

XIII. HUMAN RESOURCE AND INSTITUTION DEVELOPMENT

This year's Call for Proposal for Capability Development Program will focus on the 2 sectors, namely:

1. Small R & D Funding for PCIEERD Consortia
2. Good Governance through Data Science and Decision Support System (GODDESS)

The Small R&D Funding for PCIEERD Consortia will provide grants to budding researchers and research institutions in the Region to jumpstart their research. All PCIEERD Regional Consortium has its own priority areas for R&D responding to the needs of their respective Region. The Regional Consortium is expected to build partnerships and harness the effective use of resources in the regions through the pursuit of R&D and other scientific activities responsive to regional industry needs and anchored on PCIEERD's priority areas. This is essential and pivotal in the country's envisioned inclusive growth.

On the other hand, the call under the GODDESS Program will enable the learners to demonstrate the knowledge and skills gained from the Project SPARTA and Learning Scale: Data Science.

A. R & D PROGRAM FOR NEW RESEARCHERS AND INSTITUTIONS IN THE REGIONS

Call Overview

The Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) of the Department of Science and Technology (DOST) is ready to accept R & D project proposals for 2023 from PCIEERD consortia in the regions. Also, the call is open to all new researchers and institutions in the regions who are not yet part or member of PCIEERD Consortia. The small R & D funding to be provided will initially capacitate our new researchers and institutions in the region as well as it will help to provide full complement of the R & D needs of country's human resource and requirement within the regions.

Call Objectives

The Call for Proposals is for specific priority areas identified by the PCIEERD Regional Consortia based on the Regional R&D Agenda 2020-2023 in the areas of industry, energy, emerging technology and other special concerns.

The funding opportunity encourages new researchers and institutions from Higher Education Institutes (HEIs), government Research and Development Institutes (RDIs), non-profit S&T networks and organizations, private sector, and other proponents seeking funding for their R&D initiatives. It is also open to all researchers and institutions who are part of the PCIEERD Regional Consortium.

The general objective of this call is to develop research capabilities and increase the available researchers, scientists and engineers in the PCIEERD priority sectors through regional consortia program. The following are specific objectives of the call:

1. To provide R&D support to new researchers and institutions in the region
2. To provide research opportunities to new researchers within the institution members of the PCIEERD Regional Consortia.
3. To provide small R & D budget for project proposals of researchers that are aligned to the Regional Agenda of the region.

Call Scope

Regional Consortia R&D Program for new researchers and institution in the region shall provide small R&D assistance for new researchers and institutions from the regions.

The program aims to develop research capabilities and increase the available researchers, scientists and engineers in the PCIEERD priority sectors through regional consortia program. The specific objectives are as follows:

- to provide R & D support to new researchers and institutions who are not yet part or member of the consortia.
- to provide R&D support to new researchers within the institution members of the PCIEERD Regional Consortia
- to provide research opportunities to new researchers within the institution members of the PCIEERD Regional Consortia with participation or involvement in any PCIEERD-funded or monitored project.

Identified Regional Priority Areas

Region CAR: Cordillera Industry, Energy and Emerging Technology Research and Development Consortium (CIEERDEC)

- Food Processing
- Metals and Engineering
- Data Science and Machine Learning
- Transportation

Region 1: Region 1: Ilocos Consortium for Industry and Energy Research and Development (I-CIERD)

- Process Engineering R&D Center
- Smart City
- Creative Industries
- Material Science
- Disaster Risk Reduction Management

Region 2: Cagayan Valley Industry and Energy Research and Development Consortium (CVIERDEC)

- Food Processing
- Food and Nutrition Security
- Countryside Development

- Natural Product Development

Region 3: Central Luzon Consortium for Industry and Energy Research and Development (CLIERDEC)

- Competitive Industries
- Intelligent Transportation System
- Food Advancement and Innovation Technology

Region NCR: Metropolitan Manila Industry, Energy and Emerging Technology Research and Development Consortium (MMIEERDEC)

- IOT, Digital Science and Product Development
- Digital Science for Traffic Management, Urban Surveillance, and Environment and Pollution Control
- Environment and Pollution Control

Region 4A: Southern Tagalog Consortium for Industry and Energy Research and Development (STCIERD)

- Energy (Biogas Technology, Biofuel, Microhydro Power, Wind Power, and Energy Audit)
- Food (Functional Foods, Food Safety, and Tropical Wines)
- Environment (Cleaner Production, Agro-ecotourism, and Potable Water)
- Disaster Risk Reduction and Management & Climate Change Adaptation (Lake System; Laguna Lake, Taal Lake, Seven Lakes, and others)
- Metals and Engineering (Prototype Development)

Region 4B: Southern Tagalog Islands Research and Development Consortium (STIRDC)

- Food Processing
- Appropriate Technologies for Industry Competitiveness
- Creative Industries: Marble Research Center
- Renewable Energy Systems, Solar
- Environment, Climate Change Mitigation and Adaptation/Disaster Risk Reduction

Region 5: Bicol Consortium for Industry, Energy and Emerging Technology Research and Development (BCIEERD)

- Smart City/EGov
- Development of ICT Software/ Program
- Food Products/Technology
- Non-Food Products/ Technology
- Product Development and Packaging

Region 6: Western Visayas Consortium for Industry and Energy Research and Development (WVCIERD)

- Natural Fibers and Textiles
- Food Safety and Security
- Transport Industry
- Industrial Machineries and Parts

- Energy Efficiency and Renewable Energy
- Electronics, ICT and Emerging Technologies
- Disaster Management
- Water Resource and Waste Management

Region 7: Central Visayas Consortium for Industry and Energy Research and Development (CVCIERD)

- Renewable/Alternative Energy/Ground Water Modelling
- Food Processing
- ICT. Industry 4.0
- Disaster Risk Reduction
- Clean Technologies, Water Management

Region 8: Eastern Visayas Consortium for Industry, Energy and Emerging Technology Research and Development (EVCIEERD)

- Food Security and Nutrition (Innovative Food Products, Improvement of Food Shelf Life, Packaging)
- Competitive Industries (ICT, Electronics and Semiconductor, Metals and Engineering)
- Renewable Energy and Energy systems and Bioenergy Technologies
- Construction
- Metals and Engineering

Region 9: Zamboanga Industry, Energy and Emerging Technology Research and Development Consortium (ZIEERDC)

- DRRM
- Energy (Energy Efficiency & Conservation)
- Environment
- Food (Packaging)
- Mining (Extraction Methods)

Region 10: Northern Mindanao Consortium for Industry and Energy Research and Development (NORMINCIERD)

- Design, Mechanization & Automation
- Food Processing and Food and Nutrition Security
- Systems & Analytics/Quality Management Systems
- Human Security and Defense Research
- Metals and Engineering
- Mining & Minerals
- Halal & Blockchain Technology
- Sustainable Energy
- Environment and Climate change and Disaster Risk Reduction and Management (Flood Monitoring Systems and Watershed Characterization and Vulnerability Assessment)

Region 11: Davao Region Industry, Energy and Emerging Technology Research and Development Consortium (DRIEERDC)

- Mechanization, Automation, Artificial Intelligence and Biotechnology
- Smart City

- Geomine

Region 12: Cotabato Region Industry and Energy Research and Development Consortium (CRIERDEC)

- Food and Nutrition Security
- Disaster Risk Reduction and Environment, Climate Change Adaptation
- Competitive Industries
- Intelligent Transportation Solutions
- Renewable Energy and Energy Storage Solutions

Region 13 (Caraga): Eastern Mindanao Industry, Energy and Emerging Technology Research Alliance for Development (EMIEERALD)

- Development of Smart City
- Development of New and Innovative Product
- Healthy and Safe Tourism Destination
- Mining processing

Specific Features in this Call

1. Maximum of P1M grant is provided to approved projects.
2. Preference is given to public and private universities and colleges, Research and Development Institutes (RDIs), R&D Consortia, non-profit laboratories, other public or private non- profit S&T institutions located in the Philippines. Non-profit S&T organizations are those, which: (1) are operated primarily for scientific, educational, service, or similar purposes in the public interest; (2) are not organized primarily for profit; and (3) use its net proceeds to maintain, improve, and/or expand its operations. Non-profit organizations engaged in lobbying activities are not eligible to apply.
3. The Applicant should provide information on the counterpart funding to be provided and its source, as appropriate. Only eligible and allowable costs may be used for counterpart fund and/or in-kind contribution (ex. utility costs, office space rental, etc.), as determined by DOST-PCIEERD.
4. The proposal should be supported by a letter of intent from the applicant and an endorsement from the authorized head of organization.
5. An endorsement letter from the Regional Consortia should also be submitted.

