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| **SMI ASLET Application Form For R&D Project***This form may take you 20 minutes to fill in.**You will need all parties’ information and project details to fill in the form.*1. *Please complete and attach the signed form and supporting documents in a zip file (<10MB) to upload together with the Application page in SMI’s Grant Management System for processing.*

*(Note: Approval of this application is at the sole discretion of SMI.)* |  |

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| **INTRODUCTION**The Australia-Singapore Initiative on Low-Emissions Technologies (ASLET) for Maritime and Port Operations aims to accelerate towards a net-zero emissions future while delivering bilateral economic benefits. The ASLET initiative is co-delivered by CSIRO, Australia's national science agency and the Maritime and Port Authority of Singapore and is supported by the Governments of Singapore and Australia.**OBJECTIVES** The objectives of the ASLET grant opportunity are to provide funding to projects that will contribute to the following outcomes: * **Reduced costs** of using low emissions fuels and technologies, including clean hydrogen and its derivatives, in maritime and port operations.
* **Improved technical and commercial readiness** of low emissions fuels and technologies in maritime and port operations, including industry awareness and acceptance.
* **Improved industry investment in, and uptake** **of** low emissions technologies in Australia and Singapore, as well as increased economic and employment opportunities.
* **Reduced emissions** in Australia and/or Singapore through contribution towards national emissions reduction targets and global emissions reductions targets set by the International Maritime Organization (IMO) for shipping.
* **Strengthened connections among Australia and Singapore** maritime and port industry users, technology suppliers, researchers, and other relevant industry participants.
 |
| 1. **Name of Host Institution (IHL/RI)**
 |
| 1. **Project Title**  **Category**: [R&D / Policy]
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|  |
| **C. Project Team** (Please include CVs and details of all the team members in Appendix I) |
| Overall team leader (PI) |  |
| List of IHL/RI team members |  |
| List of Collaborators, if any(Industry / Academic Collaborators) |  |
| **Category of Research Personnel** | **No. of Full-time** | **No. of Part-time** | **Total** |
| Research Fellow |  |  |  |
| Research Engineer |  |  |  |
| Research Associate |  |  |  |
| Research Assistant |  |  |  |
| Technician |  |  |  |
| Student Assistant |  |  |  |
| [Details] |  |  |  |
| **D. Brief Project Abstract** (Please include project details in Appendix II) |
|  |
| **E. Summary of Project Objectives** |
|  |
| **F. Academic Significance of Project**  |
|  |
| **G. Practical Relevance to the Maritime Industry** |
|  |
| **H. Practical Relevance to Industrial Partner (If applicable)**  |
|  |
| **I. Summary of Deliverables** |
|  |
| **J. Project Schedule**(Detailed project schedule to be included in Appendix III) |
| Estimated project duration: months |
| **K. Capability Building / Performance Indicators**

|   | **TARGET CAPABILITY / PERFORMANCE INDICATORS** | **ORIGINAL TARGETS(TOTAL)** |
| --- | --- | --- |
| **Manpower**  | **No. of Research Fellows / Post-Doctoral Researchers hired** |  |
| **No. of Research Associates / Assistants / Engineers hired** |  |
| **No. of Student Assistants hired** |  |
| **No. of Ph.D. Students trained** |  |
| **No. of Master Research Students trained** |  |
| **No. of Master’s Research and Ph.D. Students Spun Out** |  |
| **No. of Undergrad / Polytechnic / J.C. Students attached** |  |
| **Academic Collaboration** | **No. of International Institutes of Higher Learning / Research Institutions in Collaboration** |  |
| **No. of Local Public Institutes of Higher Learning / Research Institutions in Partnership (Partner Institutions)** |  |
| **Research & Technology Development** | **No. of Technology Disclosures** |  |
| **No. of Technology Transfers** |  |
| **No. of Patents Applications Filed** |  |
| **No. of Patents Granted** |  |
| **No. of Journal Papers Published (e.g. in SCI, EI, Scopus Database)** |  |
| **No. of Conference Papers Published** |  |
| **No. of Policy Research publications** |  |
| **No. of IP Licences to Industry** |  |
| **Industry Development** | **Industry Dollars Received to Fund Project (Cash, S$)** |  |
| **Industry Dollars Received to Fund Project (In-Kind, S$)** |  |
| **No. of Industry Partners as Collaborators** |  |
| **No. of Research Staff spun out**  |  |

 |
| **L. Technology Readiness Level (TRL) Target**(Based on NASA TRL 1 to 9)

|  |  |  |
| --- | --- | --- |
| Item | Current: | Target: |
| [Component 1] | 1-9 | 1-9 |
| [Component 2] | 1-9 | 1-9 |
| [Component 3] | 1-9 | 1-9 |

 |
| **M. Summary of Project Cost and Funding**(Please attach the detailed budget estimates in Appendix V) |
| **Project Item** | **SMI Funding Sought (S$)** | **Institute Collaborator (S$)** | **Industry Collaborator (S$)**  | **Total Project Cost (S$)** |
| Manpower |  |  |  |  |
| Equipment |  |  |  |  |
| Consumables & Other Miscellaneous Cost |  |  |  |  |
| Overseas Travel |  |  |  |  |
| Indirect Research Cost |  |  |  |  |
| Total  |  |  |  |  |

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| **N. Other sources of funding**Have you applied for/attained any other forms of incentives/funding?  |
| YES / NO\*If Yes, please elaborate: |
| **O. Undertaking by Principal Investigator** |
| In signing this Project Application, the Principal Investigator UNDERTAKE, on any Project Award, to: * Declare that the information provided in this application form is true and correct.
* Not send similar versions or part(s) of this proposal to other agencies for funding.
* Ensure that the SMI Fund is acknowledged in all publications.
* Ensure that all publications arising from research wholly or partially funded by SMI will be forwarded to SMI for approval.
* Obtain approval from SMI and/or relevant University/Polytechnic and/or A\*STAR Research Institute before engaging in any commercial activity that will exploit the findings of the research funded under the project.
* Sign a confidentiality agreement prior to any discussions with industries, if applicable.
* Agree and consent to SMI as well as their respective representatives and/or agents of collecting, using, disclosing and sharing amongst themselves any Personal Data set out in this application, and disclosing such Personal Data within SMI and Organizations / relevant third parties authorised for the purpose of application review and funding consideration.

------------------------------------------------------------- Name and Signature of IHL/A\*STAR RI Principal InvestigatorDate: |

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| **P. Overall Evaluation / Undertaking by Evaluators**Based on the above given evaluations, the Director of Research (or equivalent authority in PI’s employing organisation) of the IHLs or A\*STAR Research Institute (if applicable), in consultation with the head of faculty/school/department of the respective IHLs or A\*STAR Research Institute, and taking into account the number of R&D projects which the Principal Investigator currently has on hand, hereby decide that the proposed project is: **SUPPORTED / NOT SUPPORTED**In signing the Project Application, the IHLs or A\*STAR RIs (if applicable) UNDERTAKE, on any Project Award, to:* Provide appropriate support towards the project submission.
* Ensure that the funds provided are used for the appropriate purposes.
* Ensure that approval from SMI has been obtained before engaging in any commercial activity that will exploit the findings of the research funded under the Project; and
* Support and agree to this proposal being carried out in the respective IHLs or A\*STAR RIs (where appropriate).

------------------------------------------------------------- Name and Signature of Director of Research of the IHL/ ED of A\*STAR RI (or equivalent)Date: |
| -----------------------------------------------------------Signature of IHL/A\*STAR RI Co- InvestigatorName:Date: | -----------------------------------------------------------Signature of Industry/Academia CollaboratorName:Date: |
| -----------------------------------------------------------Signature of IHL/A\*STAR RI Co- InvestigatorName:Date: | -----------------------------------------------------------Signature of Industry/Academia CollaboratorName:Date: |
| -----------------------------------------------------------Signature of IHL/A\*STAR RI Co- InvestigatorName:Date: | -----------------------------------------------------------Signature of Industry/Academia CollaboratorName:Date: |

**APPENDICES I - V**

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| **APPENDIX I: TEAM MEMBERS**  |
| Please provide details on the following:1. Name
2. Title
3. Department
4. Organisation
5. Postal Address
6. Tel No.
7. Fax No.
8. Email Address
9. Role in Project
10. CV
 |
| **APPENDIX II: PROJECT DETAILS** |
| Please provide details on the following:Response to assessment criteriaYou must address all assessment criteria in your application. Your application will be assessed based on the weighting given to each criterion. The amount of detail and supporting evidence you provide in your application should be relative to the size, complexity and grant amount requested. Please take note of word and page limits, as specified.Assessment criterion 1 – Contributes to objective, outcomes and priorities.*The extent to which the proposed project will contribute to the objective, desired outcomes and priority areas of the ASLET grant opportunity (1000 words, 30 points).*Applications should:* Describe how the project will contribute to the objective and desired outcomes of the ASLET grant opportunity.
* Describe how the project aligns with one or more of the challenge focus areas.
* Provide a scan of existing technologies relating to your project and describe how your project builds on or differentiates from these.
* Provide an assessment of the current TRL and expected TRL at conclusion of the project, including justification for this assessment.
* Describe the market potential of project outcomes, including relevance to the maritime industry and its customers, market size and market share.

Assessment criterion 2 – Project design and methodology.*The strength of the design and methodology of the proposed project, including identifying and managing risks, in order to successfully deliver the project (1000 words, 30 points).*Applications should:* Describe the **technical design and methodology** of the project.
* Describe the **project** **outputs**, i.e. tangible deliverables. Applicants should indicate:
	+ New technologies introduced to the industry
	+ New products and/or services developed
* Describe the expected **project** **outcomes**, i.e. uptake of project outputs.
* Applicants should also **attach a project plan** (15-page limit) which should include:
* A clear description of the project **scope**.
* **Duration** of the project, including start and end dates.
* Project **phases and stage-gates**, if relevant.
* Objectively verifiable **milestones and deliverables**.
* A description of how the project will be **managed and governed**.
* The **locations** at which the project will be undertaken.
* Any **dependencies** or other relevant information.
* A **risk management plan**.
* A **work, health and safety plan**.
* An **intellectual property management plan**.
* A **knowledge sharing plan** describing how you intend to share knowledge from the project for government, industry and community benefit.

You are free to format your project plan as appropriate, ensuring that all the above-listed information is included. Assessment criterion 3 – Capability and capacity.*The capability and capacity of the applicant, project partners and key project personnel to deliver the proposed project (1000 words, 20 points).*Applicants should:* Describe their **track record and experience** in managing similar projects, and their plan specific to this project to utilise and manage personnel with appropriate governance, management and technical expertise, including project partners.
* Describe the **resources** that will be used to deliver the project, including the allocation of personnel to key responsibilities, and the infrastructure, capital equipment, technology and intellectual property required, including project partners.

Assessment criterion 4 – Budget justification and value for money.*The value for money of the project, including the level of co-investment and evidence of commitment, including both cash and in-kind, to the project (500 words, 20 points).*Applicants should:* Describe how the grant will **benefit the project**.
* Describe the **broader benefits** of the project, specifically **for Singapore and Australia**.

Applicants should also **attach a project budget** in the template provided (see [CSIRO ASLET website](https://www.csiro.au/aslet)) including:* A breakdown of expected expenses, including any overseas expenses.
* The total cost of the project.
* The funding sought from this grant opportunity.
* Details of cash and in-kind contributions from the lead applicant and other sources, including project partners.

Applicant should also **attach letters of support** from the lead applicant and any project partners, including:* Commitment to provide the specified cash and/or in-kind contributions.
* Confirmation of financial capacity to fund the proposed contributions.

**Name and Role of Collaborators*** Name and Role of Collaborators (If applicable, please provide a signed Letter of Collaboration together with the Application Form.)
	+ Name
	+ Brief Background on Collaborators
	+ Contribution to Project
	+ Benefits for Collaborators
 |
| **APPENDIX III: PROJECT SCHEDULE** |
| Please provide details on the following:1. Detailed project work plan
2. Overview in Gantt Chart format
 |
| **APPENDIX IV: PROJECT ELIGIBILITY** |
| Project activities performed in Singapore?[*If “NO” or part of research is performed outside of Singapore, please elaborate here*] | **YES / NO** |
| Project Principal Investigator (PI) and Co-Investigator(s) based in Singapore | **YES / NO** |

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|  |  | **APPENDIX V: DETAILED BUDGETS** |
| **Expenditure Items** | **SMI Funding Sought (S$)** | **Institute Collaborator****(S$)[[1]](#footnote-1)a** | **Industry Collaborator** **(S$)1b** | **Total Project** **Cost (S$)** |
| **Category****(Refer to Footnote)** | **Details of Items** | **Year****1** | **Year****2** | **Year****3** | **Indirect Research Cost**5 **(20%) $** |
| **Manpower[[2]](#footnote-2)** (Please provide itemised details) |  |  |  |  |  |  |  |  |
| **Equipment****[[3]](#footnote-3)** (Please provide itemised details) |  |  |  |  |  |  |  |  |
| **Consumables & Other Misc. Cost**3(Please provide itemised details) |  |  |  |  |  |  |  |  |
| **Overseas Travel**3**,[[4]](#footnote-4)**(Please provide itemised details) |  |  |  |  |  |  |  |  |
| **Grand Total** |  |  |  |  |  |  |  |

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| **Justifications for the Manpower (Provide breakdown in Man-Months)** |
| Justifications of Expense of Manpower (EOM):Summary of EOM:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Designation** | **Year 1 ($)** | **Year 2 ($)** | **Year XX** | **Total ($)** |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |
|  | **Total EOM**  |  |  |  |  |

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| **Justifications for the Equipment**  |
| Justifications of Expense of Equipment (EOE):Summary of EOE:

|  |  |  |
| --- | --- | --- |
| **No** | **Description** | **Total ($)** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
|  | **Total EOE** |  |

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| **Justifications for the OOE** |
| Justifications of Other Operating Expenses (OOE):Summary of OOE:

|  |  |  |
| --- | --- | --- |
| **No** | **Description** | **Total ($)** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
|  | **Total OOE** |  |

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| **Justifications for Overseas Travel:** |
| Justifications of Oversea Travel (OT)Summary of OT:

|  |  |  |
| --- | --- | --- |
| **No** | **Description** | **Total ($)** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
|  | **Total OT** |  |

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| **IHL / RI Contribution**(Please provide details)  |
| **Host Institution** | PI Time Contribution | (Name) |  | % / hours |
| Co-PI Time Contribution | (Name) |  | % / hours |
| (Name) |  | % / hours |
| Others | (Details here) |
| **Partner Institution** | Co-PI Time Contribution | (Name) |  | % / hours |
| (Name) |  | % / hours |
| Others | (Details here) |

1. a & 1b Please indicate cash or in-kind under Institute and/or Industry Collaborator’s column. [↑](#footnote-ref-1)
2. PI & Co-PI Manpower Cost are not fundable, Manpower cost should exclude IRC/ Overheads & GST. [↑](#footnote-ref-2)
3. All amount stated for Equipment, Consumables and Overseas Travel should Include prevailing GST [↑](#footnote-ref-3)
4. Overseas Travel do no exceed $6,000 per person per trip and do not exceed $12,000 per year for total travel expenses

5 Up to 20 percent of the total qualifying approved direct costs. In the computation of the IRC, the costs of the exceptional items are to be excluded. The exceptional items include, but are not limited to, the following: (1) Equipment costing more than S$100,000; (2) Purchase of intellectual property that is needed to carry out the proposed R&D work; (3) Payment for subcontracting of non-research work (e.g., the development of tools for the research); (4) Infrastructural work that is approved (following strong justifications) under the direct Project budget; and (5) Any other exceptional items at SMI’s sole and absolute discretion. [↑](#footnote-ref-4)