DEFENCE INNOVATION NETWORK

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Australian Government
Department of Defence
Science and Technology

DEFENCE INNOVATION NETWORK PILOT PROJECT GRANTS

GUIDELINES FOR APPLICANTS ROUND 3 -2019/20

www.defenceinnovationnetwork.com

1. Scheme Purpose

1.1. DIN Pilot Project funding scheme is an annual, competitive program that supports cross-discipline university collaboration in NSW. The scheme is administered by the NSW Defence Innovation Network and funded by the NSW Government.
1.2. The key objective of the DIN Pilot Project Funding is to conduct a rapid feasibility study on new ideas for Defence and develop these ideas into concept or technology that can attract further investment from the government or industry. Pilot Projects should demonstrate high potential to satisfy an existing or emerging Defence capability need or an existing or emerging defence industry need.
1.3. Problem statements, which serve as a basis for a call-out for proposals, are sourced from industry or defence end-users and have been shaped into relevant problem statements for university research during DIN Sandpit Workshop held in June 2019.
1.4. Applicant are expected to consult with the originator of the problem statement to ensure alignment with their identified needs.

2. Support available

2.1. The total funding available for university research projects is $650, 000 in 2019/20.
2.2. Successful proposals can be funded up to $200,000 for projects scoped for 6-12 months.
2.3. Funding will be paid to the lead organisation in a single tranche. The leading organisation is responsible for distribution of the funds to Collaborating organisations.

3. Use of funds

3.1. Funding from the DIN Pilot Project Grant Scheme will take form of a cash contribution following the execution of a Multi-institutional Collaborative Agreement between applicants and Defence Innovation Network (Administered by University of Technology Sydney).
3.2. The project funded by DIN Pilot Project Grant Scheme must be Defence relevant and must be capable to potentially generate further research funding.
3.3. Funds must be used to directly support research project described in the application and can include following items:

- *Direct salary costs* for employees working on the project including chief investigators, early career researchers, research assistants etc.
- *On-cost salary expenses* up to maximum of 30% of direct salary costs and consistent with the university policy. On-costs must be itemised in the application and can only include the following items: superannuation, payroll tax, payroll tax on superannuation, workers compensation, long

service leave, and maternity leave. Universities must submit their on-cost salary expenses itemised by each category as the attachment of the application form.

- *Equipment, software, material and consumables* essential for the project. Funding will not be provided for equipment and consumables that are considered to be for broad general use or already held by the university.
- *Travel costs* essential to the project for the employees working on the project
- *Stipends for HDR students* working on the project

3.4. Budget items which are not supported by the Pilot Project funding and should NOT be requested in the budget include:

- *Infrastructure (overhead) costs* related to general operations of the university shared among projects and functions
- *Salaries of industry partners* working on the project
- *Costs not directly related to the project* including but not limited to conference fees, workshop expenses, entertainment costs, professional membership fees, professional development courses, visas, relocation costs, insurance and other indirect costs

3.5. All expenses must be itemised in a budget section of the grant application. Grant funds must be spent in accordance with this budget and any requests for variations must be made to the Defence Innovation Network Manager and approved in advance.

3.6. The DIN Technical Panel will have sufficient flexibility to tailor funding support according to what it believes is required to assist with the project delivery.

4. Eligibility criteria

4.1. DIN Pilot Project Fund can be accessed by the DIN member universities only.

4.2. Project proposals must demonstrate inter-university collaboration and have to involve at least two DIN member universities.

4.3. Industry partners may be part of the project team applying for Pilot Project funding. To be eligible industry partner must have an Australian Business Number and must be registered as a company, other entity or be an individual that will agree to form a company to enter into a grant agreement.

5. Selection criteria

5.1. DIN Technical Panel will evaluate applications against information and evidence provided in relation to the selection criteria:

- Identified Need in Defence
- Potential for impact and implementation pathway
- Novelty and potential to become world leading
- Technical/ Scientific Merits, Scientific and Technical Risk, Best Collaborative Team

5.2. DIN Technical Panel will make recommendations regarding funding allocations to applicants.

5.3. DIN Steering Committee will make final decisions relating to funding of projects, based on recommendations of the Technical Review Panel.

6. Application process

6.1. Application for the DIN Pilot Project Grants is a one stage process.

6.2. Applicants must submit an electronic copy of the application by due date to info@defenceinnovationnetwork.com

6.3. All applicants are expected to communicate with their university coordinator to ensure that they have optimum visibility of progress of intended submissions.