B. GOOD GOVERNANCE THROUGH DATA SCIENCE AND DECISION SUPPORT SYSTEM (GODDESS)

1. Data Science and Analytics

Call Overview

Data science has become indispensable in decision making. Data scientists effectively analyze, process and communicate complex data that are used to address a specific need, supporting

decision makers in their planning process. From the 2016 workforce of 147,420, estimates show that a total of 340,880 data scientists will be needed in the country by 2022, a surge of 131% increase (Pompa, Claudia. The Data Science and Skills Analytics Shortage: The Case for Action to Equip the APEC Workforce with the Competencies Demanded by Employers to Support Sustainable Economic Growth and Prosperity. May 2017).

Recognizing the pressing challenges in this sector, the DOST embarked, in 2018, on a massive training on data science and analytics delivered through an online learning management platform. Funded under the DOST Grants-in-Aid Program, the project, titled “Learning at Scale Volume 1: Data Science Track”, offered one thousand slots covering various course modules from the Coursera Data Science and Computer Science specializations. Following the success of this project and taking into consideration the lessons learned during its implementation, the successor project titled, “**Smarter Philippines for Data Science Adoption, Reskilling, Training and Adoption (SPARTA)**”, was launched in 2019. The SPARTA project aims to address, at a massive level, a data-literate population able to collect and process big data for research, which will be provided through an on-line learning platform (registration via sparta.dap.gov.ph).

This call will support data-driven project, policy, process or system undertaken by SPARTA training participants, as part of their capstone project, that will address the needs of a government agency or professional organizations that will benefit the local population or address a national issue and contribute to Smart Governance.

Call Rationale

To enjoin SPARTA training participants to demonstrate the knowledge gained through the SPARTA online courses undertaken, using data analytics for decision making and smart governance.

Call Scope

This Call for Proposal is open to **SPARTA Project training participants** to develop appropriate capabilities, systems and technologies geared towards enabling all LGUs and NGAs to adapt data driven governance and evidence-based management. Proposed projects must be able to develop technologies or systems that will be identified under the SPARTA project such as but not limited to:

1. Urban mobility (smart parking, intelligent traffic management, integrated multimode transport) B. Energy management (smart meters and management, renewable sources of energy, energy efficiency and green buildings)
2. E-governance and Citizen Services (public information, electronic service delivery, citizen management, video crime monitoring)
3. Waste management (waste to energy & fuel, waste to compost, treatment of Construction & Demolition waste)
4. Water management (smart meters & management, leakage identification & preventive maintenance, water quality monitoring)
5. Others researches that will use big data processing

The program area should present a novel concept or mechanism and should have an immediate application. Researchers should also collaborate with any partner agencies from national government agency, local government unit, other agencies of the government and private institutions who will be the eventual adaptor of the technology/system developed.

Call Objectives

1. To develop data driven projects that can be used by government agencies, research institutions or professional organizations in making smart decision and governance
2. To partner with public and private research institutions in developing data driven projects that will promote smart initiatives.

Specific Features in this Call

1. Maximum of P1M grant is provided to approved projects.
2. The project must be done within one year, with demonstrable output by the end of the 6th month.
3. A letter of commitment to use the output by the intended beneficiary should be submitted. Data should be readily available for use by the project team and the partner agencies identified beneficiary should allow the use of data for the project.
4. A certification from DAP that the proponent is a SPARTA participant should also be submitted.
5. Only equipment to be used in developing the project is allowed. The partner agencies should provide the server and other equipment need for repository of their data as well as for use in the adoption of the technology developed through the project.