

COMPETITIVE RESEARCH PROGRAMME (CRP) FUNDING SCHEME

Information Sheet

CRP Call-for-Proposals

1 Objectives

- 1.1 The National Research Foundation (NRF) Competitive Research Programme (CRP) Funding Scheme seeks to foster the formation of multi-disciplinary teams in Singapore to conduct cutting-edge research of relevance to Singapore. This allows a coordinated, integrated and sustained way of bringing together complementary research groups in Singapore to conduct high-impact research.
- 1.2 The CRP scheme funds use-inspired basic research¹ in all areas of science and technology. Research ideas at the intersection of multiple disciplines are encouraged. The proposed research should be motivated by an important need or problem to be solved, rather than being solely curiosity-driven.
- 1.3 The CRP scheme offers funding support for projects of varying sizes up to a limit of S\$10M per proposal (including indirect costs), between a period of **3 to 5 years**. The proposed budget and duration should correspond to the scope of the work to be accomplished.

2 Eligibility

- 2.1 Participating institutions for Lead and Team Principal Investigators (PIs) should fulfil the following criteria:
 - Registered as a public Institute of Higher Learning (IHL), public healthcare institution, A*STAR Research Institute, CREATE research entities, or research institutes affiliated with the Autonomous Universities (AUs)/A*STAR;
 - Has adequate research infrastructure to support research activities; and has the ability to take up the responsibilities of a Host Institution.
- 2.2 Private sector and other entities can participate as Collaborator(s).
- 2.3 Each CRP proposal must comprise a minimum of one (1) Lead PI and two (2) Team PIs.
- 2.4 Lead PI and Team PI(s) must fulfil the following requirements at the point of application and throughout the project duration:

¹ In this context, 'use-inspired' is defined as research that is (i) inspired principally by the quest to advance fundamental scientific knowledge and understanding; and (ii) motivated by an unmet need or the desire to address a practical problem, gap in capability or application. The research need not necessarily lead to immediate translation or commercialisation within the duration of the requested funding.

- Hold a primary and/or joint appointment(s) at eligible institution(s)/organisations(s), with a minimum time commitment of **9 months (per calendar year) in Singapore**;
- Be an accomplished PI² with a track record of leadership ability in coordinating research programme(s) and providing mentorship to research team(s), as well as having productive research outcomes; and
- Lead and Team PI(s) must be salaried by their affiliated institution(s) and not be primarily supported through any project funding.

2.5 Lead PIs who currently hold an active CRP grant are only eligible to submit a new CRP proposal after their existing CRP grant has completed its Mid-Term Review and received a satisfactory assessment from NRF.

3 Selection Process and Evaluation Criteria

3.1 Proposals are selected through a two-stage review process based on scientific excellence and merit:

- Stage 1 – Video + Annex: Shortlisting at this stage, would be done in the form of video presentation format, with annexes, by the CRP Evaluation Panel (EP) and would be assisted (if necessary) by International Peer Reviewers.
- Stage 2 - Full Proposal: Evaluation of Full Proposals by International Peer Reviewers and the CRP Evaluation Panel (EP). Shortlisted applicants will be invited for an interview with the CRP EP.

3.2 Applicants must submit both the Stage 1 (Video + Annex) and Stage 2 (Full Proposal) documents together, to facilitate a shorter review cycle. However, please note that the Stage 1 Shortlisting will only be based on the Video + Annex. Full proposals of the shortlisted applications will directly sent out for the Stage 2 Review.

3.3 The key evaluation criteria³ for the various stages are:

- Stage 1 (Video + Annex): (i) Research Excellence and Vision⁴; (ii) Impact and Innovation Potential⁵; (iii) Technical Competencies and Team Composition.

² Lead and Team PI(s) should hold a position equivalent to or higher than Assistant Professor level (including Research Assistant Professor or equivalent appointments), with demonstrated research independence, leadership experience, and a strong track record. Research Fellows, Senior Research Fellows, and Postdoctoral Researchers do **not** qualify. For A*STAR applicants, only RSE3B or higher (e.g. RSE4) are eligible. Exceptions may be considered on a case-by-case basis - applicants should consult NRF for a preliminary eligibility assessment prior to proposal submission. The final assessment of PI eligibility rests with NRF.

