes: Digital economy, Energy, Engineering, Healthcare technologies, ICT, LWEC, Manufacturing the future, Mathematical sciences, Physical sciences, Quantum technologies, Research infrastructure

Contents of this call document

Summary

The ARCHER2 Pioneer Projects call is for teams of academics and research technical professionals (RTPs) to apply for large amounts of computational resource to conduct computationally intensive modelling, simulation and calculations. Projects should be ambitious and pioneering, we encourage a high-risk/high-reward strategy, and outputs should have significant potential for a high future impact. EPSRC wants to encourage researchers to consider what they can do to significantly push the boundaries in computational research using High Performance Computing (HPC) in their field.

The computational resource will be for the UKRI-funded Tier-1 HPC service, ARCHER2, for up to 24 months. An approximate total of 3,350,000 CU (ARCHER2 Compute Units) will be available through this call and each project must use a minimum of 165,000 CU per year. There is no financial resource funding available, only ARCHER2 computing resource is available through this mechanism.

This call is for compute resource only. Therefore, applicants must demonstrate substantial high performance computing expertise within their team in order to be considered for this call.

The Pioneer Projects call is for pre-competitive research only. Pre-competitive is defined as research prior to the completion of development of a product, including the creation of a first prototype that would not be capable of commercial use. To be eligible for this call, the focus of the proposed research must fall (minimum 50%) within the remit of the Engineering and Physical Sciences Research Council (EPSRC).

A two-stage application process will be used. In stage 1, applicants must submit a Technical Assessment to the ARCHER2 service. For stage 2, applicants must complete an Application Form and submit all relevant documentation via the embedded form on the EPSRC Call page. Applications to this call will not be subject to postal peer review. A specialist panel run by EPSRC will review and prioritise the proposals.

EPSRC aims to run another ARCHER2 Pioneer Projects call in 2021. However, EPSRC reserve the right to change the timetable for this activity based on staff availability and organisational strategy.

Background

Researchers can access UKRI's Tier-1 National High Performance Computing service, ARCHER2, through a variety of different routes in order to conduct their work efficiently and effectively. EPSRC recommend that applicants familiarise themselves with these access routes to ensure they apply to the most appropriate one for their project.

ARCHER2 access mechanisms are:

- **Pioneer Projects –** a call for researchers to request large amounts of ARCHER2 compute for ambitious, computationally intensive simulations and calculations in support of an individual project. This is the successor scheme to the ARCHER Leadership calls.

- **Access to High Performance Computing –** a call through which researchers can apply for computational resource from EPSRC's HPC resources (Tier-1 and Tier-2) for smaller projects lasting up to one year. This is the successor scheme to the ARCHER RAP (Resource Allocation Panel).

- **High End Computing (HEC) Consortia -** if the researcher is within remit of one of the HEC Consortia (formed around communities with substantial and continuous computational needs), then they can apply for ARCHER2 time through the relevant consortium. Some consortia also have Tier-2 time available. More information on the consortia can be found here: https://epsrc.ukri.org/research/facilities/hpc/access/highendcomputingconsortia/

- **Grants -** researchers can request computational time to support their work as part of their full grant applications.

- **Urgent Access -** for research projects which are urgent and timely due to being related to current events.

- **Pump priming -** potential ARCHER2 users can get access to a small amount of resource through a light-touch process in order to test and scale their code for future ARCHER2 usage. This is the successor scheme to the ARCHER Instant Access mechanism.

- **Driving test -** a small allocation for new ARCHER2 users to get them started using the Tier-1 service.

Technical detail about the ARCHER2 service can be found in Appendix 1. Applicants may also find the diagram in Appendix 1 beneficial to identify the most appropriate access mechanism for their work.

Details of the ARCHER2 Pioneer Projects call

Through the ARCHER2 Pioneer Projects call, EPSRC wants to encourage researchers to consider what they can do to significantly push the boundaries in computational research on HPC in their field. We are looking for projects which will use very significant computational resource in order to achieve ambitious, computationally intensive simulations and calculations. This is an opportunity for researchers to create highly impactful work, and projects which are high-risk/high-reward are particularly encouraged.

