DEFENCE INNOVATION NETWORK
To go far, go together

DIN STRATEGIC INVESTMENT INITIATIVE
GUIDELINES 2021

1. BACKGROUND

With the recent announcement of Cyber Security and Undersea Surveillance being priority areas for the Australian Defence Force and Defence Science and Technology Group investment, the Defence Innovation Network (DIN) has established the Strategic Investment Initiative (SII).

Our objective is to harness and deepen the leadership position in NSW through targeted investment in areas of overlap between our capabilities and defence interests. Identified areas of interest align with the relevant Next Generation Technologies Fund themes -*Integrated intelligence, surveillance and reconnaissance, Advanced sensors, and Cyber. Underwater Surveillance* topic also corresponds with the *Remote undersea surveillance STaR Shot,* while the Cyber topics cuts across STaR Shots in *Resilient multi-mission space, Information warfare, Battle ready platforms and Remote undersea surveillance.*

The purpose of the Strategic Investment Initiative is to enable multi-disciplinary teams to produce two prototypes, to create lasting links to the defence industry and to catalyse commercialisation and additional investment in research and development in NSW. A key objective is to build capability in the State by funding collaborative research that will enable a prototype to be built within a 12-18 month timeframe, suitable for a 'demonstration' of the new capability of the integrated system.

It is expected that the creation of such prototypes will enable a more straightforward commercialisation pathway, will draw attention and intent from Defence and other companies and facilitate significant domestic investment through, for example, the Defence Innovation Hub.

2. ABOUT THE GRANT

2.1. The Strategic Investment Initiative supports multi-disciplinary collaborations between academic researchers from across DIN universities, industry and other Australian universities to accelerate the translation of technologies into defence capability.

2.2. DIN seeks to fund projects led by DIN universities with the highest potential to be developed into prototypes (TRL 4-6) within 12-18 months that have a straightforward commercial application.

2.3. DIN will fund proposals in the area of cybersecurity and undersea surveillance. Applicants should scope project proposals only within problem statements published on the DIN website.

2.4. The funding scheme is administered by the NSW Defence Innovation Network and funded by the NSW Government and the Department of Defence through the Next Generation Technologies Fund.

3. FUNDING

3.1. In total, $1,000,000 of funding is available to support R&D projects aligned with published topics.

3.2. DIN will support two projects with eligible costs to a maximum of $500,000 scoped for 12–18 months.
Project budgets will be assessed on merit and DIN reserves the right to amend the funding to projects.

3.3. DIN strongly recommends that researchers connect with university coordinators, listed in section 4.5, to ensure a coordinated approach between institutions. We support an approach that encourages maximum collaboration and minimum competition, to ensure that the best teams are assembled (refer to Assessment Criteria, section 7). DIN can assist to link researchers together, on request.

4. ELIGIBILITY

4.1. Proposals must demonstrate multi-disciplinary and multi-institutional collaboration. Projects must be led by DIN university with substantive inputs from at minimum two DIN universities in total. However, broader engagement across DIN universities is strongly encouraged, and may be assessed more favourably.

4.2. Project teams may include academics from other States or other research organisations. However, limited funding, up to $33,750 per project, is available to support research at non-DIN universities. Accordingly, projects involving non-member institutions or interstate collaborations should rely on key person contributions only in exceptional circumstances and where the capability is demonstrably absent from DIN universities. The contributions of such non-DIN partner institutions will be governed by terms consistent with those governing DIN member institutions.

4.3. Industry involvement and co-funding is strongly encouraged but is not necessary for a successful proposal. DIN funds cannot be used to cover expenses of an industry partner. Similarly, strong connections with DST Group or the Australian Defence Force are favourable.

4.4. The lead organisation (a DIN member university) submits the application on behalf of project partners and is responsible for the project management of the grant.

4.5. Eligible Lead organisations

- Macquarie University /Mark Berlage/
- University of New South Wales /Mick Cook/
- University of Newcastle /Sally Whittaker/
- University of Sydney /Richard Cislowski/
- University of Wollongong /Robert Beretov/
- University of Technology Sydney /Michael Murphy, Miriam Cuellar Flores/
- Western Sydney University /Andre Urfer/

4.6. Eligibility of individual researchers*

- All project participants must be citizens of the Five Eyes Alliance (Australia, Canada, New Zealand, the United Kingdom, the United States) or NATO member countries.
- Citizens of possibly allied countries not covered by the named treaties are subject to approval by DIN.
- All project participants must prove their citizenship by providing a copy of their passport or other acceptable forms of citizen identification.
- Individual researchers may participate in only one funded project.

4.7. Eligible Industry partners*

- DIN encourages industry participation in these university-led projects. Project funds may not be employed for industry partner expenses or participation.
- To be eligible industry partners must have an Australian Business Number and must be registered as a company (individuals, partnerships and trusts do not qualify as industry partners) and have a physical presence in Australia.
- Employees of the industry partner associated with the project will be subjected to the same restrictions as listed in clauses 4.6 and 5, and any other conditions imposed by the Defence or DIN.
- IP arrangements with industry partners must be of such a nature that the IP and manufacturing or production of any good flowing from the project remain in Australia, more preferably in NSW.
- Allied defence organisations may be eligible to participate and will be considered on a case by case basis.

* Note: Eligibility criteria and final security requirments for each project will be determined in consultation with Defence, but will at minimum include the specified criteria above.

5. OBLIGATIONS OF PROJECT PARTNERS

- All project participants must agree to terms that restrict access to the R&D data and other Intellectual Property (IP) to the nominated team members.
- Any additional team members must be approved by DIN and must agree to any and all terms contained in the primary contract between the parties.
- Intellectual Property (IP) and manufacturing or production must remain in Australia unless otherwise agreed.
- All participants must assign or have assigned IP to the institution either by virtue of employment contracts or by separate agreements.

- Participants must gain a minimum of Entry Level Membership through the Defence Industry Security Program (DISP) within twelve months of commencement of the project.
- Participants must keep their involvement in the Initative confidential unless advised otherwise. In line with Defence guidelines, the identities of successful teams may not be made public. Any announcements of successes will be only of a general nature.

6. USE OF FUNDS

6.1. Funding from the DIN will take the form of a cash contribution following the execution of multi-institutional funding agreements between participating organisations.

6.2. DIN funding will be paid to the lead organisation. The leading organisation is responsible for the distribution of the funds to Collaborating organisations.

6.3. Project funding can be spent on eligible expenses incurred at participating universities only. Industry cash contributions have to be transferred and spent at the universities.

6.4. Funds must be used to support the research project described in the application directly and can include the following items:

- *Direct salary costs* for employees working on the project including chief investigators, early career researchers, research assistants etc. Where chief investigator salaries are claimed, this must be specifically justified and is subject to approval. DIN's preference is that the funds be used for research associates and –fellows working directly on the project rather than for CI salaries.
- *On-cost salary expenses* up to a 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 an attachment to the application form, demonstrating compliance with this directive.
- *Computers* that are network and internet incapable or entirely excluded from networks and the internet. Each participating team must make provision for a minimum of one secured computing item per group, more preferably one per participating university institution within a team.
- *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 or top-ups for HDR students* working on the project. However, given the term of the projects (12-18 months), budget line items for PhD stipends must be specifically justified and are subject to approval.

6.5. 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, or any expenses of whatsoever nature incurred by industry partners.
- *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

6.6. Applicants must itemise all expenses in the budget section of the grant application. Grant funds must be spent in accordance with this budget and any requests for variations must be made in writing to the Defence Innovation Network Manager and approved in advance.

6.7. DIN reserves the right to tailor funding support according to what it believes is required to assist with the project delivery.

7. ASSESSMENT CRITERIA

7.1. DIN will evaluate applications against information and evidence provided in relation to the following selection criteria. Applicants should also take note of the instructions and guidance to reviewers, below.

- **Vision, Ambition & Innovation-** the proposal must articulate how the project will address the significant step change in translating science and technology and should be ambitious and transformative. Novelty and potential to become world leading will be demonstrated by Technical / Scientific Merits.
- **Leadership & Team Quality–** the proposal must bring together the best team available. It should present a robust and multi-disciplinary partnership of researchers (and industry partners as relevant) with the necessary skills and established track record of pertinent technology research. This is supported by an accurate, comprehensive and compelling analysis of requisite skills and capabilities. Bear in mind the production of a prototype and the potential engineering skills that may be required to create a prototype.
- **Impact–** The proposal must demonstrate who will benefit from the research and how they will benefit, including a demonstration on how the research will contribute to addressing key challenges and needs of the Defence. Plans should be described to disseminate results (subject to any security or IP restrictions), exchange knowledge, attract further investment and build collaborations.
- **Commitment of collaborators–** the proposal must demonstrate strong commitment from involved parties.

8. APPLICATION PROCESS

8.1. Applicants must submit their proposals in response to the topics published in the open call on the website www.defenceinnovationnetwork.com

8.2. The application form is available on request at info@defenceinnovationnetwork.com. **Completed proposals must be submitted in electronic form by 5pm, 5 March 2021 to info@defenceinnovationnetwork.com.**

8.3. DIN can connect researchers looking for collaborators on request before the application closing date.

9. SELECTION PROCESS

9.1. Applications that have conformed to the requirements of the application process and are deemed to be within the scope of the call will be subjected to a competitive review process. Peer reviewers, including DST Group experts, provide their recommendations to the DIN.