³ NRF reserves the right to modify, amend or revise any part of the evaluation criteria, requirements, and processes described herein at its sole discretion. Any changes will be communicated through appropriate channels.

⁴ Research Excellence and Vision encompasses scientific rigour, novelty and ambition beyond the current state-of-the-art and multi-disciplinarity of research.

⁵ Impact and Innovation Potential refers to the pathway to future applications and transformative/disruptive impacts.

- Stage 2 (Full Proposal): (i) Research Excellence and Vision; (ii) Impact and Innovation Potential; (iii) Technical Competencies and Team Composition; and (iv) Project Management and Implementation.

3.4 Lead PI and Team PI(s) are expected to commit at least 20% and 10% of their total time commitment to the project, respectively. The time commitment of each team member dedicated to the project will be assessed as part of the evaluation criteria.

4 Submission of Application

4.1 All interested applicants must apply via the Research Grants Portal (RGP) (URL: [Research Grants Portal](#)), during the stipulated CRP call period(s).

4.2 All applications must be submitted by the Lead PI and endorsed by the Host Institution's Director of Research (DOR) via RGP by the last day of the call period. Applicants are encouraged to submit the complete application early, in order to allow the DOR to endorse the proposal on RGP in a timely manner. Please refer to [Appendix A](#) on pointers for writing good proposals.

4.3 **Prior to the submission**, the Lead PI is required to have a registered RGP account as a ApplyGov User to submit the application on behalf of the Host Institution. Each Team PI is also required to have a registered RGP account as a ApplyGov User to be added as team members in the application. For new applicants **without** an RGP account, please refer to the User Guide, FAQs and Demonstration Videos for more information on how to onboard RGP and submit applications (URL: [RGP Resources | Optical](#)).

4.4 Please note that the online RGP application form will require each applicant to have an authorised ORCID ID on their RGP User Profile Page to create an application as a Lead PI or be listed in an application as a Team PI.

4.5 Applicants must complete the online RGP application form and upload the Video + Annex and Full Proposal (including appendices, please use the templates in **Attachments 1 and 2**) under the *Proposal, Outcomes and Key Deliverables* section.

5 Details of Research Proposal Documents

This section provides the details of the main documents related to the Research Proposal. Please note that there are additional submission requirements. Please refer to [Paragraph 6.1](#) for the complete list.

5.1 Stage 1 (Video):

- (a) A video recording of your presentation of your Research Proposal.
- (b) The Video should cover the following content: Research Objectives, Competitive Scan, Approach, and Outcomes and Deliverables.

- (c) Video should be **up to 12 minutes** long in duration⁶
- (d) Video file format **should not exceed 500 MB** and should be compatible with Windows Media Player (e.g. MP4 video file, QuickTime movie file, etc). Microsoft PowerPoint format can also be used.
- (e) Video must be uploaded to a cloud storage with a generatable link, made accessible and downloadable by external parties, and have at least 6-month validity. The link must be provided in the RGP application form. *Broken or inaccessible links may lead to application being rejected without review.*

5.2 Stage 1 Annex (Slides + Appendices)

- (a) A copy of the presentation slides used in the Stage 1 (Video), following the slide template provided in **Attachment 1**.
- (b) Slides must not exceed **10 pages** (excluding the Cover slide and appendices). Use at least Arial Font Size 12 for all text and figures, and standard slide sizes. [Note: there is no cap on the number of slides in the Video presentation. If the total slide number in the Video exceeds 10, the copy of the presentation slides must be shortened/summarized to meet the 10-slides limit with no additional information]. Please ensure the final file size **does not exceed 10 MB**.
- (c) All supplementary information, limited to figures, tables, charts or diagrams ONLY, and referenced in Stage 1 (Video + Annex), must be included in the **Appendix** (see [Paragraph 6.1](#)) in the same document.
- (d) Please note that the content in the Slides (including appendices) is meant to facilitate the EP's review of the Video.
- (e) Please convert the file into PDF format before submission.

