



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY



CALL FOR PROPOSALS FOR CY 2023 FUNDING

Collaborative Research and Development to Leverage Philippine Economy (CRADLE) Program *under the*

SCIENCE FOR CHANGE (S4C) PROGRAM: Accelerated R&D Program for Capacity Building of
Research and Development Institutions and Industrial Competitiveness

ABOUT THE CRADLE PROGRAM

The Collaborative Research and Development to Leverage Philippine Economy (CRADLE) Program of the Department of Science Technology (DOST) encourages synergistic relationships among the academe, research and development institutions, and the industry through collaborative Research and Development (R&D) projects. Under the CRADLE Program, a local industry partner determines a problem/need which requires an R&D solution, the partner higher education institution (HEI) or Research & Development Institution (RDI) undertakes the R&D to solve the problem/need, and DOST provides funding support to the project of up to PHP 5 million for a period of 1 – 3 years.

Since 2017, the CRADLE Program has funded 96 projects worth PHP 440 million and partnered with 38 HEIs/RDIs and 98 companies.

The DOST is now ready to accept R&D proposals for 2023 funding from HEIs/RDIs together with their partner company for the CRADLE Program. The R&D proposals to be submitted should provide a solution to the identified needs of the industry and meet the general criteria of the program.

GENERAL CRITERIA

Who may apply?

Any duly recognized HEI/RDI* with a proven track record in R&D in partnership with at least one Filipino-owned company which has been registered and operating for at least 3 years.

**Please note that the academic institution prepares and submits the project proposal while collaborating with the partner company.*

What are the requirements for eligibility of the industry partner?

To be an eligible industry partner, the company must:

1. Be Filipino-owned (at least 60% ownership)
2. Be operating in the Philippines for at least 3 years and be able to provide proof of active compliance with statutory regulations
3. Provide at least 20% of the project cost as counterpart funding (in cash, in kind, or person-hours)
4. Commit to adopt the output of the research through signing a technology adoption certificate. Plans for the use of the proposed technology and the mode of technology transfer after the project must be included and clearly discussed in the business plan.
5. Show how the research output will be adopted

What types of proposals may be submitted?

All proposals must be in line with the priority R&D areas and industries identified by the DOST and Department of Trade and Industry (DTI), namely:

1. Agriculture, Fisheries, and Forestry
2. Agri-processing
3. Drug and Herbal Development
4. Food and Nutrition
5. Information and Communications Technology (includes Artificial Intelligence)
6. IC Design
7. Semiconductor and Electronics
8. Infrastructure and Logistics
9. Manufacturing
10. Environment and Climate Change
11. Industrial Waste Treatment
12. Renewable Energy
13. Creative Industries/Knowledge-based Services

APPLICATION REQUIREMENTS

All requirements with prescribed DOST format may be downloaded from S4CP website under "Resources" Section: <https://s4cp.dost.gov.ph/resources/>

What documents need to be submitted?

Proposal Requirements

1. DOST Form 2 (Detailed project proposal)*
2. DOST Form 4 (LIB)*
3. DOST Form 5 (Workplan)*
4. Business Plan

**Prepared as prescribed in the Revised DOST-GIA Guidelines*

Documentary Requirements

1. Joint Endorsement Letter signed by the HEI/RDI and business head of agency
2. Latest Business Registration Certificate (e.g. SEC, DTI or CDA)*
3. Business Permit in the last 3 years*
4. Technology Adoption Certificate (TAC)*
5. Draft Collaborative Research Agreement (CRA)

**Note: Document will be coming from the partner private company*

Supplementary Requirements

1. Curriculum Vitae of the Project Team
2. Company Profile
3. Necessary documents as determined in the Revised DOST-GIA Guidelines for specific circumstances (e.g. approval from the institution's ethics review board for research involving human subjects or in the case of animal subjects, approval from the Bureau of Animal Industry (BAI); clearance from the DOST Biosafety Committee for research proposals involving the use of GMOs under contained use, etc.)

Intellectual Property Concerns

The HEI/RDI and its partner company are encouraged to start discussions and agree on the IP rights/ownership as early as the Proposal Writing stage. A Collaborative Research Agreement (CRA) including details on the IP rights and the method of technology transfer must be executed by the HEI/RDI and the partner company to formalize the agreement.