The arrival of the ARCHER2 service in 2020 also means that this call is an opportunity to capitalise on additional computational capacity and capability, in order to build on the UK's strengths in HPC and exploit these strengths in both existing and newly emerging research fields.

Our objectives across the ARCHER2 Pioneer Projects call are to:

- Encourage and facilitate high-risk/high-reward research that has significant potential for large future impact;

- Award significant computational time to enable leading researchers/research groups to conduct large and ambitious projects delivering high-quality research within EPSRC's remit;

- Encourage and support projects which need to use a very large number of processing cores;

- Challenge and develop the skills of experienced teams in the computational research community;

- Develop techniques at the forefront of high performance computing;

- Support research that is of high national importance and could lead to significant scientific and/or socio-economic impact.

Individual projects funded through this call will be required to:

- Conduct computationally intensive (minimum 165,000 CU per year) and high-quality research, the focus of which must fall within the remit of the Engineering and Physical Sciences councils (EPSRC);

- Make efficient use of the computational resource by ensuring the codes are suitable and scale appropriately to run on ARCHER2;

- Conduct their computational research highly effectively without additional support from EPSRC (and thus will need highly skilled personnel with the project team);

- Use the entirety of their allocation within two years of the project start date, unless an extension is awarded by EPSRC.

Please note that **EPSRC reserves the right to reject proposals which lie outside the scope of this call.** If you are unsure about whether your proposal is in scope, please contact us before preparing your application.

For more information on the remit of EPSRC, please see: https://epsrc.ukri.org/funding/applicationprocess/basics/remit/

For more information about EPSRC's portfolio and strategies, see our website: https://epsrc.ukri.org/research/ourportfolio/

Funding available

The resource available through this call is computational time on ARCHER2, UKRI's Tier-1 national supercomputer. There is no additional financial resource funding available, only ARCHER2 computing resource is available through this mechanism.

An approximate total of 3,350,000 CU (ARCHER2 Compute Units) will be available as a sum for all projects supported through this call. We expect to make 5-8 awards through this call.

Requests for allocations must be for a minimum of 165,000 CU per year, for up to 24 months. For projects requiring smaller ARCHER2 allocations, please refer to our other access routes (see Background section).

Any resource allocated is for immediate use and the start date of the project must be within three months of the panel date. If the ARCHER2 service is not operational

within 3 months of the panel date, then successful applicants are expected to start their project within 3 months of the ARCHER2 service going live.

Equality, Diversity and Inclusion

The long-term strength of the UK research base depends on harnessing all the available talent. EPSRC expects that equality and diversity is embedded at all levels and in all aspects of research practice and funding policy. We are committed to supporting the research community, offering a range of flexible options which allow applicants to design a package that fits their research goals, career and personal circumstances. This includes career breaks, support for people with caring responsibilities, flexible working and alternative working patterns. With this in mind, we welcome applications from academics who job share, have a part-time contract, or need flexible working arrangements.

Peer review is central to EPSRC funding decisions, we require expert advice and robust decision-making processes for all EPSRC funding initiatives. We are committed to ensuring that fairness is fully reflected in all our funding processes by advancing policy which supports equality, diversity and inclusion. Please see our Equality and Diversity webpages (https://epsrc.ukri.org/funding/equalitydiversity/) for further information.

Responsible Innovation

EPSRC is fully committed to develop and promote responsible innovation. Research has the ability to not only produce understanding, knowledge and value, but also unintended consequences, questions, ethical dilemmas and, at times, unexpected social transformations. We recognise that we have a duty of care to promote approaches to responsible innovation that will initiate ongoing reflection about the potential ethical and societal implications of the research that we sponsor and to encourage our research community to do likewise.

Responsible innovation creates spaces and processes to explore innovation and its consequences in an open, inclusive and timely way, going beyond consideration of ethics, public engagement, risk and regulation. Innovation is a collective responsibility, where funders, researchers, interested and affected parties, including the public, all have an important role to play. Applicants are expected to work within the EPSRC Framework for Responsible Innovation given on the EPSRC website (https://epsrc.ukri.org/research/framework/).