5.3 Full Proposal

- (a) The Full Proposal is required to be submitted together with the Video + Annex for Stage 1. Failure to upload this may result in your proposal being rejected without review.
- (b) The Full Proposal should address the adapted Heilmeier's questions ([Appendix A](#)). Please use **Attachment 2** (Full Proposal Template) to develop your Full Proposal.
- (c) The contents of the Full Proposal should be between **10 – 15 pages** (excluding cover page and appendices) and be written in Arial font size 12 with single line, normal spacing and normal margins. All figures, charts and tables should be consistently labelled.
- (d) References and the Gantt Chart to the Full Proposal are mandatory and must be included in the **Appendix** (see [Paragraph 6.1](#)), under the same document, along with any supplementary information (limited to figures, tables, diagrams and charts ONLY; and must be referenced in the Full Proposal). The Gantt Chart should contain details of the key research activities and go/no-go and measurable key deliverables and their timelines.

⁶ Pls may submit videos of up to 12 minutes in duration. While shorter, concise videos are acceptable, NRF reserves the right to reject any submission that significantly exceeds the specified time limit.

6 Application Form Sections

6.1 The following attachments in PDF format should be uploaded at the respective sections of the RGP application form **using the filenames as listed in blue**:

Table 1. Documents Related to Stage 1

Document	Remarks for Submission Requirement	Format of Filename	Description
Video	Mandatory	01 CRPXX Video <Input Lead PI Name>	Please insert the video link into the RGP application form. Video cannot exceed 500 MB in size. Please read Paragraph 5.1 .
Stage 1 Annex (includes Slides and Appendices)	Mandatory for: a) Slides b) References c) Response to Feedback (Resubmission) d) Write-up on ALL Related Grant(s) Optional for: e) Figures, Charts, Diagrams or Tables only (optional)	02 CRPXX Stage 1 Annex <Input Lead PI Name>	Please use clear Headings for Sub-Sections a) to e). Final file size must not exceed 10 MB. (a) <u>Slides</u> (b) <u>References</u>: a listing of all references cited in the presentation slides. Please include the full titles and DOI numbers of the publications listed. Do not forget to reference your own key publications related to the proposal (if any). [Note: Hyperlinks <u>not</u> necessary]. (c) <u>Response to Feedback</u> Mandatory for <u>resubmitted applications only</u>. • Include the Proposal ID and Title of the original application. • Summary stating the differences and improvements from past submission(s); and • A point-to-point rebuttal to address reviewers' comments from past submission(s). (d) <u>Write-up on ALL Related Grant(s)</u> Describe ALL research grants currently held by the Lead PI/Team PI(s), and ongoing grant applications. Please also include how the research objective(s)

Document	Remarks for Submission Requirement	Format of Filename	Description						
			and research differ from that in the CRP application.						
			<table><tr><td>Project ID</td><td colspan="2"><Indicate Project ID of related grant></td></tr><tr><td>Title</td><td colspan="2"><Indicate Title of related grant></td></tr></table>	Project ID	<Indicate Project ID of related grant>		Title	<Indicate Title of related grant>	
			Project ID	<Indicate Project ID of related grant>					
			Title	<Indicate Title of related grant>					
			Similarity or Relationship with CRPXX proposal	e.g. follow-up grant, similar methodology/concept.					
				<Project ID>	CRPXX				
			Difference in <Indicate here, e.g. objectives/ applications/ methodologies.						
(e) <u>Any other figures, charts, diagrams or tables (including Gantt Chart) only</u>									
They should be clearly labelled and appropriately referenced in the Stage 1 video.									

Table 2. Documents Related to Stage 2

Document	Remarks for Submission Requirement	Format of Filename	Description
Full Proposal (including appendices)	Mandatory for: a) Full Proposal b) References c) Gantt Chart d) Ethics Statement Optional for: e) Figures, Charts, Diagrams or Tables only (optional)	03 CRPXX Full Proposal <Input Lead PI Name>	<i>This is one continuous document attached as a single file.</i> Please use the template and follow the instructions in Attachment 2. Please read Paragraph 5.3. Please use clear Headings for Sub-Sections a) to e). Final file size must not exceed 10 MB. (a) <u>Full Proposal</u> (b) <u>References</u>: a listing of all references listed in the Full Proposal application.

Document	Remarks for Submission Requirement	Format of Filename	Description
			Please include the full titles and DOI numbers of the publications listed. Do not forget to reference your own key publications related to the proposal (if any). [Note: Hyperlinks <u>not</u> necessary]. (c) <u>Gantt Chart</u> Provide a Gantt Chart (appropriately referenced in the Full Proposal) with details on the key research activities and go/no-go and measurable key deliverables and their timelines. (d) <u>Ethics Statement</u> Provide a statement on the potential ethical impacts and risks of the application of AI (if any) in the proposed research. Submissions should also address how these risks can be managed and mitigated. NIL response is required if there is no AI involvement in the research proposal. (e) <u>Any other figures, charts, diagrams or tables only.</u> They should be clearly labelled and appropriately referenced in the Full Proposal.

Application Details

- 6.2 This section is to insert the Scientific Abstract, relevant Keywords and Approvals required by Institutional Review Board (IRB) and/or Institutional Animal Care and Use Committee (IACUC).

Team Composition

- 6.3 This section is to update the relevant information for all team members (**Lead PI, Team PI(s) and Collaborator(s)**) participating in the research. (**Note:** only the role 'Team PI' should be used, and the role 'Co-Investigator' should not be used for the CRP application).
- 6.4 Lead PI and Team PI(s) must state the (i) percentage (%) effort within the CRP Project and; (ii) percentage (%) time committed to the CRP project, out of their total work commitment. Please refer to [Paragraph 3.4](#).

- 6.5 Applicants must provide **a single file** which includes the CVs of all the team members (Lead PI, Team PI(s) and Collaborator(s)). Please use the format in [Appendix B](#) and name the file using the filename in blue below. *Note: Please do not add any underscores to the filenames.*

- 04 CRPXX CVs of Team Members <Insert Lead PI Name>

Budget

- 6.6 This section is to input the associated costs within each budget categories applicable for CRP, which are: (i) Expenditure on manpower (EOM); (ii) Other operating expenses (OOE); (iii) Equipment (EQP); (iv) Overseas travel (OT); and (v) Research scholarship (RS). *Note: RS category is not eligible for indirect costs.*
- 6.7 Applicants should provide the general cost per budget vote, as directed in the form. This overall budget vote costs should reflect a realistic estimation of the project needs and be fully justified under the provided fields. The total budget requested will be computed automatically upon filling in the respective budget vote costs. The team may also refer to the Budget Checklist ([Appendix C](#)) and Non-fundable Direct Costs list ([Appendix D](#)) for a guide on budgeting.
- 6.8 The proposed budget should be prepared according to the Host Institution's guidelines, which should not deviate from the institution's human resources (HR) policies and financial guidelines. NRF reserves the right to adjust the budget after the project is recommended for funding.
- 6.9 The proposed budget should realistically reflect what is required to execute the scope of work that is proposed. Where possible, existing equipment and facilities should be utilised. Compelling justifications should be provided otherwise. For OT, PIs are advised to provide realistic budgets and compelling justifications as to why it is required for the project. PIs are advised to refrain from overseas travel during the first year of the project.
- 6.10 Cost estimates should be credible, and an inflated budget will weaken the proposal. Budgetary items should be clearly explained for their purpose. **Items which lack compelling justifications will not be funded.**
- 6.11 HPC Compute Budget (if applicable): Applicants should include a comprehensive HPC Compute Budget for the entire project cycle in their research proposals (under OOE), based on current Cloud Service Provider (CSP) rates. The budget should be sufficient to cover the projected HPC resource demands.

Proposal, Outcome & Key Deliverables

- 6.12 Applicants should provide the total requested project duration as well as the relevant research outcomes/key deliverables in this section. These

deliverables should be key research milestones and should be as quantitative (e.g. technical specifications) as possible as measures of success at mid-term and completion. Please refer to [Appendix E](#) for more information.

- 6.13 The Stage 1 Video link, Stage 1 Annex and the Full Proposal should be uploaded under this section.

Declaration (Proposal Submission)

- 6.14 This section is for the respective declarations from the Lead PI, Host Institution verifier and DOR endorser.⁷

7 Completeness Check

- 7.1 The Lead PI's Host Institution's Office of Research should perform a completeness check when verifying the submission on RGP. Please refer to [Appendix F](#) for a non-exhaustive guiding checklist for completeness check. NRF will perform basic level of completeness checks on eligibility and will not be liable for incomplete submissions. NRF reserves the right to reject proposals without further review for, including but not limited to, the following reasons:

- Duplicates of proposal submitted to any other public funding agencies for simultaneous consideration
- Inappropriate format (e.g. small font size and tight para spacing) or incomplete applications (e.g. sections left blank, missing CVs, etc.)
- Late submission or endorsement on RGP by the respective Director of Research
- Revisions made after closing date, unless instructed by NRF
- Resubmitted Application for Stage 1 with minimal or no revision
- Proposal not within scope of CRP ([Appendix D](#))
- Ineligibility of Lead PI and/or Team PI(s)
- Proposal does not include at least one (1) Lead PI and two (2) Team PIs
- Single investigator-led proposals

8 Resubmission of Proposals

- 8.1 Resubmission is allowed only once, except if the applicants are invited to resubmit by the CRP Evaluation Panel. Resubmissions with minimal or no revisions will be rejected without review.

9 Contact Information

- 9.1 For further enquiries related to the CRP, please contact the CRP secretariat at NRF_CRP@nrf.gov.sg.

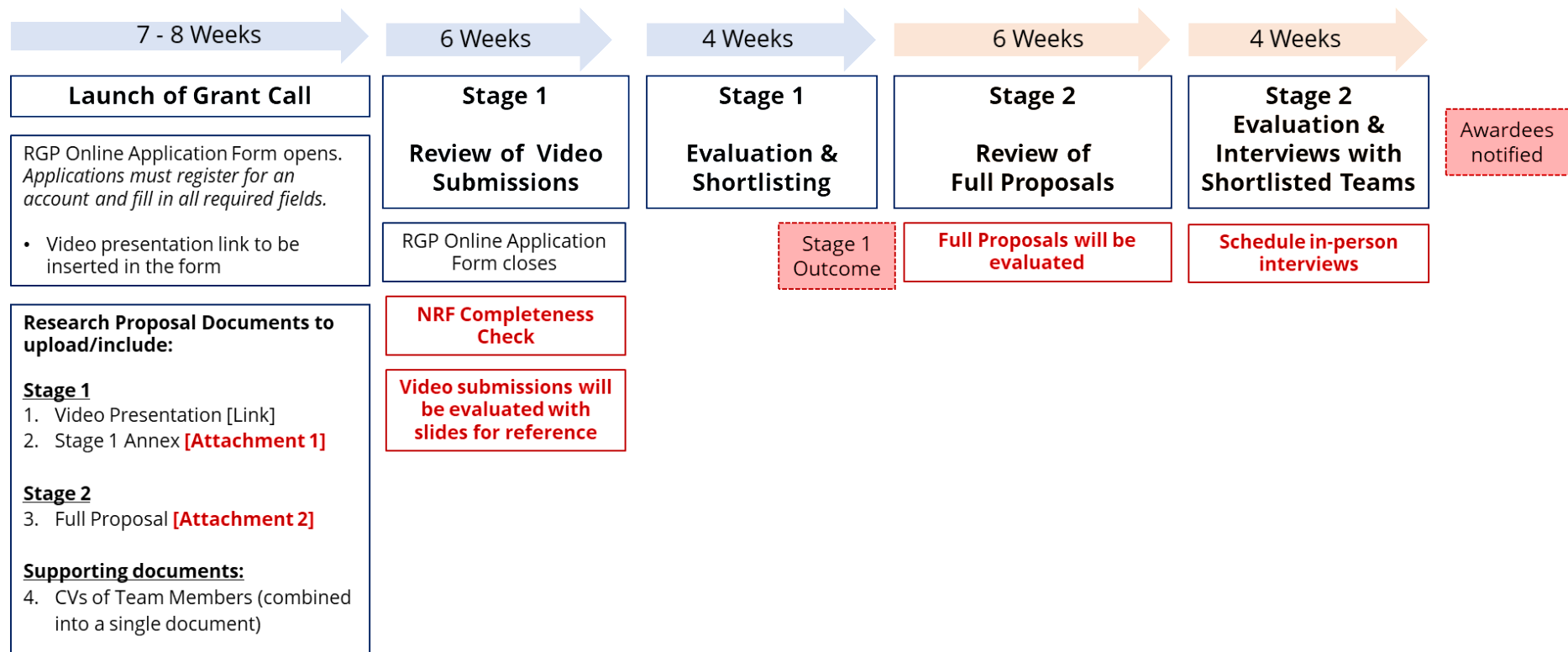
⁷ This section was previously included in the Stage 1 application form, where the Lead PI, Team PIs and Collaborators would be required to provide their signatures for declaration.

- 9.2 For technical enquiries related to RGP, please refer to the RGP Helpdesk ([Research Grants Portal \(RGP\) Helpdesk – Government Technology Agency of Singapore | GovTech](#)).

Enclosed for Reference

- a) Attachment 1: Stage 1 Annex Template
- b) Attachment 2: CRP Full Proposal Template

Overview of the Review Process and Requirements



Pointers for Writing Good Proposals

Good ideas are often undermined by missteps in proposal preparation. Most winning proposals have been polished repeatedly. Allow time to write and rewrite the proposal. Read the instructions and understand the evaluation criteria. Touch all the bases, and not just the ones you are comfortable with. Each section of the forms must be filled up carefully, as evaluations are based on how well the guiding questions are answered. Don't make work for the reviewers. Make it easy for the reviewers to get to your main points.

Pay heed to these general pointers:

- i) Define the problem statement and build a compelling case for need upfront. However, please do not dedicate too much time/space on prosaic background information. Elaborate more on important experimental details.
- ii) Use clear, accessible language. Avoid insider jargon and acronyms. Use direct statement and active voice.
- iii) Different parts of the projects need to be pulled together. Explain the basis for each sub-project and their linkages in fulfilling the overall programme objectives.
- iv) Show that you have an understanding of the existing competition. This should include performing a competitive scan and comprehensive literature search of ongoing efforts in the proposed topics and having an awareness of existing products/solutions or developments by the industry.
- v) Do not inflate the budget. Ask for a budget that realistically reflects the scope of work that will be accomplished. Where possible, existing equipment/facilities should be leveraged.
- vi) Clearly articulate the impact of your research and how you would achieve it. This should not be confused with KPI outputs (e.g. no. of paper publications, no. of postdocs recruited etc.). Be specific and quantitative with benchmarked technical specifications, if possible.
- vii) Root out inconsistencies in format, typos, misspellings, mislabelling of diagrams, grammar, etc. Get another person to proof-read.

When writing your Full Proposals, try to answer these questions adapted from Heilmeier's Catechism:

1. What are you trying to do? Articulate your objectives using absolutely no jargon. What is the problem? Why is it hard?
2. How is it done today, and what are the limits of current practice?
3. What's new in your approach and why do you think it will be successful?
4. Who cares?
5. If you're successful, what difference will it make? What impact (esp. economical & societal) will the success have?
6. What are the risks and the payoffs?
7. How much will it cost? (giving strong justifications for request exceeding S\$5mil)
8. How long will it take?
9. What are the midterm and final "exams" to check for success? How will success be measured?
10. Other components of proposal to be highlighted, e.g. synergies of projects within proposed programme, team composition, collaboration with academia/industry, programme management (e.g. Gantt chart, project involvement structure), relevance to Singapore etc.

Format of Curriculum Vitae

For Lead PI, Team PI(s) and Collaborator(s): Please upload a single file containing all the CVs of the Team Members, to the '*Proposal, Outcomes and Key Deliverables*' section of the RGP application.

The CVs of all members (**Lead PI, all Team PI(s) and Collaborator(s)**) must be provided in a single file. **Each CV must start on a fresh page and be limited to 1 page (Arial font size 12, single line spacing)**. Please indicate "N.A." beside the label field if the required information is not applicable. NRF will not be responsible for any missing information not provided in the CVs. Please note to only provide information listed below. Do not include any additional fields or extraneous information.

- Name
- Title
- Office mailing address
- Email
- Contact number
- Current position (please provide full details, e.g. primary appointment, joint appointments; other academic appointments including those outside of Singapore).
- Percentage of time spent in Singapore every year for the current position (**mandatory field for Lead PI and Team PI(s)**)
- Link to research webpage (please ensure that the link provided is valid)
- List of **up to 5 (maximum)** most relevant publications (including 'in-press' publications, regardless of acceptance/published date of the publications) [include authors, full title, journal name, volume, issue, page numbers]

CHECKLIST FOR PREPARATION OF A RESEARCH BUDGET

Before you Begin

1. Read NRF's Instructions for Submission of Full Proposal for the Competitive Research Programme (CRP) funding scheme carefully.
2. Review the instructions and guidelines to ensure that the proposed items are eligible and in concordance to your Host Institution's policies.
3. When in doubt, always seek assistance from your Office of Research or NRF before you begin.