Application Process and Timeline

1. **Proposal Submission:** Proposals must be submitted electronically through the DOST Project Management Information System (<https://dpmis.dost.gov.ph/>) following the below timeline per sector.

Sector	Inclusive Date	Deadline
Agriculture, Aquatic, and Natural Resources (AANR)/Basic Research	01 – 31 March 2023	31 March 2023, 5:00PM
Health	01 – 30 April 2023	30 April 2023, 5:00PM
Industry, Energy, and Emerging Technologies (IEET)	01 – 31 May 2023	31 May 2023, 5:00PM

The DPMIS will no longer accept proposals submitted after the deadlines. Please note: The DPMIS will only receive submissions with complete documents. Incomplete applications will not be considered.

2. **Confirmation of Submission:** After successful submission of the proposal, the proponent will receive an automatic confirmation email. This email can be used as proof that the proposal was submitted on time and correctly. For concerns in the proposal submission, contact the S4C-PMO immediately.
3. **Technical Evaluation:** Proposals that pass the pre-screening are forwarded to the appropriate Council for technical evaluation. Criteria for evaluation are based on the Revised DOST-GIA guidelines.
4. **Endorsement and Deliberation of Evaluation Results:** The results of evaluation will be forwarded to the Office of the Undersecretary for R&D (OUSEC-RD). The S4C Project Management Office (PMO) will inform the proponent of the final results.

Contact Us

For any questions or consultations, you may email us at s4c.ousecrd@dost.gov.ph or call telephone numbers (+632) 8837-2071 local 2180.

ANNEX 1

WRITING A WINNING PROPOSAL: A CRADLE Tip

This document serves as a guide to help you craft proposals that are aligned to the CRADLE framework. Included are information on how you may start the project ideation, how to establish the R&D need/problem and the proposed solution, the evaluation factors to consider in writing the proposal, and finally tips and reminders during the application process.

Guide for Project Ideation

Ideation³ is the creative process of generating, developing, and communicating new ideas. Some questions are provided below to help you get started in your CRADLE project ideation.

For the partner industry: The following are some guide questions you may start exploring to determine problems/needs your company experiences. These are focused on products and processes, but you may explore any problem/need anywhere along the supply/value chain. Please note that these are not exhaustive and are only meant to help you start the thinking process.

ON PRODUCTS

1. What are the new/emerging needs in the market? What products can we offer to meet these needs?
2. What solutions can we offer to the public in areas of pressing concern?
3. How can we reformulate existing products to increase competitiveness in the market?

ON PROCESSES (LOGISTICS, OPERATIONS, AND SERVICE DELIVERY)

1. What problems/needs do I have in my processes? Where is there usually a breakdown of processes? Is there a process that is too complicated/costly/inefficient/wasteful?
2. Is there a way to reduce production inputs without compromising quality of output? How can we reduce energy consumption, raw material input, labor costs?
3. Do we have wastes/by-products which may be re-processed to develop another product? How can we cost-effectively add value to by-products and process wastes?
4. Which part of the processes How can we reduce process time and lessen interruptions/downtime? Which process steps can have less mistakes through automation?
5. How can we lessen dependence on importation of supplies and increase sourcing local materials?
6. What problem is my company experiencing in terms of service delivery?
7. How can we provide alternative work arrangements without compromising efficiency in our operations?

For the HEI/RDI: How can this problem/need be solved through R&D (particularly through S&T)?

Rationale of the proposal

Once you have determined a problem/need, it is time to write the rationale of your proposed research. The **rationale** should establish the need to conduct the study. Please be reminded that based on the framework of the CRADLE program, the problem or need must be identified by the partner company. Please be informed that we examine if real collaboration occurred between the academic institution (HEI/RDI) and the company. As the HEI/RDI crafts the proposal, the questions are intended to be answered by them. The following may be helpful in constructing the rationale:

- Who is your Partner Company? – Nature of business, operations, and scope of business
- What problem do they encounter that needs an R&D (specifically in S&T) solution? – nature of problem, effect on the company (be descriptive and quantitative), include pictures as necessary
- What is the proposed S&T intervention? – describe the solution, how will it solve the problem (be descriptive and quantitative), why should this be used as compared to other solutions (if applicable), effect on the company (cost, quality, time)

Evaluation Factors to Consider

Consider the following criteria in building your proposal:

Criteria for Evaluation

- Alignment to CRADLE Framework
 - Submitted by a lawfully existing HEI/RDI in collaboration with at least one Filipino-owned company
 - The problem/need was identified by the partner company
- Workability/Technical Viability
- Social and Environmental Impacts
- Commercial Viability
- Management Capability of the Proponents
- Availability of Competent and Reliable Workforce and Facilities

Characteristics of Successful Proposals

- Problem/need-focused
- Relevant and applicable
- Cost effective and cost efficient
- Scientifically-sound and technically feasible
- Availability of technical manpower (i.e. performed by experts) and capable facilities
- High buy-in from the industry partner
- Fast transfer of technology

Tips and Reminders on the Application Process

1. The proponent is encouraged to visit DOST's DPMIS submission portal (<https://dpmis.dost.gov.ph/>) early on and create an account if not yet registered. Explore and familiar yourselves with the portal. For further assistance, you may email pmis@dost.gov.ph.
2. The proponent must submit all properly accomplished documentary requirements via the DPMIS on or before the set deadlines (**31 March 2023 for AANR, 30 April 2023 for Health, 31 May 2023 for IEET, at 5:00pm**). Requirements as indicated in "Submission Requirements" should follow the prescribed format and be duly signed. **Prescribed forms may be downloaded at <https://s4cp.dost.gov.ph/resources/>.**
3. An "Early Bird" benefit shall be enjoyed by those who submit within two weeks from the start of CFP. Proposals submitted in this period will be pre-evaluated by the PMO; comments will be sent to the proponent within a week after submission. The proponent may re-submit proposals until the deadline for application. Beyond this period, evaluation results will be final and resubmission after pre-screening by PMO may no longer be allowed.



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CALL FOR PROPOSALS FOR CY 2023 FUNDING

Business Innovation through S&T (BIST) for Industry Program *under the*

SCIENCE FOR CHANGE (S4C) PROGRAM: Accelerated R&D Program for Capacity Building of
Research and Development Institutions and Industrial Competitiveness

INTRODUCTION

The **Business Innovation through S&T (BIST) for Industry Program** of the Department of Science and Technology (DOST) aims to facilitate the acquisition of strategic and relevant technologies by Filipino companies for immediate incorporation in their R&D activities. This program will contribute to the technology development value chain as it provides the means for the industry to undertake R&D and acquire advanced technology for global competitiveness. Through BIST, the government will assist Filipino companies in pursuing Research and Development (R&D) and investing in new technologies, to enhance the competitiveness of Filipino companies.

The DOST is now ready to accept research and development (R&D) proposals for 2023 from private industry companies for the BIST Program. The R&D proposals should meet the program objective which aims to level-up the innovation capacity of Philippine industries through R&D, and acquisition of strategic and relevant technologies to enhance their technology level and production process.

GENERAL CRITERIA

Who may apply?

Proponent should be a Filipino-owned company (at least 60% ownership) and must be operating in the Philippines for at least 3 years and be able to provide active compliance with statutory regulations. The proponent must also provide at least 30% of the project cost as counterpart funding (in cash, in kind, or person-hours).

What types of proposals may be submitted?

All proposals submitted should be in line with the priority R&D areas and industries identified by the DOST and Department of Trade and Industry (DTI), namely:

Agri-processing (includes drug and herbal development)	Industrial Waste Treatment
Agriculture, Fishery and Forestry	Information and Communication Technology (includes Artificial Intelligence)
IC Design	Food and Nutrition
Semi-conductor and Electronics	Infrastructure and Logistics
Creative Industries/Knowledge-based Services	Environment and Climate Change
Renewable Energy	Manufacturing

- The hardware/software to be acquired must be primarily used for R&D initiatives.
- The proposed technology acquisition with its corresponding R&D must be implemented for a maximum period five years.
- Refund of financial assistance shall commence on the 3rd year of project implementation. It shall be done for a period of 3-5 years depending on the nature of technology acquired and the financial capability of the company.

APPLICATION REQUIREMENTS

All requirements with prescribed DOST format may be downloaded from S4CP website under “Resources” Section: <https://s4cp.dost.gov.ph/resources/>

What documents need to be submitted?

- Full-blown proposal using the DOST Form No. 2 (Detailed project proposal), DOST Form 4 (Line-Item Budget), DOST Form 5 (Workplan) and Business Plan.
- Letter of intent to avail of the BIST Program stating commitment to refund the cost of technology acquisition and cover the insurance cost of the acquired technology/equipment
- Copy of business permits and licenses of the private sector partner from relevant LGUs and other government offices
- Certificate of Registration of Business name with Department of Trade and Industry (DTI), Securities and Exchange Commission (SEC), or Cooperative Development Authority (CDA)
- Financial statements from the past three years (for the private sector partner) duly signed by a Certified Public Accountant/Auditor, and projected financial statements for the next five years
- Business plan that includes details of how the research outputs from the project will be used
- Curriculum Vitae of Management and Technical Team

Application Process and Timeline

1. **Proposal Submission:** Proposals must be submitted electronically through the DOST Project Management Information System (<https://dpmis.dost.gov.ph/>) following the below timeline per sector:

Sector	Inclusive Date	Deadline
Agriculture, Aquatic, and Natural Resources (AANR)/Basic Research	01 – 31 March 2023	31 March 2023, 5:00PM
Health	01 – 30 April 2023	30 April 2023, 5:00PM
Industry, Energy, and Emerging Technologies (IET)	01 – 31 May 2023	31 May 2023, 5:00PM

The DPMIS will no longer accept proposals submitted after the deadlines. Please note: The DPMIS will only receive submissions with complete documents. Incomplete applications will not be considered.

- **Confirmation of Submission:** After successful submission of the proposal, the proponent will receive an automatic confirmation email. This email can be used as proof that the proposal was submitted on time and correctly. For concerns in the proposal submission, contact the S4C-PMO immediately.

- **Technical Evaluation:** Proposals that pass the pre-screening are forwarded to the appropriate Council for technical evaluation. Criteria for evaluation are based on the Revised DOST-GIA guidelines.
- **Endorsement and Deliberation of Evaluation Results:** The results of evaluation will be forwarded to the Office of the Undersecretary for R&D (OUSEC-RD). The S4C Project Management Office (PMO) will inform the proponent of the final results.



Contact Us

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ABOUT THE I-CRADLE PROGRAM

Since the implementation of the Science for Change (S4C) Program, the Philippines has jumped from ranking 56th in 2014 to 27th in 2020 in terms of university-industry research collaboration in the Global Innovation Index. This may be attributed to the CRADLE or Collaborative Research and Development to Leverage the Philippine Economy Program of the S4C Program which has funded 96 collaborative R&D projects as of December 2022 for PhP 440 million since 2017. The CRADLE program has allowed private companies to address their needs/problems requiring R&D solutions with higher chances of success and reduced financial risks. On the other hand, Higher Education Institutions (HEIs) and/or Research and Development Institutions (RDIs) conduct R&D which are tailored to fit the needs of their partner industry hence facilitating faster adoption of technology.

1. The DOST aims to expand the benefits of university-industry collaboration through the Industry-level CRADLE Program (I-CRADLE). In the I-CRADLE Program, industry-wide problems or needs shall be identified and solved through R&D with the goal of increasing the competitiveness of Philippine industries.
2. Under the I-CRADLE Program, industry-wide needs and problems will be determined through appropriate methods, which may include but are not limited to consultations, surveys, and focused group discussions, with companies belonging to the same industry. The HEIs and/or RDIs which are experts in the identified field shall undertake the research and development. Funding shall be provided by the DOST, complemented by counterpart funding from the collaborating parties from the industry sector and the HEI and/or RDIs. Together, the academe as the producer of knowledge and human resource, and the industry as the entity that translates technologies to real-world applications, shall generate new opportunities for Filipinos in the form of new industries, enterprises, jobs, and solutions to pressing community and national problems. Furthermore, the collaboration shall ensure the timeliness and relevance of R&D endeavors, with reference to practical and pressing national needs.

GENERAL CRITERIA

Who may apply?

Any duly recognized HEI/RDI* with a proven track record in R&D in partnership with a Partner Industry Association or Group defined as any of the following:

- a. Industry association, duly registered in any of the regulating agencies and represented by the trade association's head of agency and **at least** five (5) member companies;

- b. A group of **at least** five (5) individual companies belonging to the same industry; or
- c. A secondary or tertiary cooperative, represented by the head of agency and **at least** five (5) member cooperatives (as defined in the <https://cda.gov.ph>)

**Please note that the academic institution prepares and submits the project proposal while collaborating with the partner company.*

What are the requirements for eligibility of the industry partner?

To be an eligible industry partner, the company must:

1. Be Filipino-owned (at least 60%)
2. Be operating in the Philippines for at least 3 years and be able to provide proof of active compliance with statutory regulations (such as the most recent business registration and business permits)
3. Provide at least 40% of the project budget as counterpart funding (in cash, kind, or person-hours)
4. Commit to adopting the output of the research (by signing a technology adoption certificate). Plans for the use of the proposed technology and the mode of technology transfer after the project must be included and clearly discussed in the business plan.
5. Show how the research output will be adopted

What types of proposals may be submitted?

All proposals shall be submitted by the HEI and/or RDI and shall be in line with the industries identified by the DOST, Department of Trade and Industry (DTI), and S4CP Steering Committee, including but not limited to:

1. Agriculture, Aquatic, and Forestry
2. Food processing
3. Furniture
4. Handicrafts
5. Health and Wellness (including Drugs and Pharmaceuticals, Diagnostics, and Biomedical Devices)
6. Consumer electronics
7. Metals
8. Mining
9. Construction

APPLICATION REQUIREMENTS

Forms and guidelines may be accessed through <https://tinyurl.com/CRADLECFPMaterials>

What documents need to be submitted?

Proposal Requirements

1. DOST Form 2 (Full-blown proposal)*
2. DOST Form 4 (LIB)*
3. DOST Form 5 (Workplan)*
4. Business Projection Plan

**Prepared as prescribed in the Revised DOST-GIA Guidelines*

Documentary Requirements

1. Joint Endorsement Letter signed by the HEI/RDI and business head of agency of all industry partners
2. Latest Business Registration Certificate (e.g. SEC, DTI or CDA) - of all industry partners
3. Business Permit in the last 3 years - of all industry partners
4. Technology Adoption Certificate (TAC) - of all industry partners
5. Draft Collaborative Research Agreement (CRA)

Supplementary Requirements

1. Curriculum Vitae of the Project Team
2. Company Profile
3. Necessary documents as determined in the Revised DOST-GIA Guidelines for specific circumstances (e.g. approval from the institution's ethics review board for research involving human subjects or in the case of animal subjects, approval from the Bureau of Animal Industry (BAI); clearance from the DOST Biosafety Committee for research proposals involving the use of GMOs under contained use, etc.)

Intellectual Property Concerns

The HEI/RDI and its partner company are encouraged to start discussions and agree on the IP rights/ownership as early as the Proposal Writing stage. A Collaborative Research Agreement (CRA) including details on the IP rights and the method of technology transfer must be executed by the HEI/RDI and the partner company to formalize the agreement.

Application Process and Timeline

1. **Proposal Submission:** Proposals must be submitted electronically through the DOST Project Management Information System (<https://dpmis.dost.gov.ph/>) on or before the deadline set for the relevant sectors. The DPMIS will no longer accept proposals submitted after the deadline **(5:00pm of the set deadline)**. Please note: The DPMIS will only receive submissions with complete documents. Incomplete applications will not be considered.
2. **Confirmation of Submission:** After successful submission of the proposal, the proponent will receive an automatic confirmation email. This email can be used as proof that the proposal was submitted on time and correctly. For concerns in the proposal submission, contact the S4C-PMO immediately.
3. **Technical Evaluation:** Proposals that pass the pre-screening are forwarded to the appropriate Council for technical evaluation. Criteria for evaluation are based on the Revised DOST-GIA guidelines.
4. **Endorsement and Deliberation of Evaluation Results:** The results of evaluation will be forwarded to the Office of the Undersecretary for R&D (OUSECRD). The S4C Project Management Office (PMO) will inform the proponent of the final results.

Contact Us

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