- *University of Wollongong:* Robert Beretov
- *University of Western Sydney:* André Urfer
- *University of Sydney:* Richard Cislowski
- *University of Technology Sydney:* Arno Schaaf
- *University of New South Wales:* Craig Peden
- *Macquarie University:* Mark Berlage
- *University of Newcastle:* Sally Whittaker

6.4. Applicants are expected to correspond with the originator of the problem, during the proposal drafting stage, to ensure clarity of the objectives of the problem and alignment with the end-user requirements. Forming teams are expected to contact DIN at info@defenceinnovationnetwork.com in order to obtain contact details of the problem originator.

6.5. All eligible applicants will be accessed by the Technical Panel on merit against the selection criteria. However the DIN Steering Committee, in its discretion, may choose not to provide funding to applicants.

6.6. Applicants should clearly identify in their application (including attachments) any information that needs to be treated as confidential.

7. Selection Process

7.1. Pilot Project grant scheme is administered by the Defence Innovation Network. DIN will collect applications and will conduct an initial completeness review of the applications. Advice will be provided to the Technical panel regarding the eligibility.

7.2. The Technical panel will assess each application on a competitive basis relative to the criteria and other applications.

7.3. The Technical Panel may seek further advice and request additional assessment from subject matter experts. Experts may include DST scientists, problem originators, and academics.

7.4. The Technical Panel will make recommendations for the final approval to the DIN Steering Committee.

7.5. All applicants will be informed of the outcome and the decision on their applications, whether or not they are successful.

7.6. The timeline of the selection process is as follows:

12-14-Jul-19	Sandpit Workshops
15-Jul-19	Call for Proposals- Applications open
02-Sep-19	Applications close
16-Sep-19	Technical Panel Assessment
11-Oct-19	DIN Steering Committee Approval
16-Oct-19	Successful Applicants announced
Oct-Nov-19	Contracting & Start of projects

8. Funding Agreements, Reporting Requirements & Acknowledgement

8.1. All applicants who are successful and who accept the offer of a grant will be required to enter into a formal Multi-institutional Agreement. The Agreement will specify obligations and accountabilities of the recipients.

8.2. Successful applicants will be required to provide final report to the DIN (Administered by the University of Technology Sydney) at *info@defenceinnovationnetwork.com within* 2 months of the end date negotiated in the Agreement.

8.3. Final report consist of Technical report and Financial acquittal. Lead organisation submits Financial acquittal for project as a whole including financial acquittal of Collaborating organisations.

8.4. All expenditure must be in accordance with the project description and broad structure of the proposed project cost detailed in the proposal. Lead organisation must retain the evidence of the expenditure.

8.5. All changes to project cost or roll-over of the funds must be justified and approved by the DIN (Administered by the University of Technology Sydney).

8.6. Any material or research findings published in respect of a DIN Pilot Project – funded activity must include acknowledgement of DIN Pilot project funding and the NSW Government in a form: *"We thank the NSW Defence Innovation Network and NSW State Government for financial support of this project through grant DINPP-1x-xx."*

ANNEXURE A: TECHNICAL PANEL COMPOSITION

CHAIR

Dr Helen Dorsett, Associate Director Defence Innovation Network, Defence Science and Technology Group

TECHNICAL PANEL MEMBERS

Mr Darren Burrowes, Chief Technology Officer, BlueZone Group

Prof Ian Gibson, Associate Dean for External Engagement, Faculty of Engineering, UNSW Sydney

Mr Will Hutchinson, Chair, Defence Innovation Network & Thomas Global Systems

Prof Bernard Mans, Deputy Dean, Faculty of Science and Engineering, Macquarie University

MS Christina Newman, Director Policy- Science & Research, Office of the NSW Chief Scientist and Engineer

Prof Kate Stevens, Director, MARCS Institute, Western Sydney University

Prof Bradley Williams, Director Defence Innovation Network, Associate Dean for External Engagement, Faculty of Science, University of Technology Sydney

Scientists from Defence Science Technology Group

ANNEXURE B: GUIDELINES FOR TECHNICAL PANEL REVIEWERS

Reviewers will be asked to agree to confidentiality terms. Reviewers must not correspond with applicants or interested parties relating to the proposal during or after the review process.

DIN attempts to select reviewers with no conflict of interest. Where a reviewer believes he/she has a conflict of interest, no review is required but an explanation of the conflict of interest is requested. An alternate reviewer will be sourced by the DIN. Conflicts of interest may be:

- **Direct**; i.e. you are an interested party in a proposal;
- **Indirect**; i.e. you have an association with one or more of the institutions involved in the proposal;
- **Involvement in a competing proposal or business**; i.e. you have an involvement that is direct or indirect with a competing proposal or business activity.