Preparing the Budget

4. Be realistic and do not over-inflate the budget. Budget should be reasonable and appropriate for the proposed research plan. For multi-year projects, consider time constraints and get advice on whether you will be able to spend the proposed budget within the duration of the project.
5. Be detailed and specific. List all items on a separate worksheet that clearly shows the calculations and keep this detailed list to remind yourself how the numbers were derived. This will be useful during the budget scrubbing stage (upon awarding) and for future monitoring and reporting.
6. Anticipate reviewers' views and plan ahead to ensure that detailed description and justification on the need of all items listed in the budget are written clearly.
7. Direct costs refer to costs which can be directly attributed to the project. Indirect costs are Institution overhead costs that benefit and support research.
8. Please use the checklist below to assist you with preparation of the research budget.

S/N	Item	Description	
1.	Manpower Cost (EOM)	Are the positions of all individuals working on this project listed?	☐
2.		Is the proposed manpower headcount sufficient and reasonable to meet the project objectives and deliverables?	☐
3.		Is the EOM per pax in agreement with the salary package stipulated by your Host Institution's HR policy?	☐
4.		Have you budgeted the EOM according to the man-months required of each manpower headcount within the project duration?	☐
5.		Have you sufficiently justified the role for each manpower headcount and the need to recruit him/her to meet the project objectives?	☐
6.	Equipment	Have you explored alternative sources for using existing equipment without the need to purchase new equipment?	☐
7.		Can you use the equipment in shared facilities and utilise CRP fund to pay for service fees instead?	☐
8.		Do you have sufficient space for the new equipment? What is the usage frequency of the new equipment? Does the equipment require high maintenance cost?	☐
9.		Have you factored in taxes, exchange rate (if applicable) and freight charges (if applicable) for the proposed equipment item?	☐
10.	Consumables Costs (OOE)	Have you listed all the supplies and materials required?	☐
11.	Research Scholarship	Are the tuition fees and stipend rates budgeted according to the MOE prevailing rates?	☐
12.	Overall Budget	Does the amount of all line items of each vote tally?	☐
13.		Does the total amount of all votes tally with the final proposed budget?	☐

I. AREAS OUT OF CRP SCOPE

The CRP Scheme is not intended for the following areas:

- a) Epidemiological and behavioural studies;
- b) Observational studies (including cohort, longitudinal, case-control studies, etc.);
- c) Clinical and drug trials;
- d) Health services research/operations research;
- e) Infrastructure/facilities set-up; and
- f) Market/drugs/product development.

II. NON-FUNDABLE DIRECT COSTS

Types of Expenses	Description
Salaries of Lead PI / Investigators / Project Leads	Not allowable, to ensure no double funding of salaries and related costs, as the salaries are already supported from other sources (e.g. faculty salaries are supported separately by the IHLs as it is in support of the IHLs' core mission).
Salaries of Teaching staff / Teaching substitutes	Not allowable, as this is being supported from capitation grants.
Undergraduate tuition support	Not allowable, as this should be supported under the respective scholarship grants and bursary schemes.
Salaries of general administrative staff	Not allowable, as this is an indirect cost*.
Costs related to general administration and management	Not allowable, as this is an indirect cost*. This includes common office equipment, such as furniture and fittings, office software, photocopiers, scanners and office supplies.
Costs of office or laboratory space	Not allowable, as this is an indirect cost*. This includes renovation/outfitting costs, rent, depreciation of buildings and equipment, and related expenditures such as water, electricity, general waste disposal and building/facilities maintenance charges.
Personal productivity tools & communication expenses	Not allowable, unless the use of mobile phones and other form of smart devices were indicated in the methodology for the Research. All other cost under this expense type is an indirect cost*.
Entertainment	Not allowable, as this is an indirect cost*.
Refreshment	Not allowable, unless this is related to a hosted conference or workshop for the Research. All other cost under this expense type is an indirect cost*.

