

Quarterly Physical Report of Operation
As of 31 December 2021

Department: Department of Science and Technology (DOST)

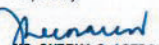
Agency: Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD)

Operating Unit:


Organization Code (UACS): 19 013 0000000

Particulars	UACS Code	Physical Targets					Physical Accomplishments					Variance as of 4th Quarter	Remarks
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total		
1	2	3	4	5	6	7=(3+4+5+6)	8	9	10	11	12=(8+9+10+11)	13	
Program: National Industry, Energy and Emerging Technology Sectors R&D Program	31 010 0000000000												
Organizational Outcome: Increased benefits to Filipinos from scientific knowledge and technological innovations for productivity and competitiveness													
Output Indicators													
Number of projects funded		32	34	32	12	110	33	61	43	64	201	-91	The total disbursed budget for the Sixty Four (64) newly funded projects amounts to P183.82M. Meanwhile, the total disbursement for the 4th Quarter is P238.18M. Twenty Two (22) of the funded projects were not included in the quarter's total physical accomplishment since they have already been reported from the previous quarters.
Number of projects monitored		32	43	55	50	180	38	84	86	56	264	-84	As of 4th Quarter , the Council monitored 56 projects based on the progress and/or financial reports submitted by the Implementing Agency or through field evaluation visit/report conducted by PCIEERD Project Managers both funded by PCIEERD-GIA and DOST-GIA.
Percentage of projects completed which are published in peer-reviewed journals, presented in national and/or international conferences, or with IP filed or approved					55%	55%	to be reported in the 4th Qtr	to be reported in the 4th Qtr	to be reported in the 4th Qtr	55%	55%	0%	Out of the 327 completed projects assisted and monitored from 2018 - 2020, 180 projects were validated to have published their papers in peer-reviewed journals, presented in national and/or international conferences, or have filed IP or approved as of 4th quarter of 2021.
Outcome Indicators													
Percentage of priorities in the Harmonized National R&D agenda (HNRDA) addressed					90%	90%	100%	100%	100%	100%	100%	-10%	The Council has ongoing projects in relation to its seven (7) main priorities in the HNRDA, which are enumerated in the attached document.
Number of partnerships with public and private stakeholders and international organizations		10	20	10	10	50	25	39	19	21	104	-54	Please see attached list of Implementing Agencies (IAs). Please take note that DOST attached agencies with projects monitored/assisted by the Council are excluded in the report because based on the definition set by the Department, only (IAs) outside of DOST should be reported.

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**Number of Projects Funded
(October - December 2021)**

	Program Title	Project Title	Implementing Agency
1		Filipinnovation Entrepreneurship Corps (FEC) 3: Cohort 3 and Train-the-Trainer (TTT) Module - Enabling Researchers to Assess Commercial and Societal Value of their Research	De La Salle University (DLSU)
2	IP Management Program for Academic Institutions Commercializing Technologies (IMPACT)	IMPACT: Enhancement of Intellectual Property and Technology Transfer Processes in MSU-IIT	Mindanao State University - Iligan Institute of Technology
3	Comprehensive Evaluation of Critical Infrastructures and Construction Raw Materials in the Philippines Using Concrete Petrography	Project 2. Geological, Chemical and Physical Evaluation of Concrete Raw Materials Used in Critical Philippine Infrastructures	UP Diliman
4		Development of an AI-assisted Thunderstorm Early Warning System from Analysis of Doppler Radar Data	UP Diliman
5		MINERVA: Monitoring of INdicators for Efficient Redevelopment and Value Assessment	Asian Institute of Management
6		Development of Nanosilica-based Anti-Corrosion Coating Formulations for Carbon Steel Reinforcement Used in Farm Structures	UP Los Baños
7		PROMT: Philippines Remediation of Mine Tailings	Philippine Nuclear Research Institute (PNRI)
8		Process and Product Optimization of Black Garlic used as Flavor Enhancer	Mariano Marcos State University
9		Speciation and Isotopic Characterization of Mercury in Sediments in Honda Bay and Puerto Princesa Bay, Palawan	Philippine Nuclear Research Institute (PNRI)
10		WHWise: innovation thru Building and Leveraging Entrepreneurship Development, Networking and inclusive Community Engagement for WomEntrepreneurs (iBLeNDNICE 4WomEn)	Mindanao State University - Iligan Institute of Technology UP Mindanao Miriam College
11		Chemical Synthesis and Characterization of Conducting Polymer/Metal Nanoparticles Composites, and Their Application as a Chemiresistive Gas Sensor Array for H2S and CO2	University of Santo Tomas
12	Startup Grant Fund Program	Exporter Incubation and Predictive Intelligence for Exporters – Improving the Capabilities of eCExport, an AI-powered export incubation platform for Filipino MSMEs	ECFULFILL INC.
13	Startup Development Program	Enhancement and Market Validation of Nutricoach (A work-from-home productivity tool for nutrition professionals)	NUTRICOACH, INC.

14	Human Resources Development Program	Development of a Water Quality Biological Monitoring Protocol using Genetic, Phylogenetic and Functional Diversity on Freshwater Zooplankton Communities in Inland Waters of Panay Island, Philippines	UP Visayas
15	Human Resources Development Program	Innovating R&D through Simulation Driven Machine Design	Capiz State University - Burias Campus
16		Thermal Processing of Selected Materials Using Agitated-Type Retorts	Industrial Technology Development Institute (ITDI)
17		The PEEL-Good Project: Bench-scale Ultrasound-assisted Extraction of Pectin from 'Saba' Banana Peel Waste	UP Los Baños
18		Image Mapping of Energy Conversion Efficiency and Other Parameters Across Solar Cell Active Areas using Photoexcitation and Photothermal Effects	UP Cebu
19		In Silico Nanotoxicology Evaluation of Engineered Nanomaterials: Bridging the Data Gap on Experimental Approaches for Toxicity Appraisal with Implications to Nanomaterial Risk Assessment and Nano-safety	Mindanao State University at Naawan
20	FASTRAC (Funding Assistance for Spin-Off and Translation of Research in Advancing Commercialization)	Enhancement and Market Validation of TITAN Vision-based Traffic Information & Analysis	De La Salle University
21	FASTRAC (Funding Assistance for Spin-Off and Translation of Research in Advancing Commercialization)	Application of Geopolymer Technology as Eco-innovative Composite Products	De La Salle University
22	FASTRAC (Funding Assistance for Spin-Off and Translation of Research in Advancing Commercialization)	VISSER: REFRESH (Redesigning for Remote Education, in School and at Home)	UP Diliman
23	KTTO-IMPACT (IP Management Program for Academic Institutions Commercializing Technologies) Program	IMPACT: Establishment of Knowledge, Technology Transfer and Business Development Processes and Services in West Visayas State University	West Visayas State University
24	KTTO-IMPACT (IP Management Program for Academic Institutions Commercializing Technologies) Program	IMPACT: IMPACT: Enhancing of the DOST-FNRI's Technology Transfer Office Policies and Processes	Food and Nutrition Research Institute (FNRI)
25	KTTO-IMPACT (IP Management Program for Academic Institutions Commercializing Technologies) Program	IMPACT: TRUE IMPACT: Technology and Research of UseP Enhanced through IMPACT	University of Southeastern Philippines
26	KTTO-IMPACT (IP Management Program for Academic Institutions Commercializing Technologies) Program	IMPACT: Teknoy InACT - Teknoy Innovation Advancement through Commercialization and Technology Transfer	Cebu Institute of Technology - University
27	IP Management Program for Academic Institutions Commercializing Technologies (IMPACT)	IMPACT: Strategic Enhancement of Technology Transfer and Business Development Operations and Programs of the Philippine Nuclear Research Institute	Philippine Nuclear Research Institute (PNRI)

28	Startup Grant Fund Program	Virtual Reality and Networking Feature for our Virtual Events Platform	OLERN INC
29	Human Resources Development Program	Online Technical Seminars/Colloquiums to Support Optics & Photonics Sectoral Development under the program of HRDP	Ateneo de Manila University
30	SEA-EU (Southeast Asia-Europe Joint Funding Scheme)	Metal Oxide Hybrid Structured Barriers for Stable Energy Devices	De La Salle University
31		AeroComp: Enhanced Lightweight Fiber-reinforced Composites Structures for Aerospace and Defense Applications	Metals Industry Research and Development Center
		AeroComp: Enhanced Lightweight Fiber-reinforced Composites Structures for Aerospace and Defense Applications	UP Diliman
32		Development of Halal Compliant Dehydrated Food Products from Selected Food Materials (Fruits, Vegetables and Rootcrops)	Industrial Technology Development Institute (ITDI)
33		Development and Field Testing of Retort Foods as Food Ration for Men in Uniform during Combat and High Risk Operations	Industrial Technology Development Institute (ITDI)
34		Waste to Wealth: Value-Adding Approaches to Transform Cacao (Theobroma cacao L.) Pod Husk Towards Economic Development	Isabela State University - Echague Campus
35	AIR-CAMMP: Air Interventions and Research - Collective Aerosol Measurement and Mitigation	Project 6. Ambient Air Remote Sensing, Modeling and Data Visualization Environment (AiRMoVE)	UP Diliman
		Project 6. Ambient Air Remote Sensing, Modeling and Data Visualization Environment (AiRMoVE)	Holy Angel University
36	Ships Ballast Water and Biofouling Treatment Systems for Marine Vessels (SAILS) Program	Developing a Prototype Ballast Water Management System (BWMS)	UP Diliman
		Developing a Prototype Ballast Water Management System (BWMS)	University of Cebu
37	AIR-CAMMP: Air Interventions and Research - Collective Aerosol Measurement and Mitigation	Project 4. Comparative Study Between Standard Methods and Philippine Made PM and CO Measuring Devices	Industrial Technology Development Institute (ITDI)
38		Development of Draft Standards and Recommended Code of Practice for Processing of Peanut Butter	Industrial Technology Development Institute (ITDI)
39		Unmanned Aerial System (UAS) with Passively Rotating Spherical Shell for Close-proximity Inspection of Infrastructure	Mindanao State University - Iligan Institute of Technology
40		Philippine Mining at the National to Catchment Scale: From Legacy Impacts to Sustainable Futures	UP Los Baños