Reviewers are asked to apply judgement when assessing science excellence and impact, relative to the stage of research and the area of impact. In principle, the DIN will co-fund research at any TRL, which can be thought of as generating new ideas, developing emerging ideas, and leveraging proven ideas.

Reviewers should assess the proposal against the supplied criteria, and are expected to provide an objective appraisal of the proposal against these criteria, i.e. undertake your assessments in accordance with the guidance in these guidelines. An assessment template is provided and reviewers are asked to assess only against the specific criteria identified for their institutional type (DIN, DST Group or University). Reviewers should use information contained in the application and the supplied supporting documentation, and may in addition employ any other information of relevance to make the assessment.

Reviewers should provide explanatory text to support your assessment, which can include reference to supporting key evidence, such as scientific publications, strategic guidance documentation, patent information, etc. It is important that your comments support your score and fairly reflects the assessment, and is accurate, professional, and honest.

ANNEXURE C: ASSESSMENT CRITERIA

For Pilot Projects, the following criteria will apply, falling into IMPACT and EXCELLENCE

- Identified need in Defence (technology or capability)
- Potential for impact and implementation pathway
- Novelty and potential to become world leading
- Technical / Scientific Merits, Scientific and Technical Risk, Best Collaborative Team

NOVELTY AND POTENTIAL TO BECOME WORLD LEADING; TECHNICAL FEASIBILITY AND RISK; BEST COLLABORATIVE TEAM (EXPERT REVIEWERS)

What is the quality of the proposed research, science, or technology, or related activities?

You may wish to particularly consider:

a. **The novelty and originality of the proposal**. The idea itself does not have to be novel, but the sum of the idea and the application must be distinctive. We are looking for 'fresh thinking' rather than an obvious extension of existing research. If you are aware of similar work please provide a reference. Similar work will not necessarily disqualify a proposal.

b. **The scientific credibility of the idea and its logic**. Is the scientific basis for the idea established well in the proposal?

c. **The quality of the science, description of critical steps** (including go/no-go steps), and methodology. Is the proposed research fit for purpose for the proposed outcome and impact sought?

d. **The degree of scientific rigour**, e.g., the accuracy of the approach and hypothesis. Please provide advice on how either might be improved.

e. **The scientific risks and uncertainties identified in the proposal.** Any omissions and how they are managed. Are the timescales realistic? Is the size of risk, and plans to mitigate that risk, consistent with the stage of research?

f. **Team composition.** Does the team represent a collaborative effort between DIN member universities? Do the team members possess the necessary expertise consistent with the needs of the project? Does the team possess other useful expertise, like previous experience or engagement with Defence or industry partners? For stage 2: Does the team have the necessary level of skills and track record to deal with the project?

When reading the proposal it would be valuable if you can consider the following questions in your scoring and commentary:

- Comment on the strengths and highlights of the proposed research.
- Highlight the deficiencies or weaknesses of the proposed research.
- Were there any concerns or issues around the proposed research, relating to technical, team, prior events, existing technologies, existing knowledge/ research?

POTENTIAL FOR IMPACT AND IMPLEMENTATION PATHWAY (STEERING COMMITTEE)

You may wish to consider:

- Has the applicant clearly articulated how this opportunity can be transformative for Defence or the defence industry / company in the future?
- Is the proposed implementation pathway credible relative to the proposed stage of research, bearing in mind the TRL or the research?
- Are the scale and breadth of proposed benefits credible given the area of impact and are these consistent with the outcomes of the proposal?

'Implementation pathways' are expected to demonstrate that the proposal has considered specifics or mechanisms by which outputs may eventually become implemented or commercialised.

The credibility of indicative implementation pathway(s) to deliver benefit to Australia will be assessed, and may not be not limited to a single industry partner or end user, and may be uncertain in nature. A 'credible' implementation pathway analysis will consider the characteristics of the end use area and is not a generic description.

The information sought is indicative only but should nonetheless impart confidence that the research team has considered this aspect, even though the information may be tentative and uncertain. It is recognised that early stage investigations are likely to have less concrete implementation pathways with higher level information at the generic beneficiary and end-user level, while more advanced (i.e. higher TRL, near-to-market) studies will present a clearer view of a pathway to impact and implementation.

'Impact' will be measured by one or more of scale, extent, and urgency of Defence need or transformative nature of the outputs (i.e. creating altogether new technologies or solutions).

'Scale' means the size, or how much, the outcomes will benefit Australia and Defence.

'Extent' means how widely the outcomes will benefit Australia or Defence.

For example, a given technology may require only five specimens in any given Defence Force. This will have small size (unless it is of very high value). If the technology is of such a nature that it is likely to be taken up by every Defence Force in which it is able to be implemented, then it will have a wide extent of coverage.

'Urgency of Defence need' can be measured against expressed priority areas, such as in the Defence Innovation Hub or via other mechanisms.

A proposal that demonstrates high impact would receive the following type of comment:

The potential benefits are extremely large and with impacts that are nationally significant across the whole of a sector or several sectors. The estimates of benefits are credible and clearly described. The proposed implementation pathways are of an extremely high standard, completely credible and the supporting information is satisfactory in scope.

RANKING SYSTEM

IMPACT

1. **Identified Need in Defence**[1]
   - **[0] None:** No obvious relationship to Defence S&T priorities
   - **[1] Low:** Peripheral relationship to Defence S&T priorities (substantial modification would be required to apply the outputs to a Defence problem)
   - **[2] Medium:** Research is closely related to a Defence problem or that is developing a technology of direct relevance to a Defence application. One industry partner is involved.
   - **[3] High:** Working directly on a Defence problem in partnership with Defence. Two or more industry partners are involved.

2. **Potential for impact and implementation pathway**[2]
   - **[0] None:** The proposal demonstrates low impact and/or a poorly articulated implementation pathway.
   - **[1] Low:** The proposal shows some impact and/or a reasonably well-developed implementation plan.
   - **[2] Good:** The impact is likely to be significant and the implementation plan credible.
   - **[3] Outstanding:** There is likely to be high impact if successful and the implementation plan is clear, credible and contains specific and detailed end use information.

EXCELLENCE

3. **Novelty and potential to become world leading**[2]
   - **[0] None:** Is routine and presents little or no novelty.
   - **[1] Low:** Displays some novelty but the outcomes are likely to be incremental.
   - **[2] Medium:** Is differentiated, will lead to notably improved technology.

[1] Assessed by Technical Panel
[2] Assessed by DIN Steering Committee

- **[3] High:** Distinctive approach that is highly likely to produce leading innovations or capability.

4. **Technical/Scientific Merits; Scientific and technical risk (science component)[2]**
   - **[0] Low:** The Proposal is uncompetitive and has significant weaknesses or flaws, such as a poorly developed or costed plan, no demonstrated ability that the investigators can deliver on the proposed research, or a lack of novelty or value. Risks are poorly articulated or are unmitigated.
   - **[1] Moderate:** An interesting proposal. Developing expertise amongst investigators. Some concerns about either the resource estimate or the ability of the researchers to deliver based on their understanding of the state of the art or their track record. The proposal may lack a compelling element. Risks are partly identified or inadequately mitigated. Risks outweigh benefits.
   - **[2] Good:** High quality research and a strongly competitive proposal. Investigators have provided evidence of previous ability to deliver. Risks have been well articulated and mitigated although some residual risks might remain. The potential benefits outweigh potential risks.
   - **[3] Outstanding:** Of the highest quality and at the forefront of research in the field. Well budgeted for the proposed statement of work. Sound track record of investigators. Risks have been adequately identified and mitigated.

5. **Team Technical/Scientific Merits; Collaboration and Track Record[2]**
   - **[0] None:** The team consists of an individual lead researcher (with or without students, research associates) or has inadequate expertise to lead to a successful outcome.
   - **[1] Low:** The team consists of two lead researchers from the same institution (with or without students, research associates)
   - **[2] Good:** The team consists of two lead researchers from the different institutions (with or without students, research associates) with fit for purpose expertise.
   - **[3] Excellent:** The team clearly has been assembled to encapsulate the best expertise from across the DIN.

PILOT PROJECT ASSESSMENT FORM

Application Number: DINPP201x-xx

Title:

Reviewer Name: _____

Reviewer's Institution: _____

Criterion 1 – **Identified Need in Defence**

Ranking (circle one): 0 1 2 3

Comments:

Criterion 3 - **Novelty and potential to become world leading**

Ranking (circle one): 0 1 2 3

Comments:

Criterion 4 – **Technical and Scientific Merit/ Scientific and Technical Risk**

Ranking (circle one): 0 1 2 3

Comments:

Criterion 5 – **Team Collaboration and Expertise**

Ranking (circle one): 0 1 2 3

Comments: