Australian Government
Australian Research Council

Research Grants Services
NISDRG Assessor Handbook

A guide for both **General** and **Detailed** Assessors on the selection process and assessing applications under the National Intelligence and Security Discovery Research Grants (NISDRG) grant opportunities for

Intelligence Challenges (NI23)

National Security Challenges (NS23)

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Contents

1. Overview

The Australian Research Council (ARC) provides grants administration services to other Australian Government entities who are managing grant programs focussed on the university and research sector. The ARC provides research grants administration through the ARC's Research Grants Services (RGS) team. This process is managed through individual portals of the ARC's Research Management System (RMS).

This Handbook provides instructions and advice for both **General** and **Detailed** Assessors on the assessment process for the National Intelligence and Security Discovery Research Grants (NISDRG) program, administered by the ARC through RGS on behalf of the Office of National Intelligence (ONI) and the Department of Defence National Security Science and Technology Centre (Defence-NSSTC).

The specific objectives and assessment criteria for grant opportunities under the NISDRG program are listed in Appendix 1, and are also available in the relevant Grant Guidelines on GrantConnect.

This handbook covers assessment for:

1. National Intelligence and Security Discovery Research Grants (Intelligence Challenges)– NI23
2. National Intelligence and Security Discovery Research Grants (National Security Challenges) – NS23

This handbook does not cover the assessment process for grant opportunities offered under the ARC's National Competitive Grants Program (NCGP).

2. The assessment process

The objective of the assessment process conducted by RGS on behalf of ONI and Defence-NSSTC is to ensure effective peer review so that a shortlist of the highest quality applications are provided to the grant Funding Entity for funding.

After the peer review and shortlisting process is complete, the grant Funding Entity will review the shortlisted applications with respect to:

- fit with the Intelligence Challenges or National Security Challenges
- the National Intelligence and Security Communities priority research needs
- Australia's national interest, including national security
- projects already funded and the funding envelope available.

The grant Funding Entity then makes recommendations to the relevant Delegate who decides which projects will be allocated funding.

Peer review, managed by RGS on behalf of ONI and Defence-NSSTC, plays a critical role in the assessment of NISDRG grant applications and is undertaken by two groups of experts known as General and Detailed Assessors. Experts from each group assess applications against the grant opportunity assessment criteria and contribute to the process of scoring and ranking applications. The peer review process for NISDRG will also provide advice on whether the applications suitably address an important gap in knowledge or a significant problem as implied through the Intelligence Challenges or National Security Challenges.

The Research Management System (RMS) is the web-based computer system available for the preparation and submission of applications, assessments and rejoinders for NISDRG grants administered by RGS. This document, The *Research Grants Services NISDRG Assessor Handbook*, a guide for **General** and **Detailed** Assessors to navigate the RMS assignment and assessment process, is also available on the RGS website.

Each NISDRG grant opportunity has its own specific RMS portal:

1. NI23 – https://rmsoni.researchgrants.gov.au
2. NS23 – https://defence.researchgrants.gov.au

Both specific RMS portals can be accessed using your existing RMS (standard ARC) login details.

Applications for each NISDRG grant opportunity have been submitted through the individual portals. Assessments for each NISDRG grant opportunity are to be prepared and submitted through the individual portals. Assessors should check in **both** specific portals to confirm whether they have been assigned applications to assess for **both** grant opportunities.

General and Detailed Assessors have different roles in the peer review process. Key aspects of their roles are outlined in Sections 2.1 and 2.2, respectively.

2.1 General Assessors

RMS profile

It is important that General Assessors ensure that their RMS profile is up to date and contains the following details:

1. **Expertise text:** Please outline your expertise briefly. The following format is suggested **"**My major area of research expertise is in a, b, c. I also have experience in research q, r, s. I would also be able to assess in the areas of x, y, z. The research facilities and techniques I use are l, m, n"
2. **Fields of Research (FoR) Codes:** Please include between six and ten 6-digit 2020 FoR classification codes that reflect your key areas of expertise
3. **Employment History:** Please ensure that your employment history is kept up to date, to enable your organisational conflicts of interests to be automatically identified by RMS
4. **Personal Details:** Please ensure your personal details are up to date, including conflicts of interest and personal material interest declarations.

This RMS Profile information will be used to match General Assessors with applications and should therefore best represent the required research expertise.

The Selection Advisory Committee

For the NISDRG grant opportunities, General Assessors are selected to form a Selection Advisory Committee (SAC) to contribute to the peer review process. The SAC may include members from the ARC College of Experts (CoE) and other eminent members of the wider academic community. SAC members are chosen to provide a combination of relevant expertise and experience to support the objectives of the grant opportunities.

Following the deadline for submission of applications, ARC Executive Director(s) assign each application to General Assessors. The lead General Assessor (Carriage 1) is usually closely associated with the application's academic field and other General Assessor(s) (Other Carriage) have supplementary expertise. Carriage 1 has primary responsibility for the

application, which will include speaking to the application and its assessments and rejoinder at the SAC meeting.

Following RGS' announcement of assignments, the Carriage 1 may notice that some applications may appear to need more assignments. This is due to the previously assigned assessors rejecting the assessment or not responding, but no action is required from the Carriage 1. If the assigned Detailed Assessors and reserves become unavailable, an ARC Executive Director will assign additional Detailed Assessors. The monitoring of assignments, acceptance, rejection and submission is managed by RGS staff. Please contact the RGS team if you have any questions about this.

General assessment process

All assessors must declare any conflicts of interest (COI) and if a COI exists they must reject the assignment as soon as possible. This will assist RGS with the timely re-assignment of applications. See Section 4.1 for further information.

When assessing applications General Assessors must rely solely on the information provided within the application and should not seek additional information from any sources. This includes following any hyperlinks that may have been provided in the application. The inclusion of webpage addresses/URLs and hyperlinks is only permitted under certain circumstances such as publications that are only available online and letters of support. Webpage addresses/URLs and hyperlinks should not be used to circumvent page limits, nor should they provide information that is not contained in the application. All information relevant to the application must be contained within the application.

Assessors should contact the RGS team at ARC-NISDRG@arc.gov.au if they have any questions or concerns about potential eligibility issues, particularly issues related to personnel or organisations named on an application. As noted above, assessors should not seek additional information from any other sources.

Saving preliminary assessments

Following the assignment process, while the Detailed Assessors are undertaking their assessments, General Assessors should independently read and assess all their assigned applications against the relevant criteria, based on an A to E Scoring Matrix (each application must be scored on its own merits). These preliminary assessment scores should be saved as drafts in RMS (**but not submitted**).

General Assessors will receive a spreadsheet listing the applications to which they have been assigned. This spreadsheet can be used for working notes as General Assessors undertake their assessments. As part of the assessment process, General Assessors must consider whether there is an important gap in knowledge or a significant problem as implied through the Intelligence Challenge(s) or National Security Challenge(s) (see Section 2.3 and Appendix 2 for more information on the Challenges) identified in an application and make working notes in the spreadsheet to facilitate discussion at the Selection Meeting.

When the Rejoinder process commences, the comments from Detailed Assessors are provided anonymously to the applicant. The applicant then has an opportunity to provide a Rejoinder to address any issues raised by the Detailed Assessors.

After the Rejoinder process has closed, General Assessors can review the Detailed Assessors' comments and scores, the Detailed Assessors' comments on the Challenges, and the applicants' Rejoinder text. Detailed assessments and Rejoinders are important to further inform General Assessors' scores and at this point General Assessors can review and if necessary, revise and save their preliminary scores. After considering the Detailed

Assessments and Rejoinder, General Assessors must ensure that their scores are entered in RMS (**but not submitted**) before the preliminary assessment due date determined by RGS. Doing this enables their co-Carriages to view the scores and to facilitate discussion and ensure that any potential differences in scores are understood by all co-Carriages.