Audit fees (Internal and external audit) and Legal fees Fines and Penalties Professional Membership Fees Staff retreat and team-building activities	Not allowable, as this is an indirect cost*.
Patent Application	Not allowable, as this should be supported from overheads given to I&E Office (IEO)*. This includes patent application filing, maintenance and other related cost.

**Note: Indirect costs should be funded from overheads or other funding sources.*

SUMMARY OF POTENTIAL IMPACT

A summary of potential impact of the proposed CRP project is intended to inform the NRF and its reviewers that the team has scoped its research project based on the understanding of how it would impact the beneficiaries and/ or users, if the project succeeds. An impact summary should include a clear description of the problem that the project is addressing, significance and expected outcomes of the research, and address the following two questions: who might benefit from the research and why it matters.

Impact of research may be described as academic or economic/societal impact. Academic impact refers to making scientific advancements or breakthroughs that could result in a better understanding of an unknown space that could benefit mankind. Economic/societal impact refers to making advancements that could benefit the society and Singapore's economy at large. Impact should not be confused with outputs. Number of publications, patents and students trained are seen as outputs. These outputs can become outcomes; for e.g. building competence, adding to the knowledge base for a particular research field or product development. The impact summary should be written in lay non-technical language, be as specific as possible and provide information that will help the NRF and external reviewers in assessing the potential impact of the proposed project.

As an example, some forms that the impact of research may take are listed below:

- Transformation of an existing manufacturing process.
- A novel solution/technology/product that could address existing gaps that could not be met by existing solution/technology/product.
- Generation of new knowledge that could establish better understanding of existing / new phenomenon that would benefit mankind.

PATHWAY TO IMPACT

A clearly thought through and acceptable Pathway to Impact is an essential component of a research proposal and a condition of funding. This describes the activities that contribute to achieving the impact(s) as depicted in the impact summary. It should contain details of what will be done in the proposed research to engage the beneficiaries and users to maximise the impact(s).

A clearly thought through and acceptable Pathway to Impact should:

- be project-specific and not generalised;
- be flexible and focus on potential outcomes;

PIs are encouraged to:

- identify and actively engage relevant users of research and stakeholders at appropriate stages;
- articulate a clear understanding of the context and needs of users and consider ways for the proposed research to meet these needs or impact upon understanding of these needs;
- outline the planning and management of associated activities including timing, personnel, skills, budget, deliverables and feasibility; and
- include evidence of any existing engagement with relevant end users.

GUIDING CHECKLIST FOR COMPETITIVE RESEARCH PROGRAMME (CRP) COMPLETENESS CHECKS

This is a non-exhaustive list for PIs to take reference to ensure completeness of the submissions, and for the Office of Research to take reference when verifying the submissions.

S/N	Document	Section	Item to Check
1	Stage 1 Annex	Supporting Documents	• Cover Page contains proposal title, budget (including indirect costs) that match with the RGP online application. • This document should contain all relevant sections (research objectives, assessment on current development, proposed approach, outcomes, and deliverables) and are within the 10-slides limit (excluding cover page and appendices). • This document should be in PDF format (no larger than 10 MB) and must be uploaded into Proposal, Outcomes and Key Deliverables Section of the RGP application form. • Response to Feedback contains the Proposal ID and title of the original submission, a summary stating differences and improvements from past submission and a rebuttal to address past comments. • This section should be written in Arial font size 12, single spacing, normal margins.
2	Full Proposal	Proposal	• Full Proposal is within 15-page limit (excluding cover page and appendices), uploaded as a single file. • All sub-sections (research objectives, assessment on current development, proposed approach, programme plan, role of team members) are addressed. • Headings for all appendix sub-sections should be clearly stated.

			• Full titles, DOI numbers are included for all references. • File Names are correct (refer to Paragraph 6.1, Table 1 and 2).
3	For resubmissions		• The proposal has not been resubmitted more than once.
4	CVs		• All CVs of Team Members should be combined into a single file. • CVs should include the Lead PI, Team PI(s) and Collaborator(s) . • Indicate % time spent in Singapore (mandatory for Lead and Team PI(s)). • A maximum of 5 publications are listed. • The CV should follow the requested format and extra sections / information should be removed. • The CV of each team member does not exceed 1 page. • Link to the PI's research webpage should be valid. • File names are correctly formatted (refer to Paragraph 6.1 of Information Sheet).