
LUX Photonics Consortium Industry-IHL Collaboration Seed Grant Guidelines

1. Objective

- 1.1 Promote adoption of innovative technology / intellectual property (IP) developed at the IHL (NTU or NUS) by an Industry Member of the LUX Photonics Consortium through supporting a feasibility check or small-scale collaborative project between the IHL and the LUX Industry Member.
- 1.2 Support feasibility study that could potentially lead to larger scale IHL-Industry collaboration aimed at IHL IP adoption into the LUX Industry Member's product, which could tap on a larger grant such as an Industry Alignment Fund (IAF).

2. Overview of LUX Photonics Consortium Industry-IHL Collaboration Seed Grant

- 2.1 The LUX Photonics Consortium Industry-IHL Collaboration Seed Grant will be awarded through a competitive application process to support projects which are innovative, technically sound, and commercially viable.
- 2.2 It is mandatory for the LUX Industry Member to obtain a license to evaluate the innovative technology/IP of the IHL. The project should yield results pertaining to the assessment of the feasibility of IHL IP commercialization by the LUX Industry Member.

For technology evaluation purposes, IP evaluation licensing terms are to be negotiated between the collaborating IHL and LUX Industry Member. As a guide:

- (a) IHL IP generated from a project funded by a National Research Foundation (NRF) Competitive Research Programme (CRP) grant: non-exclusive, non-commercial license can be free-of-charge for up to 3 years
 - (b) IP not generated from a project funded by an NRF CRP grant: license fee chargeable, licensing terms are to be negotiated with the IHL's technology transfer office
- 2.3 Each granted project will receive funding support of up to \$100,000, where the public (LUX Photonics Consortium) and LUX Industry Member's contributions are as below:

Public funds : \$100,000 cash

LUX Industry Member funds : \$30,000 cash and in-kind

[LUX Industry Member's funding to the project is exclusive of any applicable Goods and Services Tax (GST) payable by the LUX Industry Member thereon at the prevailing rates.]

- 2.4 For projects of more than 6 months duration, the funding will be provided on a reimbursement basis to the relevant IHL research account for the IHL Principal Investigator (PI) in 2 instalments and after receipt of the reimbursement submission by the IHL PI: (1) upon review and acceptance of the mid-term report for the first 6 months; and (2) upon review and acceptance of the final report. For projects of less than 6 months duration, the

funding will be provided on a reimbursement basis after receipt of the reimbursement submission by the IHL PI and upon review and acceptance of the final report.

- 2.5 Each granted project duration should span no more than 12 months.

3. Eligibility

- 3.1 Only LUX Faculty Members are eligible to apply for the grant as lead Principal Investigator (PI) of the project.
- 3.2 Each project must have an industry collaborator who is a “Full Industry Member” of the LUX Photonics Consortium.
- 3.2. The project funds can only be used to support the developmental work conducted at the hosting IHL (NTU or NUS). In particular, the project funds can only be utilised for approved manpower, equipment and operating expenditure incurred at the respective IHL.

4. Application and Call Processes

- 4.1 To apply for the grant, applicants will first need to submit their proposals by filling up the **LUX Photonics Consortium Industry-IHL Collaboration Seed Grant application form**.
- 4.2 The grant call is open throughout the year. On announcement of the grant call, LUX Faculty Members can submit their applications to LUX_Chairman@ntuitive.sg
- 4.3 Proposals submitted should contain all relevant information required for a proper and complete evaluation of their merits without the need to revert to applicants for additional information. Relevant privileged or confidential information should be disclosed if necessary to help convey a better understanding of the proposed project. However, such information should be clearly marked as such in the proposal.
- 4.4 LUX Faculty Members are required to present the proposal to the Review Panel.
- 4.5 All applicants must comply with the relevant ethics and other regulatory approval requirements needed to carry out their project, as per the hosting IHL’s policies and regulations.
- 4.6 The **Review Panel** will be appointed based on the guidance of the Steering Committee of the LUX Photonics Consortium.
- 4.7 **Evaluation by Review Panel and award of grant.** The Review Panel will convene half yearly to assess the proposals and make recommendations on those to be awarded the grant, based on the selection criteria listed in Annex B. Following recommendation by the Review Panel, the LUX Photonics Consortium will inform the successful applicants.
- 4.8 **Finality of decision.** Any decision made by the Steering Committee of the LUX Photonics Consortium and the Review Panel shall be final and conclusive.

5. Progress Reports and Presentations

- 5.1 For projects with durations of more than 6 months, the project teams are required to submit interim progress reports after the end of the first 6 months of the project to the LUX Photonics Consortium. Such reports are due by the end of the 7th month.
- 5.2 For all projects, final technical reports on the feasibility study or evaluation of the IHL IP and future plans must be submitted to the LUX Photonics Consortium within 2 months of project completion. Every project team is to deliver an end of project presentation to the Review Panel after they submit the final technical report. These reports are to follow the templates provided by the LUX Photonics Consortium.
- 5.3 The LUX Photonics Consortium reserves the right to request for progress reports more frequently when necessary.

6. Intellectual Property Management

- 6.1 Applicants agree to be bound by the hosting IHL's policies on IP, Technology Transfer and Research Collaboration as may be in force at the material times. Applicants are to ensure that the research collaboration agreement is in place with the relevant LUX Industry Member before they start on their approved projects.

7. Funding Support

- 7.1 Under the LUX Photonics Consortium Industry-IHL Collaboration Seed Grant scheme, NTUitive for NTU as the hosting IHL, and NUS Enterprise for NUS as the hosting IHL, offer funding support of up to S\$100,000 per project over the maximum duration of 12 months. The total cost of the project includes only approved direct costs, which are defined as the incremental cost required for executing the project. This excludes contributions in-kind, existing equipment and the cost of existing manpower as well as building cost. All expenditure by the IHL for goods and services for the project should be budgeted inclusive of any applicable GST at the prevailing rates. No IHL overheads or indirect costs will be applicable for the project.
- 7.2 Any direct cost charged to the project grant must be reasonable and for the proposed developmental activities of the project. Supportable direct costs can be classified into the following three cost categories:-
 - i. Expenditure on manpower (EOM);
 - ii. Expenditure on equipment;
 - iii. Other operating expenditure (OOE).
- 7.3 Please refer to Annex A for a detailed guide on non-supportable cost items. The LUX Photonics Consortium's decision on the funding support to be awarded for each project is final.

8. Changes to Guidelines

- 8.1 The LUX Photonics Consortium reserves the right to make changes to the above guidelines and any submission templates related to the LUX Photonics Consortium Industry-IHL Collaboration Seed Grant scheme, as and when it deems fit.

ANNEX A: Guide on Non-Fundable Cost

1. EOM Related Expenses

Type of Expenses	Description
General Policy	Not allowable for Research Personnel not provided for in the approved budget.
Overtime	Not allowable.
PI's and Co-PI's EOM cost	Not allowable.
Staff Insurance	Not allowable unless they are incurred under an established and consistently applied policy of the hosting IHL. The hosting IHL may be requested to certify that such payments are in accordance with its established policy or on the same terms as the other staff.
Staff Recruitment and related cost	Not allowable. Examples of such costs are advertisement, recruitment agency cost, staff relocation, housing allowances, etc.
Student Assistants / Interns	Not allowable unless specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee and is only allowable for students already residing in Singapore, and who are not receiving any stipends or awards.

2. Equipment Related Expenses

Type of Expenses	Description
General Policy	No purchase of equipment where the cost is more than \$50,000 per piece is allowed unless specifically provided for in the grant with justification given and approved by the LUX Photonics Consortium Steering Committee.
Cost of capital works and general infrastructure	Not allowable unless specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee.
IT Equipment (including computer equipment and printers)	Not allowable unless specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee. Purchase of IT equipment must be in accordance with the IT policy of the hosting IHL regardless of the source of funds.
Office Equipment, Furniture & Fittings, etc	Not allowable.
Purchase of mobile devices	Not allowable unless specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee.

3. OOE Related Expenses

Type of Expenses	Description
General Policy	Not allowable for expenses that are not directly related to the Project.
Audit Fees	Not allowable. This includes both internal and external audit fees.
Conference and Seminar Organisation	Not allowable unless specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee.
Entertainment & Refreshment	Not allowable.
Equipment Usage Charges	Not allowable for internal (intra-institution) equipment usage charges unless the equipment/service is part of the hosting IHL's central/shared facilities, such as central laboratory, and specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee. However, external (inter-institution) equipment usage charges are allowable.
Fines and Penalties	Not allowable.
Insurance Premiums	Not allowable. This includes insurance premiums for equipment, workmen compensation and professional indemnity of researchers funded from the grant. The hosting IHL is responsible for the insurance of the equipment, relevant workmen compensation and professional indemnity insurance which are in line with the hosting IHL's risk policies.
IT Peripherals	Not allowable unless specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee (e.g. thumbdrives, optical media, data storage devices).
Legal Fees	Not allowable.
License Fees	Not allowable (e.g. radiation license from HSA) unless the license is required for the handling of machines funded under the grant.

4. Overseas Travel and PhD Student Exchange Related Expenses

Type of Expenses	Description
General Policy	Not allowable unless specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee. Travel must be by economy class airfare. For all other travel-related claims, the hosting IHL's policy must be consistently adhered to.
Meeting Overseas Collaborator	Not allowable for students.
Overseas Conferences	Not allowable unless specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee.
Overseas Training	Not allowable unless specifically provided for in the grant and approved by the LUX Photonics Consortium Steering Committee.

**ANNEX B: EVALUATION CRITERIA FOR LUX PHOTONICS CONSORTIUM INDUSTRY-IHL
COLLABORATION SEED GRANT REVIEW PANEL**

The Review Panel will evaluate the proposals based on the following criteria:

Criteria	Weightage (%)	Guiding Questions
Problem Statement	30	<ul style="list-style-type: none"> • Does the problem identified have critical impact to product or technology advancement? • Does solving the problem help to define or support follow-on larger scale industry collaboration?
Solution & Novelty	40	<ul style="list-style-type: none"> • Is there a solid plan for IHL IP adoption and commercialization? • Does the project address an important scope of the technology development roadmap or productization plan? • Is the proposed approach unique, innovative, novel?
Project Scope	30	<ul style="list-style-type: none"> • Does the project fit the scope and time frame? • Do the proposed deliverables and milestones commensurate with the expected impact and objectives? • Does the expected impact and/or deliverables of the project commensurate with the requested funding?