9.2. The DIN will constitute a Technical Review Panel comprised of selected DIN Steering Committee Members, DST Group experts, NSW Chief Scientist and Engineer, and any co-opted members as deemed fit by the DIN.

9.3. The DIN Steering Committee (or its delegated sub-committee) will make final decisions relating to the funding of projects, based on recommendations of the Technical Review Panel.

9.4. All applicants will be informed of the outcome of their applications, whether or not they are successful.

9.5. The indicative timeline of the selection process is as follows. DIN reserves the right the amend timelines as required.

30-Nov-20	Call for Proposals
05-Mar-21	Applications close
29-Apr-21	Expert Panel Assessment
14-May-21	DIN Steering Committee Approval
17-May-21	Successful Applicants announced
May-Aug-21	Contracting
01-Sep-21	Project start

10. FUNDING AGREEMENT, REPORTING REQUIREMENTS & ACKNOWLEDGEMENT

10.1. Successful applicants who accept the offer of a grant will be required to enter into legally binding grant agreements. The agreement will specify the obligations and accountabilities of the recipient.

10.2. Projects must not start until agreements are fully executed.

10.3. The lead organisation will be required to provide a final report to the DIN (Administered by the University of Technology Sydney) within two months of the end date of the project.

10.4. Final and mid-term reports consist of a Technical report and Financial acquittal. The lead organisation submits the Financial acquittal for the project as a whole, including the financial acquittal of Collaborating organisations.

10.5. 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.

10.6. All changes to the project timeline, staffing, costs or roll-over of the funds must be justified and approved in writing by the DIN.

10.7. Any material or research findings published in respect of a DIN funded activity must include acknowledgement of DIN funding in the form: "We thank the NSW Defence Innovation Network, the NSW State Government and the Department of Defence through the Next Generation Technologies Fund for financial support of this project funded by the Strategic Investment Initiative Grant."

ANNEXURE A: GUIDELINES FOR EXPERT 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. The DIN will source an alternate reviewer. 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 interest.

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 these guidelines. DIN will provide an assessment template to reviewers.

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

ANNEXURE B: ASSESSMENT CRITERIA

A. POTENTIAL FOR IMPACT AND IMPLEMENTATION PATHWAY /assessed by the DIN Steering Committee/

You may wish to consider:

- Has the applicant clearly articulated how this opportunity can be transformative for Defence or the defence industry 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 new technologies or solutions altogether).

'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 a 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 can be implemented, then it will have a vast 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, entirely credible, and the supporting information is satisfactory in scope.

B. NOVELTY AND POTENTIAL TO BECOME WORLD LEADING; TECHNICAL FEASIBILITY AND RISK; BEST COLLABORATIVE TEAM
/assessed by expert reviewers/

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

You may wish to consider particularly:

- **The novelty and originality of the proposal**- the idea itself does not have to be novel, but the sum of the concept 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. Please bear in mind that the proposals seek to produce a prototype, i.e. advancing the technology, not specifically the science.
- **The scientific credibility of the idea and its logic-** is the scientific basis for the concept established well in the proposal?
- **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?
- **The degree of scientific rigour**, e.g., the accuracy of the approach and hypothesis. Please provide advice on how either might be improved.
- **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?
- **Team composition-** is the analysis of necessary skills and competencies complete and satisfactory? 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 have the required *level* of skills and track record to deal with the project? Is the analysis of the required skills and team composition compelling and complete?

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 the technical, team, prior events, existing technologies, existing knowledge/ research?

C. RANKING SYSTEM

IMPACT

Potential for impact and implementation pathway

- **[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 a high impact if successful, and the implementation plan is clear, credible and contains specific and detailed end-use information.

EXCELLENCE

Novelty and potential to become world-leading – bearing in mind the intention is to produce a prototype device

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

Technical/Scientific Merits; Scientific and technical risk (science component) – bearing in mind the intention is to produce a prototype device

- **[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.

Team Technical/Scientific Merits; Collaboration and Track Record – at minimum, the team must comprise of collaborators from two member universities.

- **[0] None:** The team does not meet the minimum eligibility requirement
- **[1] Low:** The team has inadequate expertise to lead to a successful outcome or is significantly flawed in its composition.
- **[2] Good:** The team consists of 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:

Title:

Reviewer Name: _____

Reviewer's Institution: _____

Criterion 1 – **Impact and implementation pathway**

Ranking (circle one): 0 1 2 3

Comments:

Criterion 2 - **Novelty and potential to become world-leading**

Ranking (circle one): 0 1 2 3

Comments:

Criterion 3 – **Technical and Scientific Merit/ Scientific and Technical Risk**

Ranking (circle one): 0 1 2 3

Comments:

Criterion 4 – **Team Collaboration and Expertise, including analysis of requisite skills**

Ranking (circle one): 0 1 2 3

Comments: