**PROPOSAL FOR INDUSTRY ALIGNMENT FUND (PRE-POSITIONING)**

**(FOR HHP DOMAIN ONLY)**

Please do not exceed 8 pages. Sections I and II may be excluded from the page count, while Sections III, VII, VIII, IX, X, XI, XII and XIII, as well as any additional information (e.g. Letters of Support from industry) may be included as Annexes, but limited to no more than 80 pages. Please use Font: Arial 10 pt, Single spacing for your text.

**Note: We ask that applicants strictly adhere to the guidelines provided. Additional information submitted beyond the page count and beyond the information requested will be disregarded from the proposal assessment.**

|  |  |
| --- | --- |
| **SECTION** | **DESCRIPTION** |
| **I.** | **DESCRIPTIVE TITLE AND EXECUTIVE SUMMARY** |
| **II.** | **DETAILS OF TEAM MEMBERS (LEAD PI, TEAM PIS, CO-IS AND COLLABORATORS)** |
| **III.** | **REPORT FOR PREVIOUS PHASE OF IAF FUNDING (IF APPLICABLE)** |
| **IV.** | **KEY OBJECTIVES AND DESCRIPTION OF PROPOSED PROGRAMME** |
| **V.** | **SIGNIFICANCE AND POTENTIAL IMPACT OF PROGRAMME** |
| **VI.** | **IMPLEMENTATION PLAN** |
| **VII.** | **BUDGET REQUEST** |
| **VIII.** | **DECLARATION OF ETHICS APPROVAL** |
| **IX.** | **MILESTONES, KPIS AND TIS** |
| **X.** | **FUNDING SUPPORT FROM ANY INDUSTRY PARTNER** |
| **XI.** | **CURRICULUM VITAE** |
| **XII.** | **DECLARATION FROM THE LEAD PI, TEAM PI(S), AND PROGRAMME MANAGER** |
| **XIII.** | **DECLARATION FROM THE HEAD(S) OF THE HOST INSTITUTION** |

Kindly submit application to:

[IAF-PP\_HBMS@hq.a-star.edu.sg](mailto:IAF-PP_HBMS@hq.a-star.edu.sg) (HHP domain)

***Last Updated: May 2023***

**Important:**

**Relevant privileged or confidential information should be disclosed to help convey a better understanding of the project. Such information should be clearly marked in the proposal.**

1. **DESCRIPTIVE TITLE AND EXECUTIVE SUMMARY**

* Title of IAF proposal
* Budget Requested (only Direct Costs)
* Funding Period
* Host Institution (should be the institute the lead PI is affiliated to)
* List up to 6 keywords related to this proposal
* Lay Abstract (limited to 150 words)
* Executive Summary: List specific aims, hypotheses, methodology, potential applications/exploitations and transformative/differentiated/game-changing factors
* Articulate economic value capture pathway and industry development outcomes

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1. **DETAILS OF TEAM MEMBERS (LEAD PI, TEAM PIS, CO-IS AND COLLABORATORS)**
   * The Lead PI’s role will be to coordinate research activities carried out by the research team. He/She will be responsible for all progress reporting of the platform, on behalf of the research team.
   * The Team PI(s) will be the representative(s) leading the research at the Partner Institution.
   * The Co-I(s) will be the person(s) leading and managing a particular aspect of the collaborative effort.
   * Collaborator(s) refers to any company, institution, incorporated body or other industry or academic collaborator, who are engaged in the research in collaboration with Lead PI, Team PIs or Co-Is and their institutions.
   * Please note that grant funding will be awarded to Singapore public sector research performers only. Collaborators do not receive grant funding.
   * If required, please insert additional rows below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Role of Team Member** | **Name with Salutation** | **Designation** | **Research Institution** | **Email address** | **% of time committed on the project[[1]](#footnote-1)** | **% effort within the project[[2]](#footnote-2)** |
| **Lead PI** |  |  |  |  |  |  |
| **Programme Manager** |  |  |  |  |  |  |
| **Team PI** |  |  |  |  |  |  |
| **Team PI** |  |  |  |  |  |  |
| **Team PI** |  |  |  |  |  |  |
| **Co-I** |  |  |  |  |  |  |
| **Co-I** |  |  |  |  |  |  |
| **Co-I** |  |  |  |  |  |  |
| **Collaborator** |  |  |  |  |  |  |
| **Collaborator** |  |  |  |  |  |  |

1. **REPORT FOR PREVIOUS PHASE OF IAF FUNDING (IF APPLICABLE)**

* If previously funded programme, please provide details of achievements to date in Annex C.
* Elaborate on the milestones achieved, commercialisation outcomes, industry collaboration projects, industry funding received and industry R&D spending (IRS) in Singapore as achieved by the programme.

1. **KEY OBJECTIVES AND DESCRIPTION OF PROPOSED PROGRAMME**

* List key objectives
* Describe:
  + hypotheses and methodology
  + the innovative concepts or approaches, and how the proposed R&D approach will achieve the stated objectives
  + how the approach differentiates and sets it apart from others in the same field

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1. **SIGNIFICANCE AND POTENTIAL ECONOMIC IMPACT OF PROGRAMME**

* In the field of the proposed programme:
  + Address the global competitive landscape and explain how the programme will set Singapore apart from competitors.
  + Provide an assessment of the local industry landscape in Singapore and how the proposed programme will develop or enhance existing capabilities.
* Where applicable, highlight how this proposed programme could:
  + Develop new product(s) or service(s), or improve existing practices that transforms and protects health, advances human potential, and creates economic value for Singapore and globally
  + Catalyse development of leading-edge technology to raise the competitiveness of companies and impact industry in Singapore
  + Create internationally competitive Singapore initiatives
  + Have the potential for wider adoption across different industry sectors
  + Engage potential industry partners to establish R&D collaborations or consortia
  + And as a result, generate industry R&D investments within 3-5 years
  + And anchor or grow longer-term industry investments in Singapore
* Describe the economic value capture pathway and key industry development outcomes of the proposed programme using one or more of the following constructs:
  + New product(s), improved processes/yield/productivity, or service(s) that could arise
  + Attract new R&D investments to Singapore by international and/or local companies (name company, where applicable)
  + Transform existing industry and companies in Singapore to maintain global competitiveness
  + Create new industry segment and businesses, or drive top line growth for companies in Singapore
  + Where possible, the creation of high-quality jobs

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1. **IMPLEMENTATION PLAN**

* Briefly describe each team member(s)’ contribution to the programme and the plans for interaction among the team member(s) to achieve the research objectives.
* Please identify a commercialisation lead within the team or within one of the host institutions’ IEOs / TTOs, who would be responsible for driving the industry engagement plan. The team can also reach out to BMS IPO, as early as possible, on business development strategy and implementation plan.
* Please identify a project management lead within the team or within the host institution’s or one of the partner institutions’ IEOs/TTOs/OREs, who would be responsible for overall project management.
* Please outline the industry engagement plan for your programme, including the following considerations where applicable:
  + Specific target industry partners and potential collaboration models for each partner
  + Well-articulated commercialisable service / product and revenue model
  + New business / start-up and business model
  + Strategy on achieving the leverage ratio
  + Financial sustainability
* Applicants are asked to include at least 3 letters of support from potential industry collaborators, and/or VCs (to be provided in the Annex). Letters of support from industry should address the following:
* How the work scope is differentiated, how it compares with international efforts
* How the company may use the outcomes from the project
* What forms of formal collaboration will the company enter with the programme, if successful
* What milestones the company would like to see next
* Company’s potential cash/in-kind contribution (strongly recommended to include)
* Programmes requesting for ≥S$10M (including overheads) are required to:
* Perform a landscape scan by engaging industry/scientific experts and include the report together with this proposal.
* Establish a Scientific Advisory Board (SAB). The SAB report must be submitted for the programme’s Mid-Term Review and Final closing meeting. Please provide the names and credentials of the proposed SAB members in this proposal (refer to Annex A for the Terms of Reference for IAF-PP Programme SAB).

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1. **BUDGET REQUEST**

Please provide a detailed budget breakdown required for the project using the EXCEL SPREADSHEET template provided. ONLY the summary of Overall Budget and Total Budget Breakdown by Institute should be included in this document.

1. Overall Budget
2. Budget Breakdown by Institutions
3. Budget for Scientific Advisory Board (SAB) - applicable only for proposals requesting for ≥$10M (incl. overheads).

**Summary of Overall Budget** *(exclude budget for SAB)*

*Please ensure that the figures reflected in this table tally with the figures indicated in the excel spreadsheet.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** |
| **EOM** |  |  |  |  |  |  |
| **EQPT** |  |  |  |  |  |  |
| **OOE** |  |  |  |  |  |  |
| **OT** |  |  |  |  |  |  |
| **Direct Cost** |  |  |  |  |  |  |
| **Overheads** |  |  |  |  |  |  |
| **Grand Total** |  |  |  |  |  |  |

**Total Budget Breakdown by Institute** *(exclude budget for SAB)*

*Please ensure that the figures reflected in this table tally with the figures indicated in the excel spreadsheet.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Institute** | **Total direct cost** | **Total indirect costs** | **Total costs** |
| Host Institution |  |  |  |
| Partner Institute 1 |  |  |  |
| Partner Institute 2 |  |  |  |
| Partner Institute 3 |  |  |  |
| Partner Institute 4 |  |  |  |
| **Grand Total** |  |  |  |

1. **DECLARATION OF ETHICS APPROVAL**

* The approval of the grant is subject to ethics approval. Please state if your study involves the following ethics categories and attach the ethics approval documentation, if applicable.

|  |  |  |
| --- | --- | --- |
| **Ethics Category** | **Involve?**  *(Y/N)* | **Please declare the participating institutions where study requiring ethics approval is conducted** |
| Human Subject |  |  |
| Use of Human Tissues or Cells from Primary Donors (i.e. subject / volunteers recruited for project) |  |  |
| Use of Commercially Available Human/Animal Tissues or Cells |  |  |
| Animal Experimentation |  |  |
| Requirement for Containment |  |  |
| Multi-Centre Trial(s)  (if yes, please state all participating institutions / centres) |  |  |

1. **MILESTONES, KPIS[[3]](#footnote-3) and TIs**

* Please propose the key deliverables and desired end outcomes that the programme aims to achieve within the period of funding in the tables below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Key Performance Indicators (KPIs)** | **Target** | | |
| Industry R&D Spending (IRS) | Cash (S$) | In-kind (S$) | Total (S$) |
|  |  |  |
| No. of industry projects |  | | |

|  |  |  |
| --- | --- | --- |
| **Key Performance Indicators (KPIs)**  PI to report KPIs achieved at annual, Mid-Term and Final reports | **Mid-Term Review KPI Targets** | **Projected KPI by end of Project Term** |
| Amount of Industry Cash Spending on R&D (S$) |  |  |
| Amount of Industry In-kind Spending on R&D (S$) |  |  |
| No. of industry projects |  |  |

|  |  |  |
| --- | --- | --- |
| **Tracking Indicators (TIs)**  PI to report outcomes at annual, Mid-Term and Final reports | **Mid-Term Review Tracking Indicator** | **Projected TI by end of Project Term** |
| No. of successful spin-offs |  |  |
| Follow on funding |  |  |
| Additional/Subsequent industry investment that leveraged IAF-PP platforms/programmes |  |  |

* Company contributions leading up to R&D industry spending should be accounted for via signed Research Collaboration Agreements (RCAs).
* Please also add on and propose additional KPI Indicators relevant for the programme (refer to the list of possible KPIs/TIs indicated in Annex B).
* Propose detailed scientific milestones for the programme. These will be used to assess the progress of the programme. The progress of the programme will be taken into consideration for continued disbursements of funds. Please keep to a *maximum* of 5 milestones per work package and these milestones should be quantitative as far as possible.

*\*Please use shading for the time points.*

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| **Research**  **Milestones/**  **Deliverables** | **Year 1** | | | | **Year 2** | | | | **Year 3** | | | | **Year 4** | | | | **Year 5** | | | |
| **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q 4** | **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** |
| **Milestone 1** – Achieve XX% accuracy in a particular task. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Milestone 2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Etc.** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1. **FUNDING SUPPORT FROM ANY INDUSTRY PARTNER**

* Please provide details of the funding or other resources provided by any participating industry partner(s), where applicable, for this IAF-PP programme.

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| **Items Supported** | **Funding Source** | **Amount of Fund ($)** | **Support Period (Year)** |
|  |  |  |  |
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1. **CURRICULUM VITAE**

In no more than 1 page per team member (Lead PI, Programme Manager and Team PIs), please provide only the following required information in the following format:

|  |  |
| --- | --- |
| Salutation & Name |  |
| Current Appointment(s)  & Institution Affiliation(s) | (Please provide full details, e.g. joint appointments; other academic appointments including those outside of Singapore) |
| Primary Appointment/ % FTE (with primary appointment) |  |
| Percentage of time spent in Singapore every year |  |
| ORCID ID |  |
| Relevant Project Management Experience | (please include details of any project management qualifications, eg PMP) |
| Key research achievements, e.g. patents, licenses, awards, spin-off companies, external consultancy etc. |  |

1. **DECLARATION FROM THE LEAD PI, TEAM PI (s) AND PROGRAMME MANAGER**

I, the undersigned, declare that:

1. all information is accurate and to the best of my knowledge;
2. all investigators listed as Lead PI, Team PI, Co-Is and Programme Manager have no conflict of interest with the industry partners (company (s) and company executives) listed in this proposal;
3. similar versions or part(s) of this proposal have not been sent to other agencies for funding;
4. I agree to abide by the conditions governing the award of research grants set out by the IAF-PP Implementing Agency.

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Lead PI Signature, Name and Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Team Principal Investigator(s) Signature, Name and Date

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Programme Manager Signature, Name and Date

1. **DECLARATION FROM THE HEAD(S) OF THE HOST INSTITUTION**

It is certified that:

the Institution agrees to participate in this IAF-PP Programme;

the Institution shall provide necessary facilities for implementing the IAF-PP Programme;

the Institution assumes financial and other management responsibilities for the duration of the programme to be carried out at their institution; and

the back-up funding for manpower, consumables, etc. is available for this IAF-PP Programme.

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Head of the Institution Signature, Name and Date

**Annex A – Terms of Reference for Scientific Advisory Board (SAB)**

Roles and Responsibilities

The SAB will:

1. Review strategic research directions, progress, international competitiveness and performance of the IAF-PP Programme.
2. Provide expert advice and recommend strategies on pertinent areas related to the scope of the IAF-PP programme, which Singapore could capitalise on to strengthen its technical capabilities and enhance economic value capture.

Appointment Term

The appointment term should ideally cover the entire duration of the grant.

Frequency of Meetings

To be as often as necessary and once a year at minimum

Remuneration

Honorarium of USD3,000 for Chair and USD2,000 for Member per SAB meeting.

Confidentiality

From time to time, Members will be privy to confidential, proprietary information relating to the IAF-PP Programme, participating research institutions, and other third parties. Such information acquired in the course of their appointment shall be held in strict confidence by the Members and shall not be disclosed other than for the purposes of the IAF-PP Programme. The obligation of confidentiality shall carry on during and after the end of the appointment as Members.

Composition of the IAF-PP SAB

Requirement: There must be a minimum of 1 industry expert and 1 scientific expert on the SAB.

**Annex B – Definition for KPIs and TIs**

|  |  |
| --- | --- |
| **KPI** | **Definition** |
| Amount of industry **cash** spending on R&D ($) | This refers to the investment that a company commits to spend in Singapore on R&D activities as a result of projects funded by HHP IAF-PP in RIE2025. It comprises cash and/or in kind contributions. |
| Amount of industry **in-kind** spending on R&D ($) |
| No. of industry projects | This measures the total number of R&D projects (excluding services projects) undertaken companies as a result of projects funded by HHP IAF-PP in RIE2025.  Industry projects should be segmented by sector and enterprise segment. |

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| **TI** | **Definition** |
| No. of successful spin-offs | No. of spinoffs that meet one or more of the following criteria, within 5 years of launch:   1. Received subsequent 3rd party financing, equal or greater than $250K; or 2. Increased enterprise valuation by at least 20%; or 3. Crossed $250K annual revenue. |
| Follow on Funding ($) | Amount of third-party funding (both private and public) raised by spinoffs. |
| Additional/ Subsequent industry investment that leveraged IAF-PP platforms/ programmes ($) | Amount of additional/subsequent funds invested from industry/coys into other projects (e.g. IAF-ICP) due to the initial IAF-PP platform/programme developed. |

**List of Other Possible KPIs/TIs**

|  |  |
| --- | --- |
| **KPI** | **Definition** |
| No. of patent applications | This measures the number of complete patent applications that are filed by public research performers as a result of the IAF-PP project. |
| No. of patents awarded | This measures the number of complete patent applications that are awarded by public research performers as a result of the IAF-PP project. |
| No. of product or process innovations | This refers to product or process innovations developed as a result of the IAF-PP project, either new to the enterprise, or new to the market. |
| No. of publications in the top 10% most highly cited journals | The top 10% most highly cited journals will be based on the CiteScore rankings maintained by Scopus, with fields listed in the All Science Journal Classification (ASJC) Codes. |
| No. of tech disclosures | This refers to the technical disclosures filed as a result of the IAF-PP project. |
| No. of unique conference abstracts accepted for oral presentations at top conferences | Abstracts accepted for presentation, either in a physical or online conference, excluding poster sessions. |

|  |  |
| --- | --- |
| **TI** | **Definition** |
| Amount of licensing royalties ($) | Amount received by research performer from companies for licensing the IP developed from the project funded. |
| No. of industry R&D jobs | New headcount of full-time staff hired by companies for work related to the project funded. |
| No. of technologies deployed/ licenses | Technologies deployed or licences to companies with new licensing agreement signed. |

**Annex C – Report for Previous Phase of IAF Funding**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S/N** | **Funding Scheme** | **Project Title** | **Project start - end date** | **Awarded budget** | **Budget utilisation** | **KPI targets** | **KPI achieved** | **Details of Achievements to date**  *Include:*   1. *Milestones achieved* 2. *Commercialisation outcomes such as licensing deals* 3. *Industry collaboration projects* 4. *Post project outcomes* |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

1. Represent % effort spent by the investigator in the project relative to his/her other job scope. [↑](#footnote-ref-1)
2. Represent % effort spent by the investigator in the project relative to other team members. Total % of all team members (excluding Collaborators and Programme Manager) must add to 100%. [↑](#footnote-ref-2)
3. *Applicants/Performers awarded IAF-PP and IAF-ICP programme grants are to note that there must be no double counting of KPIs. Applicants/Performers are to propose the split of KPIs reported between their IAF-PP and IAF-ICP programme grants.* [↑](#footnote-ref-3)