Revising and submitting final assessments

For applications that have a significant difference in scores between the General Assessors, Carriage 1 is responsible for contacting the other Carriage to discuss their scores. General Assessors are not required to agree on or align their scores for an application, but if the scores are disparate, they need to have a shared understanding of why their opinions differ. Following this discussion, final scores and ranks should be submitted in RMS by the required final due date.

When all final scores are submitted, RMS produces a ranked list of all applications — see Section 2.3 for more details. This ranked list is used at the SAC meeting to assist with the initial identification of applications that are of sufficient quality to be shortlisted. The ranking of applications on this list is not final and the meeting process provides several opportunities for the SAC to discuss and review all applications, as outlined below.

Inappropriate assessments

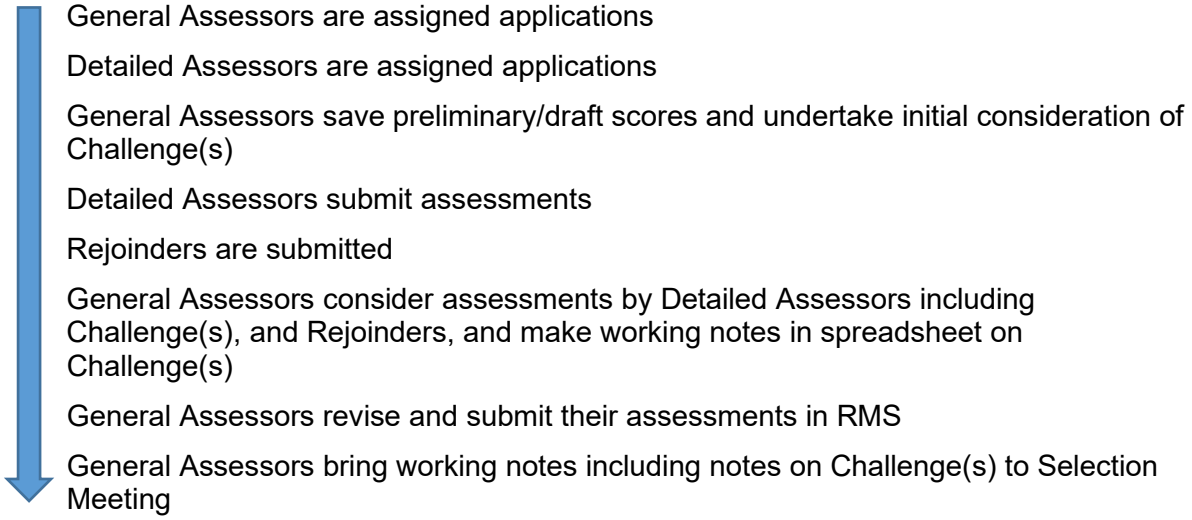
If General Assessors are concerned about the appropriateness of any assessment text or comments that do not match scores from Detailed Assessors, or identify a potential Detailed Assessor COI, they **must** contact RGS by sending an email to the RGS team via ARC-NISDRG@arc.gov.au as soon as possible. RGS will investigate the concerns raised and decide whether a Detailed assessment should be removed from the process. This happens in rare circumstances and requires the NISDRG RGS Senior Responsible Officer's (SRO) approval.

If inappropriate assessments are identified early in the assessment process, RGS may ask the assessor to amend their assessment of the application.

Order of the Assessment Process

The following diagram provides an overview of the General Assessor's assessment process.

Diagram 1: Overview of the General Assessor Assessment Process



2.2 Detailed Assessors

RMS profile

A Detailed Assessor's RMS profile plays an essential role in the assignment process as information contained in the profile assists with the matching of NISDRG applications with appropriately skilled Detailed Assessors. It is important that Detailed Assessors ensure that their RMS profile is up to date and contains the following details:

1. **Expertise text:** Please outline your expertise briefly. The following format is suggested **"**My major area of research expertise is in a, b, c. I also have experience in research q, r, s. I would also be able to assess in the areas of x, y, z. The research facilities and techniques I use are l, m, n."
2. **Fields of Research (FoR) Codes:** Please include between six and ten 6-digit 2020 FoR classification codes that reflect your key areas of expertise.
3. **Employment History:** Please ensure that your employment history is kept up to date, to enable your organisational conflicts of interests to be identified by RMS.
4. **Personal Details:** Please ensure your personal details are up to date, including conflicts of interest and personal material interest declarations.

Assignment of applications

NISDRG applications are assigned to Detailed Assessors using information from their RMS profile and expert judgement by an ARC Executive Director. Detailed Assessors for the NISDRG grant opportunities have been approached by RGS to participate in the assessment process. Detailed Assessors form a targeted group of assessors from which the ARC Executive Director will assign applications for assessment.

Detailed Assessors may be assigned applications from either or both the NI23 and NS23 grant opportunities using the information contained in their RMS profile (see above) and its match with the information contained in the NISDRG application.

Detailed Assessments

Detailed Assessors provide scores and written comments addressing the assessment criteria on each application, and written comments on how well the proposed research project addresses an important gap in knowledge or a significant problem as implied through the Intelligence Challenge(s) or National Security Challenge(s) identified and justified in the application. Detailed Assessors may be assigned a number of applications within their field of research or across a broader disciplinary area on the basis of their RMS profile expertise text and FoR codes. Detailed Assessors are asked to:

a. Complete in-depth assessments of applications in RMS, providing scores and detailed comments against grant opportunity assessment criteria (refer to Appendix 1) and comments against identified Challenges (refer to Appendix 2)

b. Identify the merits or otherwise of the application with respect to the assessment criteria set out in the grant guidelines

c. Assess and score the application for each assessment criterion separately

d. Assess and provide detailed comments on how well the proposed research project addresses an important gap in knowledge or a significant problem as implied through the identified Challenge(s).

e. Provide detailed comments on how the proposed research project fits with the Technological Readiness level (refer to Section 2.4) selected within the application.

Minimum and maximum character limits apply to comment fields in the assessment form.

If a Detailed Assessor identifies a COI with an assigned application this must be declared to RGS by rejecting the assignment in RMS and no further participation in the assessment process for that application should take place.

Detailed Assessors may receive applications to assess at any stage of the assessment process due to late COIs being declared by other assessors.

As applications may address more than one Challenge within the Intelligence or National Security set of Challenges, Detailed Assessors must ensure their comments accurately address the Challenge(s) in the numerical order (1-8 for Intelligence Challenges, 1-12 for National Security Challenges) listed in Appendix 2.

Detailed Assessor comments, including those regarding the Challenge(s) and the Technological Readiness level selected, are made available to applicants anonymously once an application is open for a Rejoinder.

How to ensure high quality detailed assessments

Detailed Assessors are asked to provide detailed high quality, constructive assessments with the following elements:

1. **Objective** and professional comments
2. **Detailed** comments on the merits or otherwise of the application with respect to the weighted assessment criteria
3. **Detailed** comments on how effectively the proposed research project will address an important gap in knowledge or a significant problem as implied through the Challenge(s) identified in the application
4. **Sufficient** information to allow applicants to provide a Rejoinder to comments about the application, and to allow non-disciplinary expert General Assessors to evaluate the merit of the application (one or two sentences is not sufficient)

5. **Comments that align closely with scores**—for example, an 'A' score should not be submitted if an application is assessed as being of limited merit against a criterion. Further, if a 'D' score is given, then suitable constructive criticisms and comments justifying the score are required. It is important to remember that applicants see only the comments and the SAC will see both comments and scores. It is essential that your scores and comments are fit for purpose and provide appropriate information for the person using them.
6. **Comments that are fair, meaningful and balanced**, addressing only issues relevant to the application in terms of the assessment criteria. Comments should provide a sound, comprehensive account of, and justification for views about the application, while respecting the care with which applications have been prepared
7. **Comments that are free** from platitudes, exaggeration and understatement
8. **Timely submission** via RMS as early as possible is appreciated, and by the RGS deadline is required.

Refer to the ARC Peer Review webpage for **examples** of good quality Detailed assessments. The webpage also provides links to two supplementary guides, the *Statement of Support for Assessors within the National Competitive Grants Program* and *ARC Conflict of Interest and Confidentiality Policy*, supporting implementation of the Australian Code for the Responsible Conduct of Research (the Code).

How to avoid inappropriate assessments

Detailed Assessors **should not** put the following in their assessment comments, as this may render the assessment inappropriate:

1. Scores which do not align with assessment text
2. Excessive use of acronyms
3. Generic comments used in multiple assessments
4. Very brief assessment text
5. Scores that are included within the assessment text
6. Information that identifies researchers named on other applications
7. Advice about their own identity, standing in, or understanding of, the research field in the application
8. The outcome or status of relevant research not mentioned in the application
9. Restatement or rephrasing of any part of the application
10. Comments about the potential ineligibility of an application. All queries regarding eligibility should be sent to ARC-NISDRG@arc.gov.au
11. Comments comparing one application with another in the NISDRG program
12. Text that has been copied from a previous assessment
13. Text that appears to be discriminatory, defamatory or distastefully irrelevant (such as gratuitous criticism of a researcher and/or eligible organisation)
14. Assumptions of the impact of COVID-19 on the proposed research in the application.

Under no circumstances should Detailed Assessors contact researchers and/or institutions about a submitted application or seek additional information from any sources. This includes following any hyperlinks that may have been included in the application. The inclusion of webpage addresses/URLs and hyperlinks is only permitted under certain circumstances

such as publications that are only available online and letters of support. Webpage addresses/URLs and hyperlinks should not be used to circumvent page limits, nor should they provide information that is not contained in the application. All information relevant to the application must be contained within the application.

Assessors should contact the RGS team at ARC-NISDRG@arc.gov.au if they have any questions or concerns about potential eligibility issues, particularly issues related to personnel or organisations named on an application. As noted above, assessors should not seek additional information from any other sources.

Treatment of inappropriate assessments

Inappropriate assessments compromise the integrity of the peer review process. To be fair to all applicants, RGS may review and reject assessments with inappropriate or highly subjective comments from individual assessors about any aspect of the application. If RGS considers an assessment to be inappropriate, RGS may request that an assessor amend the assessment or may remove the assessment from the process.

The RGS website also contains information for applicants advising how to request that RGS review an assessment that contains inappropriate elements during the Rejoinder period.

2.3 Intelligence Challenges and National Security Challenges

The Expressions of Interest applications' alignment with the Intelligence Challenges and National Security Challenges were assessed by the Office of National Intelligence and Defence-NSSTC through the Expression of Interest process.

The full application is intended to be in line with that proposal, however the full applications provide much more detail about the proposed research, and for this reason we ask you to assess the alignment with challenges, and provide information where it appears alignment is not strong.

Applications submitted for each NISDRG grant opportunity must address one or more Challenge(s). For NI23, 8 Intelligence Challenges have been set by ONI (representing the National Intelligence Community). For NS23, 12 National Security Challenges have been set by Defence-NSSTC. Appendix 2 provides detailed information on the Intelligence Challenges and the National Security Challenges.

The Intelligence Challenges for NI23 are:

- Covert collection challenges
- Space-based challenges
- Identity management challenges
- Emerging biological and material science exploitation challenges
- Cyber security, protective security and offensive cyber challenges
- Human behaviour and influence challenges
- Data-driven and real-time analytical challenges
- Situation awareness and multi-source assessment challenges

The National Security Challenges for NS23 are:

Preparedness, Protection, Prevention and Incident Response Challenges

- Reliable Detection and Prevention
- Integrated Information Sharing
- Enhanced Analysis
- Robust Consequence Management

Border Security and Identity Management Challenges

- Enhanced Analysis
- Integrated Information Sharing
- Improved Detection and prevention
- Rapid and Reliable Identification (human, object, & CBRNE)

Investigative Support and Forensic Science Challenges

- Enhanced Analysis
- Enhanced Detection and Identification
- Advanced Protection and Exploitation

Integrated Information Sharing **Note that the Challenges listed in the assessment form for Detailed Assessors may appear in a different order to the order shown in the application.**

For ease of reference, RGS recommends that assessors accurately address the Challenge(s) in the numerical order (1-8 for Intelligence Challenges, 1-12 for National Security Challenges) listed in Appendix 2.

Detailed Assessors must provide comments against each identified Challenge assessing how well the proposed research project addresses an important gap in knowledge or a significant problem as implied through the Challenge(s). This can include consideration of:

- how the research is significant in or critical to the Challenge
- why the research is highly innovative, game-changing and can offer new avenues for technology or policy
- whether the research will make future national intelligence or security capability significantly better.

A comment is required for each identified Challenge, but no scores are needed. Detailed Assessors should take their comments on the Challenges into consideration as they enter scores against the assessment criteria. Detailed Assessor comments against the Challenge(s) and the applicants' Rejoinders will assist ONI and Defence-NSSTC in their selection processes.

General Assessors do not score the identified Challenge(s) but must consider the Detailed Assessors' comments on the Challenge(s) and the applicant's Rejoinder as part of their application assessment scoring process. General Assessors must take working notes on the Challenge(s) and comments to facilitate discussion at the SAC meeting. As with Detailed Assessors, General Assessors can consider:

- how the research is significant in or critical to the Challenge
- why the research is highly innovative, game-changing and can offer new avenues for technology or policy
- whether the research will make future national intelligence or security capability significantly better.

2.4 Technological Readiness Level Selection

Applications submitted for each NISDRG grant opportunity must identify a Technological Readiness Level (TRL) that relates to the application as outlined in the Technology Readiness Levels Definitions and Descriptions document published by the Department of Defence - TRL Explanations_1.pdf.

A comment is required for the TRL Selection, but no scores are needed. The comment entered by a Detailed assessor should address the appropriateness of the TRL selected by the applicant relative to the application. If the TRL selected is not congruent with the application a new TRL should be entered in the comment field along with a justification of the updated TRL selection.

General Assessors do not score the identified TRL selection but must consider the Detailed Assessors' comments on the TRL and the applicant's Rejoinder as part of their application assessment. General Assessors may take working notes on the TRL selection to facilitate discussion at the SAC meeting if required.

2.5 Scoring and ranking assessments – all assessors

Scoring

When applying the Scoring Matrix, assessors should have regard for the grant opportunities' objectives (see Appendix 1).

Scoring applications against assessment criteria can be a difficult exercise when assessors might only look at a small sub-set of applications. Bands within the Scoring Matrix ideally represent a distribution across all applications submitted to a grant opportunity.

Only the very best applications should be shortlisted.

A Scoring Matrix for the scores A to E is provided in **Table 1** below and should guide scoring by both Detailed and General Assessors.

Table 1: Scoring Matrix

Score	Criteria
A	**Outstanding:** Of the highest quality and at the forefront of research in the field.
B	**Excellent:** Of high quality and strongly competitive.
C	**Very Good:** Interesting, sound and compelling.
D	**Good:** Sound but lacks a compelling element.
E	**Uncompetitive:** Uncompetitive and has significant weaknesses.

Ranking

Each application must have a unique rank, therefore assessors who have multiple assessments with an identical final score are prompted by RMS to give each application a unique rank to differentiate between them. Differentiation should be based on how you compare the applications in relation to the Scoring Matrix.

Detailed and General Assessors who have been assigned multiple applications must establish a ranked list. RMS will use your scores to automatically rank applications, and then use your rank order to differentiate equally scored applications.

Assessments should be submitted when all applications have been assigned 1) a score and 2) a unique ranking.

2.6 Important factors to consider when assessing – all assessors

Objectives, assessment criteria and Challenges

The NISDRG grant opportunities have specific objectives, assessment criteria and Challenges which must be addressed that aim to ensure funded applications achieve the best possible outcomes. Assessors must have regard to both the objectives and the assessment criteria as outlined in the NISDRG grant guidelines and Appendix 1 of this document, and the Challenges relevant to each NISDRG grant opportunity as outlined in Appendix 2.

Research Opportunity and Performance Evidence (ROPE)

The ROPE assessment criterion requires assessors to identify and consider research excellence relative to a researcher's career and life experiences. It aims to ensure that assessment processes accurately evaluate a researcher's career history relative to their

current career stage and consider whether their productivity and contribution is commensurate with the opportunities that have been available to them.

All General and Detailed Assessors should be familiar with the full ROPE statement located on the ARC website.

Interdisciplinary research

Interdisciplinary research is highly valued in the NISDRG program. The ARC has provided the *ARC Statement of Support for Interdisciplinary Research* which outlines support for interdisciplinary research.

Interdisciplinary research can be a distinct mode of research, or a combination of researchers, knowledge and/or approaches from disparate disciplines. Examples of interdisciplinary research may include: researchers from different disciplines working together in a team; researchers collaborating to bring different perspectives to solve a problem; researchers utilising methods normally associated with one or more disciplines to solve problems in another discipline; and one or more researchers translating innovative research outcomes from one discipline into an entirely different research discipline.

Assessors are required to assess all research on a fair and equal basis, including applications and outputs involving interdisciplinary and collaborative research. To assist with this, RGS facilitates consideration of applications by relevant General Assessors with interdisciplinary expertise or where not feasible, applications are allocated to General Assessors who have broad disciplinary expertise regardless of discipline grouping. Interdisciplinary applications are allocated to Detailed Assessors with specific interdisciplinary expertise or from different disciplines.

COVID-19 guidance

The ARC has published Pre Award Guidance for preparing applications: Responding to the impact of COVID-19 for applicants on the ARC website.

In the guidance the ARC acknowledges that the future impacts of COVID-19 are difficult for anyone to determine while the pandemic continues to evolve. Hence, the ARC has advised researchers preparing applications during this time, to ensure that application information is accurate and realistic at the time of submission. If an application is successful, but circumstances have changed since the time of submission, RGS will manage variations to the proposed research as a post award issue.

RGS requests **all assessors** to continue to assess each application based on the content of that application only and without making assumptions about the impact of COVID-19. Therefore, ***assessments should not include scores and comments that make assumptions about the viability of a proposed research project due to the potential impacts of COVID-19.***

RGS has also advised that we understand that the level of co-contribution pledged above and beyond the minimum threshold is likely to be reduced in future applications due to the financial impact of the COVID-19 pandemic.

RGS requests **all assessors** not to make assumptions about an Administering Organisation's level of commitment and support of an application solely based on lower levels of pledged additional cash and/or in-kind support.

3. General Assessors: Selection Advisory Committee (SAC) meeting preparation

3.1 Roles and responsibilities before the SAC meeting

After the assessment period has closed and prior to the SAC meeting, General Assessors will:

1. be unable to access applications for a short period whilst RGS staff undertake administrative functions to prepare for the SAC meeting
2. be advised by RGS when the RMS Meeting Application (App) opens
3. also have access to all applications in the RMS Meeting App where they do not have a COI
4. be required to attend a pre-meeting videoconference to be updated on the SAC meeting process and relevant information.

Carriage 1: Reviewing applications in the RMS Meeting App

Prior to the SAC meeting, Carriage 1 should review the Detailed and General Assessors' assessments and scores and consider whether they believe there are applications:

- which are highly ranked that should be lower
- which are lowly ranked that should be higher
- which are highly ranked that should/should not be considered for funding.

Particular attention should be given to applications where a ROPE case (see Section 2.6) has been made that has been neglected by Detailed Assessors, or where an anomalous Detailed Assessment may have materially affected the ranking of the application. Carriage 1 should identify such applications and prepare a recommendation to shortlist for consideration by the SAC.

RGS staff will also identify applications with 'disparate' scores and will flag these for the attention of SAC members. SAC members can flag these (or any other) applications for discussion at the meeting. Carriage 1 will be expected to lead discussion on these applications.

Carriage 1: Considering the Challenges

The Expressions of Interest applications' alignment with the Intelligence Challenges and National Security Challenges were assessed by the Office of National Intelligence and Defence-NSSTC through the Expression of Interest process.

The full application is intended to be in line with that proposal, however the full applications provide much more detail about the proposed research, and for this reason we ask you to assess the alignment with challenges, and provide information where it appears alignment is not strong.

How well the proposed research project addresses an important gap in knowledge or a significant problem as implied through the Challenge(s) identified in the application will be an important part of ONI's and Defence-NSSTC's consideration of recommended applications. Applications were assessed by ONI and Defence-NSSTC subject matter experts during the Expression of Interest stage of the assessment process. Applications that aligned to Challenges were invited to submit a full application (see Section 2.3 for more information on considering the Challenges).

Carriage 1: Considering the Technological Readiness Level Selection

Prior to the SAC meeting, Carriage 1 should review the TRL selected within the application, the Detailed Assessors' comments on the TRL selection and the applicants' Rejoinders. Carriage 1 can then make working notes if the applicant selected TRL is not congruent with the application, any pertinent Detailed Assessor comments, and the strength/weakness of the applicant Rejoinder to these comments (see Section 2.4 for more information on considering the TRL). Discussions regarding an application's TRL will be by exception, as this should not be the focus of the assessment. The Funding Entity is only looking for a comment if you do not agree that the TRL selected is appropriate.

Carriage 1: Prepare a budget recommendation

If an application is shortlisted, it is Carriage 1's responsibility to recommend an overall, one-line budget amount for each funding year of the application to the SAC. Suggested budget recommendations should be noted in Carriage 1's working notes and brought to the SAC meeting. While RGS encourages Carriage 1 to prepare a budget recommendation for each application on which they are listed as Carriage 1, particular attention should be paid to applications which are highly ranked (within the top 20) and to applications where Carriage 1 considers a case can be made for further discussion on the application merits.

The budget recommended for each year must not exceed the amount requested in the application. Budget recommendations are discussed by the SAC members and the recommended budget is forwarded to the grant Funding Entities (ONI/Defence-NSSTC) as part of the RGS's list of meritorious grant applications.

Carriage 1 may need to discuss or justify their budget recommendation at the SAC meeting and should therefore bring their own notes to the meeting on how they arrived at their final recommended funding amount.

To prepare a one-line budget for each year of funding, Carriage 1 should consider the following:

1. The extent to which specific budget items are well justified
2. Whether the budget items are supported or not supported as outlined in the NISDRG grant guidelines
3. The minimum/maximum funding amounts outlined in the NISDRG grant guidelines
4. Whether they are satisfied that the project can still be completed with the recommended budget
5. Whether the budget for the application has been considered on merit and at this stage not compared to other applications.

All Carriages and SAC members

Prior to the SAC meeting, all members are advised of the applications that are highly ranked. All highly ranked applications will be discussed by the SAC, including a discussion on how well the identified Challenge(s) is met.

Applications which are not highly ranked can be briefly discussed at the SAC meeting, particularly if a SAC member considers that an application presents a compelling case for the quality and innovation of its research project and in addressing one or more of the Challenges. All Carriages and SAC members are requested to briefly review their applications that fall below this band and notify RGS of any applications that need to be discussed at the SAC meeting.

It is recommended that all SAC members (if not conflicted) should read the summary, Challenge(s) justification, and Detailed Assessor comments on the Challenge(s) of all applications as they are expected to contribute to discussions for all applications during the meeting.

3.2 Roles and responsibilities at the SAC meeting

Each SAC meeting will comprise a Chair, Deputy Chair, SAC members (Carriage 1, Other Carriages and other panel members) and RGS Staff. A single SAC meeting is held to shortlist applications in both grant opportunities under the NISDRG program.

The role of the Chair is to:

- lead the SAC through the process to decide on shortlisting of applications
- call the SAC to a vote for applications as required
- ensure the meeting runs in a timely manner.

For applications where the Chair is conflicted out of the room or is Carriage on an application, the Deputy Chair will act in the role. Where multiple conflicts arise, other SAC members may be called on to be acting Chair.

When you are Carriage 1 on an application, your role is to:

- lead discussion for that application making a decision to, or not to, shortlist the application for funding and give a brief summary of the strengths and weaknesses
- advise the assessed technological readiness level of the application
- vote on applications when called by the Chair
- recommend a one-line budget for applications that are shortlisted for funding

All other Carriages and SAC members will:

- Note and discuss as necessary perceived technological readiness level of the application
- contribute to discussions of whether an application should be shortlisted for funding in line with the following:
    - Strongly support shortlisting
    - Support shortlisting
    - Support shortlisting with reservation
    - Unsupportive of shortlisting
    - Not recommended for shortlisting
- vote on applications when called to do so by the Chair.

RGS staff are responsible for:

- providing secretariat support for meetings
- providing procedural advice to SAC
- ensuring that correct administrative procedures are followed
- ensuring COIs and inappropriate discussions are managed correctly
- capturing details of SAC considerations in RMS as necessary.

4. Ensuring integrity of process

4.1 Confidentiality and Conflict of Interest (COI)

The NISDRG program utilises the ARC policy on COIs and confidentiality. The *ARC Conflict of Interest and Confidentiality Policy* is designed to ensure that all COIs are managed in a

rigorous and transparent way. It aims to prevent individuals from influencing decisions unfairly and to maintain public confidence in the integrity, legitimacy, impartiality and fairness of the peer review process.

Any individual who is reviewing material for RGS, on behalf of its Funding Entities, must agree to comply with the confidentiality and COI statement, and must clearly disclose any material personal interests that may affect, or might be perceived to affect, their ability to perform their role.

All assessors must maintain an update-to-date RMS profile, including personal details, current employment details and previous employment history within the past two years. This information will assist the RGS, on behalf of its Funding Entities, with the identification and management of organisational conflicts of interest.

Assessors reviewing grant applications who have identified a conflict of interest must reject the grant application assigned in RMS to assist the RGS, on behalf of its Funding Entities, in the management of conflicts of interest.

For more information on disclosure of COIs, including material personal interest declarations, please refer to the *Identifying and Handling a Conflict of Interest in NCGP processes* document.

Note: In RMS, assessors will be asked to indicate their willingness to comply with this policy before proceeding to assess. They do this by selecting the 'Accept' button.

4.2 Research integrity and research misconduct

The NISDRG program utilises the ARC policy on research integrity and research misconduct. If in the course of undertaking an assessment you identify or suspect a potential research integrity breach or research misconduct, please notify the ARC Research Integrity Office (researchintegrity@arc.gov.au) in accordance with Section 5 of the ARC Research Integrity Policy. Please do not mention your concerns in any assessment comments.

The ARC Research Integrity Office will consider whether to refer your concerns to the relevant institution for investigation in accordance with the requirements of the *Australian Code for the Responsible Conduct of Research (2018)*. You should provide sufficient information to allow the ARC to assess whether there is a basis for referring the matter to the institution and to enable the relevant institution to progress an investigation into the allegation (if required).

Note: In RMS, assessors will be asked to indicate their willingness to comply with this policy before proceeding to assess. They do this by selecting the 'Accept' button.

4.3 Applications outside an assessor's area of expertise

The RGS, on behalf of its Funding entities, receives applications from many scholarly fields. Occasionally you will be asked to assess an application that does not appear to correspond closely with your area of expertise, particularly if you are a General Assessor. Your views are valuable as they are being sought on the entire application, drawing on your expert knowledge as a researcher. If you are a **General Assessor** and are concerned that an application is well outside your area of expertise, **please contact the RGS team via** ARC-NISDRG@arc.gov.au **before** rejecting the assignment.

If you are a **Detailed Assessor** and believe that the RGS has misunderstood your expertise, or has made an error in assigning an application to you, please give **early notice** of your view by rejecting the applicable application/s in RMS and entering a reason in the Reject

Reason comment box. It is also important to review your RMS profile expertise text and FoR codes.

4.4 Eligibility

If, while assessing an application, you have concerns about eligibility, ethics or other issues associated with an application, **you must not include this information in your assessment**. Please send an email highlighting your concerns to **the RGS team via** ARC-NISDRG@arc.gov.au as soon as possible. The RGS, on behalf of its Funding Entities, is responsible for investigating and making decisions on these matters, and General and Detailed Assessors should not conduct investigations at any point. Please complete your assessment based on the merits of the application without considering the potential eligibility issue.

In October 2018, RMS functionality was updated to populate research outputs into applications from within a researcher's RMS profile. Researchers will have the flexibility to choose and add which outputs to include in the application. RGS is aware of some research output display errors that are system issues and cannot be corrected by RMS users. Any applications that are affected will not be deemed to breach eligibility requirements and all General and Detailed Assessors should disregard research output display errors in their assessment of applications. Examples of possible research output display errors include symbols, foreign language characters and subscript/superscript that does not render correctly.

4.5 Unconscious bias

Assessors should also be aware of how their unconscious bias could affect the peer review process.

Unconscious biases are pervasive and may relate to perceptions about a range of attributes including:

1. gender and/or sexuality
2. social/cultural background
3. career path
4. institutional employer
5. discipline.

RGS encourages assessors to recognise their own biases and be aware of them in their assessments. A selection of short, online tests for identifying unconscious biases is available via Harvard University's 'Implicit Social Attitudes' demonstration sites.

5. Contact details for queries during the assessment process

For **all** assignment and assessment, as well as accessibility enquiries, please email **the RGS team via** ARC-NISDRG@arc.gov.au (General Assessors).

For all questions relating to the SAC and SAC meetings, please contact ARC-NISDRG@arc.gov.au.

Appendix 1: National Intelligence and Security Discovery Research Grants Program – Objectives, Intended Outcomes and Assessment Criteria

Please note: For assessment criteria assessors assign a score in the assessment form and do not have to consider the weighting of a criterion as this is applied automatically within RMS.

The information below provides ready access to the NISDRG program objectives and assessment criteria as set out in the *Grant Guidelines for the National Intelligence and Security Discovery Research Grants* (available on GrantConnect). The objectives and assessment criteria are relevant to both the NI23 and NS23 grant opportunities. Assessors should use their judgement and experience to assess the appropriate score within the context of the relevant discipline.

Grant Opportunities – Intelligence Challenges (NI23) and National Security Challenges (NS23)

Overview
NISDRG supports excellent research that deepens understanding of emerging science and technology and addresses intelligence and national security interests. The grant program will facilitate innovation and develop national security and intelligence capacity. It will also enable Australia's National Intelligence and Security Communities to systematically engage with Australia's research and technology community.

NISDRG provides support to research that aligns with the priority research areas identified by the Australian Government. These research areas are outlined in the Intelligence Challenges, and the National Security Challenges developed under the broad National Security Science and Technology Priorities. More information on the Intelligence Challenges and National Security Challenges are available on the RGS website.

Objectives
The objectives of the **National Intelligence and Security Discovery Research Grants** grant opportunities are to:

a) support excellent fundamental research (sometimes called discovery, basic or blue sky research) in areas identified in the Intelligence Challenges and National Security Challenges;

b) build Australia's research capacity and capability in these areas by supporting researchers, fostering research trainees, and contributing to a greater body of opensource research;

c) enhance collaboration in the research, science and technology community that supports Australia's National Intelligence and Security Communities; and

d) support systematic and coordinated engagement between the research, science and technology community and Australia's National Intelligence and Security Communities.

Intended outcomes

The intended outcomes of the **National Intelligence and Security Discovery Research Grants** grant opportunities are:

a) increased scale of Australian research into emerging science and technology impacting Australia's national security, sovereignty and potential future intelligence capability;

b) strengthened relationships and greater interaction between the research, science and technology community and Australia's National intelligence and Security Communities; and

c) enhanced ability of Australia's National Intelligence and Security Communities to access and use relevant knowledge and research to inform policy development in intelligence and national security related science and technology.

Assessment criteria and Scoring Matrix – National Intelligence and Security Discovery Research Grants

Assessment criterion	**(A) Outstanding** Of the highest quality and at the forefront of research in the field.	**(B) Excellent** Of high quality and strongly competitive.	**(C) Very Good** Interesting, sound and compelling.	**(D) Good** Sound, but lacks a compelling element.	**(E) Uncompetitive** Uncompetitive and has significant weaknesses.

Assessment criteria and weightings	**Assessment criteria details**
Project quality and benefit: 60%	Demonstrate this through identifying the: ▪ contribution to an important gap in knowledge or significant problem ▪ novelty/originality and innovation of the proposed research (including any new methods, technologies, theories or ideas that will be developed) ▪ clarity of the hypothesis, theories and research questions ▪ cohesiveness of the project design and implementation plan (including the appropriateness of the aim, conceptual framework, method, data and/or analyses) ▪ new or advanced knowledge resulting from outcomes of the research ▪ extent to which the project would build research capacity and ▪ potential to enhance Australian intelligence and national security capabilities.

Assessment criteria and weightings	Assessment criteria details
Investigator(s) / Capability: 25%	Demonstrate this through identifying: ▪ Research Opportunity and Performance Evidence (ROPE); ▪ time and capacity to undertake the research; ▪ evidence of experience in research training, mentoring; and supervision (where appropriate) and ▪ the capability of the investigator or team to build collaborations both within Australia and internationally.
Feasibility and commitment: 15%	Demonstrate this through identifying the: ▪ cost-effectiveness of the research and its value for money; ▪ suitability of the environment for the research team and their project, and for HDR students where appropriate, including availability and resourcing of HDR students and postdoctoral researchers; ▪ availability of the necessary facilities to complete the project; and ▪ extent to which the project's design, participants and requested budget create confidence in the successful completion of the proposed research on time.

Appendix 2: Intelligence Challenges and National Security Challenges

Please note: All applications submitted for the NISDRG program had to address one or more Challenges specific to each grant opportunity under the NISDRG program. ONI listed eight Intelligence Challenges for NI23. Defence-NSSTC listed twelve National Security Challenges for NS23. Detailed information about each set of Challenges is included below.

Assessors must use their judgement and experience to consider how well the proposed research project addresses an important gap in knowledge or a significant problem as implied through the Challenge(s) identified in each application as part of their assessment. Detailed Assessors must provide comments on the Challenge(s) justification in the assessment form. The Challenges are not scored directly but they must be considered as assessors score against the assessment criteria.

National Intelligence and Security Discovery Research Grants Program

Round 3 (2023): Intelligence Challenges

The 2017 Independent Intelligence Review (IIR) identified a number of challenges facing Australia's intelligence enterprise over the coming decade. These included the increasing complexity of the geostrategic environment, broadening scope of national security and intelligence missions, rapid pace of scientific and technological change and high levels of innovation investment by other nations. To meet these challenges the Review recommended, among a number of other recommendations, a more systematic approach to leveraging science and technology.

To enable the National Intelligence Community to better leverage emerging science and technology the following eight challenges have been identified as being the priority areas for engagement with the research and innovation sectors.

Science and Technology Challenges

1. Covert collection challenges
The ability to access and collect intelligence from people, imagery, signals, signatures, nodes, networks (including internet-of-things environments) and transactions with a low probability of detection and/or attribution. The ability to defeat adversary collection and cyber capabilities to safely move people, information and equipment into, out of, and through environments with low signature and likelihood of detection and/or attribution.

Examples of science and technology research include:

- Access technologies
- Imagery and geospatial intelligence
- Sensors, signatures, signals and networks
- Computer network exploitation
- Covert, secure and assured communications
- Financial intelligence; and
- Cryptocurrency, block-chain and distributed ledger technologies.

2. Space-based challenges
The ability to leverage low cost and innovative technological advancement in space-based and high-altitude capabilities in a timely manner to improve collection, communication and analysis capabilities.

Examples of science and technology research include:

- Launch technologies
- Mission control systems and systems integration
- Satellite communications, sensors and networks
- Automation and on-board processing and analysis
- Advanced materials
- Space-based situation awareness; and
- Counter space-denial capabilities.

3. Identity management challenges
The ability to quickly, accurately and uniquely identify individuals from all types of data (online, surveillance, biometric, speech, behavioural, forensic, text, etc.), including where the data has low linkages to real world identities. The ability to mask or obfuscate the identity of an individual from adversaries where access to online, surveillance, biometric, forensic or other data is available.

Examples of science and technology research include:

- Biometrics (including behavioural biometrics)
- Deep fakes and generative adversarial networks (GAN)
- Bio- and geo- forensics (including for law enforcement and prosecutions)
- DNA / RNA
- Web-scraping and machine learning for identity data
- Counter biometric surveillance; and
- Socio-technical systems and systems integration.

4. Emerging biological and material science exploitation challenges

The ability to develop methodologies, techniques, services and devices from emerging biological, material and other technologies to provide new or alternate options to meet existing and future intelligence mission objectives. The ability to detect, identify, analyse, counter, defeat and prosecute threats from emerging technologies, in a safe and timely manner. The ability to exploit advances in machine learning to enable the above.

Examples of science and technology research include:

- Biotech engineering (e.g. CRISPR), synthetic biology (e.g. data storage)
- Immunology and microbiology (e.g. gene sequencing and applications)
- Nanotechnology and material science (e.g. miniaturisation and new functions)
- Convergence or integration of technologies (e.g. nano-, bio- and info- technologies)
- Human augmentation technologies, human-machine interface and wearable devices; and
- Threat detection and remediation (e.g. explosives, radiological and pathogens).

5. Cyber security, protective security and offensive cyber challenges

The ability to ensure the security and integrity of sensitive and classified information whilst enabling flexible/remote working and crisis response. The ability to predict, prevent, detect, attribute, respond and recover from cyber incidents and malign online interference (foreign, domestic, insider) at a national scale. The ability to conduct offensive cyber and informational activities to disrupt emerging security threats.

Examples of science and technology research include:

- Cyber (and national infrastructure) systems analysis, vulnerability, risk, resilience
- Human aspects of cyber security (e.g. insider threat, behavioural analysis)
- Mobile device trust/assurance for remote and collaborative working
- Secure data transport
- Networking and sensor technologies (including internet-of-things)
- Supply chain security/intelligence
- Cryptography, quantum technologies and photonics; and
- Automated at-scale response.

6. Human behaviour and influence challenges

The ability to identify and understand actors' psychologies, social identities, narratives and behaviours that constitute a threat to Australia's security. The ability to mitigate and counter cultural, psycho-social and organisational drivers and antecedents to national security threats. The ability to influence target audiences to elicit information, affect behaviour or shape preferences.

Examples of science and technology research include:

- Network analysis and disruption techniques (criminal, terrorist, etc.)
- Analysing online behaviour and profiling individuals and groups
- Building trust, rapport and influence and eliciting information
- Identifying and countering malign interference, influence and disinformation
- Identifying drivers, antecedents and pathways to radicalisation and extremism
- Understanding actors, communities, cultures, identities and narratives and influencing effects / outcomes
- Identifying trends in transnational, serious and organised criminal activities; and
- Influencing 'crowd' or mass behaviour.

7. Data-driven and real-time analytical challenges

The ability to employ advanced machine learning, natural language technologies and data science techniques to autonomously (or semi-autonomously) identify, extract, fuse and disseminate meaningful intelligence from large, disparate, sparse and/or incomplete data sets, including linguistic (text, speech, etc.), geospatial, financial, signals, identity and other relevant data sets. The ability to do this at the speed and scale required to meet emerging threats.

Examples of science and technology research include:

- Data management, data engineering and data curation
- Automated information fusion, filtering, triage and knowledge management
- Advanced sampling, pattern recognition, predictive analytics and statistics
- Natural language processing and other language technologies
- Deep learning for large and disparate data sets
- Human-systems integration and uncertainty analysis; and
- Ethical, legal and societal aspects of AI/ML (trust, bias, discrimination, privacy, etc.).

8. Situation awareness and multi-source assessment challenges

The ability to analyse and assess significant events and trends that impact on Australia's national security and interests (including political, strategic, environmental and economic developments as well as trends in adversarial behaviour, capability or investment in S&T). The ability to collaboratively analyse and synthesise evidence from multiple sources, and across multiple agencies, to produce timely, high quality and influential intelligence reports and assessments. The ability to articulate the basis and level of confidence in assessments.

Examples of science and technology research include:

- All-source intelligence integration and collaboration technologies
- Political, strategic, economic and 'drivers of conflict' research and analysis
- Advance 'red-teaming', 'war-gaming', scenarios and course of action analysis
- Technology forecasting: emerging, critical and disruptive technologies
- Security implications of environmental change and health crises
- Risk and resilience frameworks and measurements for security threats
- Understanding and avoiding bias (e.g. algorithmic bias) and generating confidence measures for assessments; and
- Enhancing cognition, comprehension, learning and decision-making (e.g. visualisation, etc.).

Australian Government
Defence

National Intelligence and Security Discovery Research Grants Program

Round 3 (for funding commencing 2023): National Security Challenges

Pre-amble:

Science and technology plays a crucial and at times, dichotomous role in both strengthening and threatening a prosperous, secure and cohesive Australia. Australia's national security agencies, including those within the Defence and Home Affairs portfolios, operate within increasingly complex and rapidly shifting environments driven by multiple threat and opportunity vectors, including science and technology. Outcomes from our collective strategic outlook and scenario forecasting for the future out to 2040, including the Defence Strategic Update (DSU), signal that we are entering an era of significant change, unprecedented in scale and pace – both geo-strategically and technologically. In order to enable rapid responses to these challenges, we need to ensure that our national security capabilities are supported by science and technology that enhances strategic advantage.

The National Security Science and Technology Centre coordinates whole-of-Government science and technology for national security in order to support Australia's economic prosperity, national security and social cohesion.

Below are research topics focused on science and technology challenges for national security. The target time horizon is 2040. Proposals are invited that will significantly advance the sciences pertaining to these challenge topics. We are seeking research with game-changing potential.

Science and Technology Challenges

1. PREPAREDNESS, PROTECTION, PREVENTION AND INCIDENT RESPONSE CHALLENGES

The ability to appropriately equip and prepare Australian agencies to effectively address national security threats and natural or man-made destructive events, including mass-harm and mass-damage incidents, either by preventing their occurrence, or responding and recovering effectively if they have occurred.

Reliable Detection and Prevention - The ability to detect, identify and neutralise natural and man-made threats, including people, vehicles and chemical, biological, radiological, nuclear and explosive (CBRNE) materials.

Examples of science and technology research include:

- Conduct remote, stand-off, non-invasive and portable sensing
- Conduct rapid and reliable CBRNE detection
- Countering/suppression of threat device remote initiation systems
- Means for the mass communication of incident and emergency information in crowded places (e.g. stadiums)
- Identify individuals and vehicles in complex environments
- Detect and track small unmanned vehicles (UV); and
- Remotely disable/control UV.

Integrated Information Sharing - The ability to share data and information across agencies and jurisdictions to achieve smooth, whole-of-nation operational response.

Examples of science and technology research include:

- Achieve smooth multi-agency Command, Control and Communications
- Integrated and interoperable communications and information systems; and
- Integrated sharing, management and fusion of data and information.

Enhanced Analysis - The ability to augment all aspects of analysis and decision-making in operational settings through advanced and artificial means.

Examples of science and technology research include:

- Assessment and development of vulnerability modelling tools to identify and prioritise risks and the development of mitigation options
- Use of event consequence modelling to plan emergency response requirements
- Conduct advanced analytics for enhanced detection, identification and tracking
- Conduct advanced analytics for enhanced situational awareness, analytics and decision-support
- Exploit social media and internet data; and
- Perform advanced analysis of extremism in social groups.

Robust Consequence Management **-** The ability of Australian individuals, communities and agencies to respond and recover quickly and effectively and minimise harm.

Examples of science and technology research include:

- Detect and remediate CBRNE events
- Model the evolution and impact of CBRNE events
- Protect first responders through knowledge of threat properties, safe handling, neutralisation procedures and personal protective equipment
- Utilise robotics and remote-controlled systems in hazardous environments; and
- Shape resilient people, communities, critical infrastructure and systems.

2. BORDER SECURITY AND IDENTITY MANAGEMENT CHALLENGES

National Security Community's ability to protect and secure Australia's borders from disease outbreaks, hazardous material and threats to our community, including maximum disruption effect on illegal activity and migration with projected growth in people and cargo movement across Australian borders.

Enhanced Analysis **-** The ability to improve the management and analysis of high volume data to support decision making with a focus on increasing the effectiveness and responsiveness of capabilities.

Examples of science and technology research include:

- Biometric fusion with biographical data
- Behavioural biometrics
- Enhance algorithm and human performance
- Artificial Intelligence; and
- Mobile collection devices.

Integrated Information Sharing **-** The ability to have a scalable and responsive information sharing system that provides seamless access to data and protects privacy.

Examples of science and technology research include:

- Data Fusion
- Single digital platform access
- Secure real time access; and
- Data protection, standards and privacy.

Improved Detection and prevention - The ability to rapidly and reliably detect, screen and track threats and contraband to prevent mass harm.

Examples of science and technology research include:

- Remote sensor technology
- Enhance human and technology detection performance;
- Surveillance for detection of biosecurity threats; and
- Surveillance for detection, alert and tracking of vessels.

Rapid and Reliable Identification (human, object, & CBRNE) **-** The ability to rapidly identify and verify humans, objects, CBRNE and biosecurity threats in support of border control/security, immigration and disaster victim identification.

Examples of science and technology research include:

- Biometric fusion with biographical data
- Behavioural biometrics
- Enhance algorithm and human performance
- Artificial Intelligence; and
- Mobile collection devices.

3. INVESTIGATIVE SUPPORT AND FORENSIC SCIENCE CHALLENGES

Law enforcement's ability to prevent, disrupt and prosecute terrorist and criminal activities in a complex transnational and evolving digital environment.

Enhanced Analysis **-** The ability to manage and interrogate large disparate data sets with a focus on improvement in productivity through machine learning (ML), automation and artificial intelligence.

Examples of science and technology research include:

- ML to advance pattern recognition
- Predictive analytics based on multiple data sets
- Exploitation of data sets rapidly
- Methods of translation for audio and visual
- Advanced biometric analysis; and
- The automation of current forensic processes.

Enhanced Detection and Identification **-** The ability to support traditional forensic and novel capabilities in the detection, identification and collection of reliable information in the field while maintaining the integrity of the evidence.

Examples of science and technology research include:

- ML to advance pattern recognition
- Predictive analytics based on multiple data sets
- Exploitation of data sets rapidly
- Methods of translation for audio and visual
- Advanced biometric analysis; and
- The automation of current forensic processes.

Advanced Protection and Exploitation **-** The ability to covertly obtain information across various sources whilst ensuring the protection of members.

Examples of science and technology research include:

- Deep analysis of systems

- Biomarkers identification
- Advanced methods and techniques for information collection
- The extended and remote monitoring methods for people, places and things
- Methods and tools to assess situations and environments; and
- Counter measure development to ensure protection of members.