Guidance on Journal-based metrics

As part of our commitment to support the recommendations and principles set out by the San Francisco Declaration on Research Assessment (DORA; https://sfdora.org/read/), UKRI reviewers and panel members are advised not to use journal-based metrics, such as journal impact factors, as a surrogate measure of the quality of individual research articles, to assess an investigator's contributions, or to make funding decisions.

The content of a paper is more important than publication metrics, or the identity of the journal, in which it was published, especially for early-stage researchers. Reviewers and panel members are encouraged to consider the value and impact of all research outputs (including datasets, software, inventions, patents,

preprints, other commercial activities, etc.) in addition to research publications. We advise our peer reviewers and panel members to consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.

Equipment

Equipment is not available through this call.

For more information on equipment funding, please see:
https://epsrc.ukri.org/research/facilities/equipment/

Eligibility

Only individuals eligible to hold a full EPSRC grant can apply to this call. Please note that research technical professionals (RTPs), including research software engineers (RSEs), are considered as academic employees and thus they are eligible to be a principle investigator or co-investigator under the same terms as traditional researchers. More information about investigator eligibility can be found here:
https://epsrc.ukri.org/funding/applicationprocess/fundingguide/eligibility/investigators/

Only one application per PI or Co-I is permitted.

Only applications for pre-competitive research will be considered and summative results will have to be published in the public domain. Pre-competitive is defined as research prior to the completion of development of a product, including the creation of a first prototype that would not be capable of commercial use.

This is not a call for consortia, but is intended for large, computationally intensive, individual single-bid projects.

For information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide:
https://epsrc.ukri.org/funding/applicationprocess/fundingguide/

A list of eligible organisations is provided at: https://www.ukri.org/funding/how-to-apply/eligibility/

How to apply

Stage 1 - Applicants must submit a Technical Assessment form to the ARCHER2 service at support@archer2.ac.uk. This form will be assessed by the service and returned to the applicant.

Stage 2 - Applicants must then submit their application via the embedded form on the EPSRC Call page, where they must submit the following as separate PDF documents:

- Document 1: A completed Application Form

- Document 2: A one-page Diagrammatic Workplan

- Document 3: A completed and approved Technical Assessment

- Optional: Applicants may choose to provide Letters of Contribution (to evidence either cash or in-kind support) or General Letters of Support. See Guidance on Writing an Application section for more details and limitations.

- Optional: Applicants may choose to submit a Cover Letter. This will be seen only by EPSRC and not sent to peer review.

Please ensure you adhere to the maximum page length and restrictions on the various documents when submitting your proposal. Any missing, over length or unnecessary attachments may result in your proposal being rejected.

Stage 1: Obtain a Technical Assessment

All full proposals **must be accompanied by a Technical Assessment** completed by both the applicant(s) and the ARCHER2 service. This step is to ensure that the resource requested is appropriate and that all technical requirements have been considered prior to submission.

The ARCHER2 service will examine and comment on the Technical Assessment form, and applicants will have the opportunity to amend the technical aspects based on these comments before the ARCHER2 service decides whether to give its approval.

In order to obtain a completed technical assessment, applicants should:

1. Complete Section 1 of the Technical Assessment form (available for download from the EPSRC Call Page where you accessed this document).

2. Submit the Technical Assessment form (with Section 1 completed) to the ARCHER2 service at support@archer2.ac.uk by **16:00 on 7 September 2020**. Please make sure the subject header of your submission email states that this is an "**ARCHER2 Pioneer Projects submission**".

The ARCHER2 service will normally return the technical assessment (either approved or with requests for amendments) to the applicant promptly, but this is dependent upon the level of demand at the time of submission.

EPSRC and the ARCHER2 service cannot be held responsible for applications that miss the final deadline if the applicant has not met the deadline specified above for submission of the technical assessment.

Stage 2: Application form and other attachments

Applicants should download the Application Form (available for download from the EPSRC Call Page where you accessed this document).

When completing your application form you should take into account the assessment criteria given below (see Assessment Criteria) and keep in mind that proposals will be assessed by a generalist panel drawn from research areas across EPSRC's remit with computational expertise (see Assessment Process).

Applications submitted on an incorrect form will not be considered. Unless explicitly stated otherwise, only information contained in the Application Form and the Technical Assessment, as well as a separate Diagrammatic Workplan and optional

Letters of Support will be considered by the panel. Applicants may choose to submit an optional Cover Letter, but this will not be visible to the panel.

Please ensure you adhere to the maximum page length and restrictions on the various documents when submitting your proposal (see below for further details). Any missing, over length or unnecessary attachments may result in your proposal being rejected.

Submitting an application

To submit their application to EPSRC, the applicant must create separate PDF files of the following documents:

- Document 1: A completed Application Form

- Document 2: A one-page Diagrammatic Workplan

- Document 3: A completed and approved Technical Assessment

- Optional: Applicants may choose to provide Letters of Contribution (to evidence either cash or in-kind support) or General Letters of Support. See Guidance on Writing an Application section for more details and limitations. All Letters should be submitted as 1 PDF document.

- Optional: Applicants may choose to submit a Cover Letter. This will be seen only by EPSRC and not sent to peer review.

PDF documents should be submitted via the SmartSurvey which can be found on the EPSRC call page or at https://www.smartsurvey.co.uk/s/CQ61TD/ before the call deadline at **16.00 on 12 October 2020**. A checklist of the required information can be found in Appendix 2, and further details are given in the 'Guidance on writing an application' section below.

Guidance on writing an application

When drafting the sections below, the applicant(s) should keep in mind:

- **The assessment criterion:** the criterion with which the panel will score the proposals can be found in the assessment criteria section below.

- **The panel expertise:** the panel will draw upon a broad cross-section of HPC users from disciplines within engineering and the physical sciences. EPSRC aims to engage panel members who cover the expertise of the research areas of the submitted applications. However, it is not guaranteed that there will be an expert for every application area. Therefore, **it is important that the case for support can be understood by a general scientific audience** with significant computational expertise.

Please ensure you adhere to the maximum page length and restrictions on the various documents when submitting your proposal (see below for further details). Any missing, over length or unnecessary attachments may result in your proposal being rejected.

Description of the proposed research and its context (up to four pages)
Briefly list the main objectives of the proposed research. Describe your proposed research explaining clearly the novelty and timeliness of the work. Explain how it will deliver a high-quality scientific output or lead to results that will ultimately enable high quality scientific research. If the work has particularly novel elements that could be considered high-risk/high-reward please indicate how the risks will be managed.

It is important that you use this section to describe in detail the methodology you will use to tackle the scientific problem at hand. Please explain why ARCHER2 is the most appropriate resource for this work, rather than other national, regional or local (University) resources.

Importance (up to one page)
Explain why this proposal warrants support in terms of the importance to the UK. This could include (but is not limited to) economic or industrial impacts, advancing world-leading research activities and identifying how the proposed research contributes to national and EPSRC priority areas (https://epsrc.ukri.org/research/ourportfolio/).

Expertise and track record of the team (up to one page)
Provide details of the applicant(s) track record in computational science and engineering, porting, developing and using codes and on the use of HPC facilities such as ARCHER2. Highlight any previous publications or other scientific outputs arising from HPC work relevant to this application. Please include any other information you think is relevant to demonstrate the applicant(s) suitability to undertake this work. This includes information about the expertise of the research team and any internal computational support that may be available to you.

This call can be used to enable non-academic research groups and academic research groups in collaboration with industrial partners (in sectors related to the remits of EPSRC) to conduct pre-competitive research. Non-academic partners (if relevant) should be considered part of the team and discussed here.

Additional Support (up to half a page)
State details of any additional financial and/or technical support for this or other research projects relevant to this application. As this proposal is for computing resources only, applicants should give details of how any other necessary resources for the project (e.g. staff time) will be made available.

Resource Management (up to two pages)
In this section, you need to demonstrate that your code(s) can make optimal use of the ARCHER2 resource. It is therefore paramount that you provide detailed and relevant, benchmarking and scaling data. Should this data not be available, we encourage applicants to seek a brief period of Pump Priming (previously known as the ARCHER Instant Access mechanism) through the ARCHER2 helpdesk (support@archer2.ac.uk).

Please state the total requested number of CU (ARCHER2 Compute Units), memory, and notional costs; as approved by the technical assessment. The requested resource must be profiled into six-monthly allocations, depending on the size of the intended runs and the intended profile of the project over the time of the grant.

Describe the staff resources available and how they will be used complete the project. Keep in mind that it is important that you start the project promptly (see funding requirements in the funding available section), use the resource efficiently and finish within the allocation period.

It is therefore imperative that applicants are well prepared and only request an allocation they can realistically use in the allocated period. This should take into account queuing times, potential issues with newly ported codes, any planned maintenance and the time to respond to intermediate results. Please do not hesitate to contact the ARCHER2 Helpdesk (support@archer2.ac.uk) at an early stage if any computational issues occur. Exciting high-risk/high-reward research is strongly encouraged, but careful consideration is needed to ensure that the requested allocation is appropriate and can realistically be used within the project duration.

Workplan (up to one page)
Please provide a diagrammatic workplan for the proposed project to justify the requested amount of time and CU.

Letters of support (optional, up to one page per letter)
Letters of Support are optional. Letters of Support must be on headed paper and be signed and dated within six months of the proposal submission date.

Letters of Contribution are for partners (academic or industrial) who are integral to the bid and are making cash or in-kind contributions. There is **no limit on the number of Letters of Contribution** that can be included in an application.

However, we recognise that due to the nature of this call it could be beneficial for applicants to evidence claims that their bid has support from certain groups which may not be contributing to the proposal directly. An example of this could be that the proposal may claim to be of benefit to a particular research community and it could be beneficial to have a letter signed by representatives of those communities who are not directly involved with the bid. These are classed as general letters of support, and applicants are permitted to **provide a maximum of three such General Letters of Support**.

General letters of support are only permitted on the following basis:

- The letters of support are specifically to evidence key and central claims made in the proposal;

- A letter of support should not be used if the claims can be evidenced by the applicants within the proposal itself;

- The letters of support should not include additional arguments for why the proposal is valuable.

Any key points for why the proposal should be funded must be made within the proposal itself. Letters of support are not to be used as additional space to make the case for the proposal, we will request that any such letters are removed.

Cover Letter (optional, no page limit)
Applicants can use the Proposal Cover Letter to express any other information they feel is relevant to their application.

This letter will only be seen by EPSRC and will not be seen by the panel. The letter will not be shared with the ARCHER2 service unless this is specifically requested by the applicant. If the letter contains sensitive information, then the applicant should state clearly whether the information is confidential. The Cover Letter should also be used to highlight anything that has been discussed and agreed with EPSRC staff beforehand. For example:

- Applicant is on maternity leave until a certain date;
- Declaration of Interest;
- Additional information about eligibility to apply that would not be appropriately shared in the track record;
- Conflict of Interest for EPSRC to consider in panel participant selection;
- The application is an invited resubmission.

Other guidance

EPSRC will not fund a project if it believes that there are ethical concerns that have been overlooked or not appropriately accounted for. If the research will involve human participation or the use of animals covered by the Animals (Scientific Procedures) Act 1986 it is recommended that applicants pay particular attention to the guidance highlighted below. EPSRC reserves the right to reject applications prior to peer review if the Ethical Information sections are not completed correctly.

Other relevant guidance includes: EPSRC's policy on animal use in research (https://www.epsrc.ukri.org/about/standards/animalresearchpolicy/) and the Responsible Innovation Framework (https://epsrc.ukri.org/research/framework/).

For advice on writing proposals see:
https://epsrc.ukri.org/funding/howtoapply/preparing/

Assessment

Assessment process

Stage 1 - Technical Assessment

Applicant must fill out section 1 of the Technical Assessment Form. Technical Assessment forms will be reviewed by technical reviewers at the ARCHER2 service (support@archer2.ac.uk).

The Technical Assessment stage is carried out to ensure that the level of resources requested have been appropriately scoped and that all technical requirements have been considered prior to submission of an application to EPSRC. Applicants can find the criteria the services will use to assess their technical submission in Section 2 of the Technical Assessment form. Applicants will receive comments made by technical reviewers on the Technical Assessment form and should respond to these by amending the technical aspects of their forms. Once the technical reviewer at the service is satisfied that their comments have been addressed, they will approve the Technical Assessment, and the form will be returned by email with sections 1 and 2 completed as required for the full proposal stage.

It is recommended that applicants encrypt the email request for a Technical Assessment when it is sent to the ARCHER2 service (support@archer2.ac.uk).

Following this stage, and providing the technical assessment endorses the proposal, applicants will submit their full proposal to EPSRC as per the Submitting An Application section.

Stage 2 – Full Application

Applications to this call are not subject to postal peer review. Applications will be reviewed and prioritised directly by a panel of experts, selected to comprise a broad cross section of HPC users from disciplines within engineering and physical sciences. EPSRC aims to engage panel members who are experts in working with large HPC compute resources in academia or industry in the research areas of the submitted applications. However, EPSRC cannot guarantee an expert for every exact application area. Therefore, it is important that the case for support can be understood by a general, scientifically and computationally literate audience.

At the meeting, the panel will rank the submitted proposals in priority order for allocation. This decision will be made on the assessment criteria.

This call does not have an expert peer review stage prior to the panel and has no right to reply stage.

EPSRC reserves the right to award a reduced level of resource upon recommendation from the panel.

In the event of this call being substantially oversubscribed as to be unmanageable, EPSRC reserve the right to modify the assessment process.

Assessment criteria

The assessment criteria used by the panel to rank proposals are:

- **Quality (Primary):**

    The degree to which research excellence is achieved within the proposal itself or enabled through the proposed computational work. In particular:

    o The novelty, ambition, adventure, transformative aspects or potential outcomes;

    o The relationship to the context, timeliness and relevance to identified stakeholders;

    o The suitability of the proposed methodology and the appropriateness of the approach to achieving impact;

    o The work capitalises on the nationally unique capabilities of the ARCHER2 service, e.g. by effectively using the high number of cores/nodes linked by a fast interconnect.

- **Resource management (Secondary):**

    The effectiveness of the proposed planning and resource management of the project including whether:

    o The workplan is appropriate and achievable;

    o The computational resource requested are appropriate and have been fully justified and evidenced, that the computational resource will be

used effectively and that there is sufficient staff time dedicated to the project;

- o The stated outputs are appropriate for ARCHER2 and could not be achieved on another available service (such as local university resources or Tier-2);

- o The codes to be used are suitable to, and can scale appropriately to, run on ARCHER2 (accounting for the stage of development of the code);

- o The potential risks (with regards to the high-risk/high-reward nature of the project) have been considered and are appropriately mitigated.

- **Importance (Secondary):**

The degree to which the research or research enabled through the proposal:

- o Enhances the UK's position as a leader in computational skills and high performance computing techniques;

- o Contributes to, or helps maintain: the health of other disciplines, addressing key UK societal challenges and/or future UK economic success, and development of emerging industry(s);

- o Complements other UK research funded in the area, including any relationship to the EPSRC portfolio.

- **Applicant(s) (Secondary):**

The applicant's ability to deliver the proposed project and achieve the desired outcomes, with a focus on the computational elements of the work, without additional computational support. In particular:

- o Appropriateness of the track record of the applicant(s);

- o Balance of skills of the project team, including collaborators.

Feedback

All applicants will receive summarised feedback from the evaluation panel.

Grant additional conditions (GACs)

Grants will be subject to the standard UK Research and Innovation grant conditions however the following additional grant conditions will be added to this call:

GAC 1: Publicity and Branding

In addition to RGC 12.4 Publication and Acknowledgement of Support, the Grant Holder must make reference to ARCHER2 accommodating the project (including reference, "ARCHER2 PR17125") and UKRI funding and include the UKRI logo and relevant branding on all online or printed materials (including press releases, posters, exhibition materials and other publications) related to activities funded by this grant.

GAC 2: Extensions

Notwithstanding RGC 6.1, computational allocations awarded through this call may not be extended and any compute units which have not been used by the end of the project will be lost. Exceptions to this are considered to fall under RGC 8.3 and RGC 8.4. Exceptions should be reported to the relevant service as soon as is feasible.

GAC 3: Reporting

The Grant Holder is responsible for providing a final progress report against non-financial performance metrics, within 3 months of the completion of the project. A detailed list of performance metrics and instructions for reporting will be agreed with the Grant Holder upon commencement of the grant. A summary of this report will be published on EPSRC's website.

GAC 4: Use of allocation

EPSRC can request information on allocation if usage is not in line with expected usage breakdown, more information is detailed in the Technical Assessment. EPSRC reserves the right to remove allocation if it is not being used effectively.

Moving forward

Submissions to this call will **not** count towards the Repeatedly Unsuccessful Applicants Policy. Further information about the policy can be found at: https://www.epsrc.ac.uk/funding/howtoapply/basics/resubpol/rua/

EPSRC aim to notify applicants of their outcomes within 10 working days of the panel meeting. Successful applicants should then contact the ARCHER2 Helpdesk (support@archer2.ac.uk) to confirm the start date of their project.

The start date of each funded project must be within three months of the panel date. If the ARCHER2 service is not operational within 3 months of the panel date, then applicants are expected to start their project within 3 months of the ARCHER2 service going live.

Key dates

Activity	Date*
Technical Assessment deadline (Application stage 1)	16:00 on 7 September 2020
Closing date for applications (Application stage 2)	16:00 on 12 October 2020
Panel meetings	25-26 November 2020
Expected project start dates	From 7 December 2020

*EPSRC aims to adhere to the key dates as published, however there may be exceptions where the panel meeting may have to change due to panel member availability.

Contacts

For technical queries, please contact the ARCHER2 Helpdesk at: support@archer2.ac.uk

For any other queries please contact: Rebecca How, Senior Portfolio Manager, Research Infrastructure, EPSRC. researchinfrastructure@epsrc.ukri.org

Change log

Name	Date	Version	Change
Rebecca How	16.07.20	1	N/A

Appendices

Appendix 1: ARCHER2 Service details

Service details

Service Contact Details	support@archer2.ac.uk
Service Webpage	https://www.archer2.ac.uk/
Service Reference	ARCHER2 PR17125

Hardware and Technical specifications

System name	ARCHER2
Compute nodes & Processors	5,848 compute nodes, each with dual AMD Rome 64 core CPUs at 2.2GHz, for 748,544 cores in total and 1.57 PBytes of total system memory
Interconnect	Cray Slingshot
Storage	14.5 PBytes of Lustre work storage in 4 file systems
Software available	https://www.archer2.ac.uk/about/hardware.html
Additional information on the hardware available	https://www.archer2.ac.uk/about/hardware.html

Resources available through this call

Unit of Allocation	ARCHER2 allocates its compute resource in ARCHER2 Compute Units (CU). Please note:

- 1 node hour on ARCHER2 costs 1 CU, unless jobs are submitted in low priority queues where a discount applies.
- 1 CU on ARCHER2 should (at a minimum) provide at least as much scientific throughput as 1.5156 kAU on ARCHER for most codes. This is based on conservative estimates of the performance of ARCHER2 relative to ARCHER, and thus is subject to variability based on the code used.

Total level of computational resource available through this call	3,350,000 CU
Project length restrictions over and above those in the call	24 months maximum limit
Minimum requests	Users must request a minimum of 165,000 CU per year

Access Routes

Prospective ARCHER2 users may also find it useful to use the following diagram to determine which access route is best placed to meet their needs:
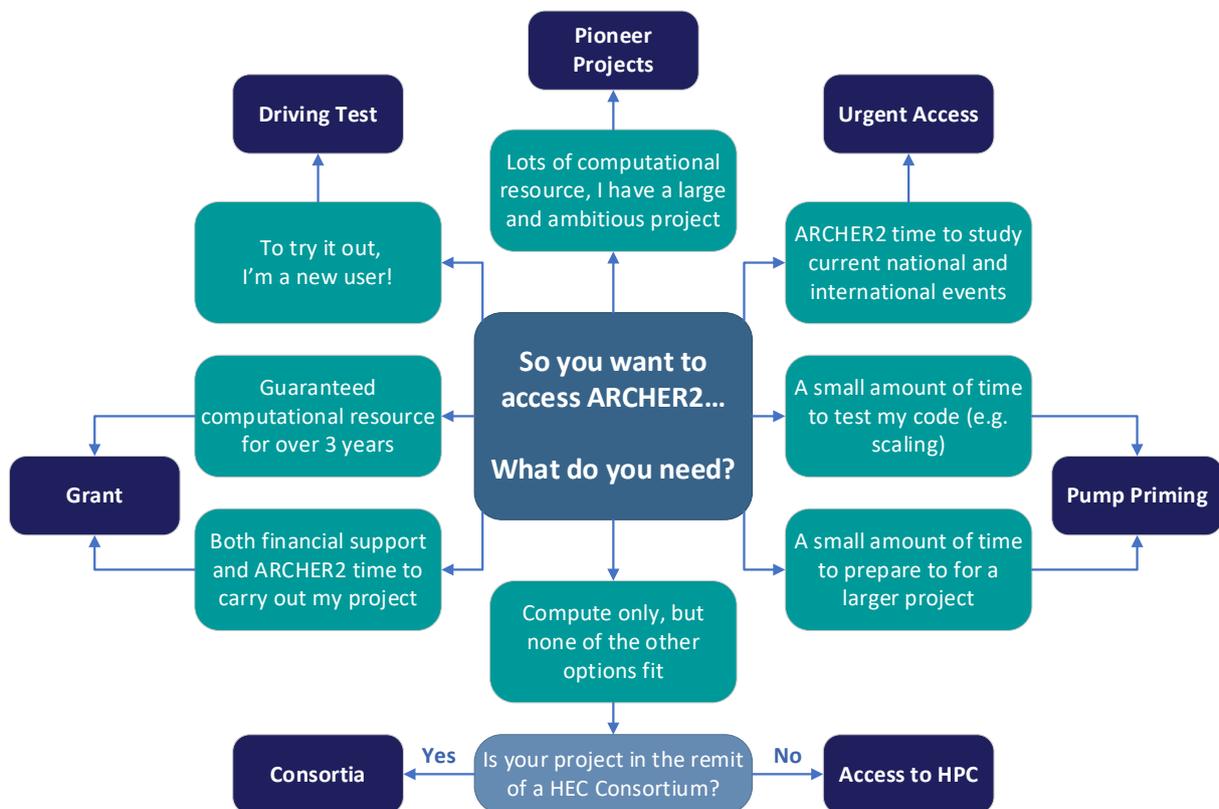
Appendix 2: Application Checklist

Details on the expected content for each of these sections can be found under Guidance on Writing an Application.

Please ensure you adhere to the maximum page length and restrictions on the various documents when submitting your proposal (see below for further details). Any missing, over length or unnecessary attachments may result in your proposal being rejected.

Application Stage 1: Submitted to the ARCHER2 Helpdesk.

Text/Document	Maximum Page length
Technical Assessment (section 1 completed)	N/A

Application Stage 2: When submitting your application via the SmartSurvey (see Submitting an Application) please ensure the following are attached in the specified section as a single pdf document.

Text/Document	Maximum Page length
Completed Application Form including:	
Description of the proposed research and its context	4
Importance	1
Expertise and track record of the team	1
Additional Support	½
Resource Management	2
Completed Technical Assessment	N/A
Diagrammatic Work Plan	1
Letters of Support (optional)	1 (per letter)
Cover Letter (optional)	N/A