Integrated Information Sharing **-** The ability to create secure and advanced networks and communication systems that allows the fusion of datasets and seamless information sharing.

Examples of science and technology research include:

- Single Platform data access
- Secure communications in remote access areas; and
- The fusion of disparate data sets to obtain forensic intelligence.

Glossary

Applicant means the Administering Organisation.

Application means a request for funding submitted through RMS by an Administering Organisation seeking grant funding under a grant program. It includes the specifics of a proposed grant activity as well as the administrative information required to determine the eligibility of the application.

ARC means the Australian Research Council, as established under the ARC Act.

ARC Act means the *Australian Research Council Act 2001*.

ARC website means the website accessed using https://www.arc.gov.au/.

Assessment criteria means the specified principles or standards, against which applications will be considered. These criteria are also used to assess the merits of applications and, in the case of a competitive grant opportunity, to determine application rankings.

Australian National Intelligence community comprises the six agencies that formerly made up the Australian Intelligence Community (AIC) — ONA, the Australian Signals Directorate (ASD), the Australian Geospatial-Intelligence Organisation (AGO), the Australian Secret Intelligence Service (ASIS), the Australian Security Intelligence Organisation (ASIO) and the Defence Intelligence Organisation (DIO) — as well as the Australian Criminal Intelligence Commission (ACIC) and the intelligence functions of the Australian Federal Police (AFP), Australian Transaction Reports and Analysis Centre (AUSTRAC) and The Department of Home Affairs.

Australian National Security Community comprises the Department of Defence, the Department of Home Affairs, Office of National Intelligence, Department of Home Affairs, Department of Foreign Affairs and Trade, Prime Minister and Cabinet, and Department of Industry, Science, Energy and Resources.

Carriage 1 means the General Assessor with the primary responsibility for the application.

Conflict of Interest (COI) means any conflict of interest, any risk of a conflict of interest and any apparent conflict of interest arising through a party engaging in any activity, participating in any association, holding any membership or obtaining any interest that is likely to conflict with or restrict that party participating in the Grant. The ARC *Conflict of Interest and Confidentiality Policy* is available on the ARC website.

Defence-NSSTC means the National Security Science and Technology Centre, within the Defence Science and Technology Group.

Detailed Assessment means an assessment process completed by a Detailed Assessor which involves an in-depth assessment of applications. A Detailed Assessment provides scores and comments against the grant opportunity specific assessment criteria. The Detailed Assessment is then taken into consideration by General Assessors (i.e. CoE or SAC members) in the later stages of the peer review process.

Detailed Assessors means assessors drawn from the ARC's assessor community who are assigned applications to review for their specific expertise in a field of research.

FOR Codes means Fields of Research Codes as defined in the Australian Bureau of Statistics' *Australian and New Zealand Standard Research Classification* (ANZSRC) (2020).

Funding Entity means the RGS client who is funding the grant.

General Assessment means a review process completed by a General Assessor, taking into consideration the scores and comments provided by Detailed Assessors and the applicant Rejoinder. Scores on each of the relevant grant opportunity assessment criteria are provided as part of the General Assessment.

General Assessors means the members that make up a relevant grant opportunity's Selection Advisory Committee (SAC). General Assessors utilise knowledge of their disciplinary areas and a broad understanding of intellectual and methodological issues and good research planning. Each application has a lead General Assessor (known as Carriage 1) who is typically close to the academic field of the application, and one or more General Assessors (known as Other Carriages) with supplementary expertise.

GrantConnect is the Australian Government's whole-of-government grants information system, which centralises the publication and reporting of Commonwealth grants in accordance with the CGRGs.

Grant Guidelines outline information for the relevant grant opportunity/ies relating to eligibility criteria, application process, assessment process, and any other additional accountability requirements that the ARC, on behalf of ONI and Defence-NSSTC, considers necessary.

NISDRG means the National Intelligence and Security Discovery Research Grants program, administered by RGS on behalf of ONI and Defence-NSSTC.

NISDRG Delegate means the person in RGS who is authorised to approve decisions made by RGS on behalf of Funding Entities.

ONI means the Office of National Intelligence.

Other Carriage means the General Assessor with secondary or tertiary responsibility for the application.

Participant means all named participants on an application (ie. CIs, PIs); and all unnamed researchers such as postdoctoral researchers and postgraduate researchers working on a project.

Rejoinder means a process by which applicants are given an opportunity to respond to assessment comments made by Detailed Assessors via a written submission. Rejoinders are considered by the SAC during the moderation and shortlisting process.

RGS means Research Grants Services, a branch within the ARC established to provide grant provision services to external Australian Government departments for their grants within the research sector.

RGS Website means the website accessed using https://www.researchgrants.gov.au/

RMS means the Research Management System. Each grant opportunity under the NISDRG program has a specific portal, through which applications, assessments, Rejoinders and the SAC meeting are managed. NI23 utilises the ONI RMS portal, while NS23 utilises the Defence RMS portal. Further information on RMS and links to the specific NISDRG RMS portals can be found on the ARC's RMS information webpage.

RMS Meeting App refers to the RMS meeting application available to SAC members in preparation for/and at the selection meeting.

Selection Advisory Committee (SAC) means a group of experts from academia and industry appointed to assist the RGS to evaluate applications and to provide a shortlist of meritorious grants for funding, which will be provided to the funding agency/ies for approval. A SAC may be drawn from the ARC College of Experts.

Scoring Matrix refers a set of guidelines provided to assessors on the degree of merit associated with particular scores in relation to the NISDRG grant opportunity assessment criteria.

SRO means the Senior Responsible Officer within RGS.

Frequently Asked Questions

Why do I have to keep changing my password for RMS?
The Australian Research Council is a Government entity and as such, our systems must comply with the whole-of-government security policy. The Australian Government Information Security Manual is set out by the Australian Signals Directorate and is publicly available for you to access.

These polices are put in place to protect the information within Australian Government systems, including personal information relating to our RGS assessors. The increasing use of technology as a way of doing our business requires us to strengthen our information security.

What if I'm not sure if I have a conflict of interest or not?
The *ARC's Conflict of Interest and Confidentiality Policy* provides guidance on conflicts. Further guidance is provided through *Identifying and Handling Conflicts of Interest in NCGP processes*. Where there is still doubt, assessors should email the NISDRG grant opportunities team via ARC-NISDRG@arc.gov.au for advice.

What if I pick up eligibility issues as part of my assessment?
Eligibility is managed as a separate process to the peer review process. Any eligibility issues should be emailed to the NISDRG grant opportunities team via ARC-NISDRG@arc.gov.au for investigation. Assessments should be completed based on the merit of the application. It is important not to include potential eligibility issues in assessments.

Why can't I see the 'submit' button?
The most common reason for the 'submit' button not showing is because the applications you are reviewing have not been ranked. You must select your rankings for each group of equally scored applications before they can be submitted.

Why have I lost the assessments I have been working on?
The most common reason for assessments to be lost is when an assessor has two sessions of RMS open at the same time. It is best practice to only have one session of RMS open at a time and to ensure you save your assessments regularly.

For General Assessors

When do I submit my assessments?
General Assessors will be advised via email regarding the due date to save assessments in RMS, and the slightly later due date to submit assessments in RMS. You should not submit any assessments until after the Detailed Assessments have been completed and Rejoinders have closed. You should review the Detailed Assessments and Rejoinders and amend your initial scores if required. Your scores should then be saved in RMS (**not submitted**) by the earlier deadline, to facilitate discussion with your other carriages. Following this discussion, please submit your assessments by the final deadline.

Why can't I see the Detailed Assessments and Rejoinders?
You will not be able to view the Detailed Assessments or Rejoinders until those modules have been closed in RMS. You will be notified when you have access to the Detailed Assessments and Rejoinders.