41	Natural Fibers as Nanostructured Scaffolds for Biomedical Applications	Project 2. Nanostructured Scaffolds from Natural Fibers as Platforms for Stem Cell Growth and Differentiation	UP Diliman
42	KTTO-IMPACT (IP Management Program for Academic Institutions Commercializing Technologies) Program	IMPACT: Strengthening Bicol University's IP Management Programs and Commercialization Strategies (BU-IPCom)	Bicol University
43	Terahertz Research and Innovation Program Leading to Commercially-Viable THz Time Domain Spectroscopy Systems	Project 4. THz Spectroscopic Fingerprinting of Controlled Substances Relevant to Human Health and Security	UP Los Baños
44		PECTIN-CARRAGEENAN MIXTURES: High Precision Characterization of Hydrogel Heterogeneity Properties with Optical Tweezers and FESEM Imaging	University of San Carlos
45	HEIRIT	HEIRIT: Establishment of Technology Business Incubation Facility of Mapua University	Mapua University
46		Photonic Integrated Circuit (PIC)-based Linearized Optical Frequency Discriminator filter for 5G Applications	Ateneo de Manila University
47		"Kepler-Equation-in-a-Photonics-Chip": A Leapfrogging technology for orbital position determination using low-energy, high-speed calculation Photonic Integrated Circuits (PIC) analogs	Ateneo de Manila University
48		HEIRIT: Handholding Starting Incubators from HEIs for Readiness towards Innovation and Technopreneurship Preparatory and Skills Acceleration for TBI Managers Optimizing Regional Startup Ecosystem (HIHEIRIT PA MORE!)	UP Mindanao
49		HEIRIT ReSEED: Establishment of the Cagayan Valley Startup Ecosystem Consortium (CVSEC)	Cagayan State University
50		HEIRIT ReSEED: Start-up Ecosystem Leveraging on Opportunities and Networks for Growth (SULONG Central Luzon)	Bulacan State University
51		HEIRIT ReSEED: Mindanao Startup Ecosystem Transformation Consortium (MindSET North Mindanao)	UP Mindanao
52		HEIRIT Regional Startup Enablers for Ecosystem Development (ReSEED). Establishment of a Regional Startup Ecosystem Consortium in Southern Luzon	Batangas State University
53		Establishment of the Innovation and Development Accelerators Consortium for Startups in Davao Region (IDEAS- Davao Region)	UP Mindanao
54		HEIRIT ReSEED: Establishment of Western Visayas Startup Ecosystem Consortium(WVSEC)	Iloilo Science and Technology University

55		Enhancement of XPERTO Events Management and Credentialing Platform Using Cloud Technologies and Artificial Intelligence for Professionals	Wayvent Innovations, Inc.
56		Calunasan Cacao Pod Husk w/ Rice Hulls based Fuel Briquetting	Joypulchra Ofamen Sarabia Ofamen Cacao Farm
57		Support for DOST Technology Business Incubators (TBIs) through Launchgarage Innovation Hub Acceleration Program	De La Salle University Science Foundation, Inc.
58		Prototype Improvement and Market Validation of AtoANI i-CROP Platform (A Databased Recommendation Platform for a Produce-to-Demand Agriculture Model)	W.V.J.A Foods Product Manufacturing
59		Improvement and Digitalization of Agri-Ecommerce Farm To Table Infrastructure	Platform Technologies, Inc.
60		HEIRIT ReSEED: Cordillera Unified Regional Startup Ecosystem (CoURSE)	University of the Cordilleras
61		EdukSine App and Streaming Website	Pirfs Multimedia Distribution Services
62		HEIRIT ReSEED: Strategic and Collaborative Alliance for Leveraging Ecosystem of Startups in the National Capital Region (SCALE NCR)	Technological Institute of the Philippines
63		Fully Accessible Cloud-Based Learning Management System (LMS) for Persons with Disabilities in the Philippines	Virtualahan, Inc.
64		HEIRIT ReSEED: Development and Acceleration Support for Innovation Growth in Central Visayas (DASIG Central Visayas)	Silliman University
65		Development and Market Validation of Empath, a Mental Health Mobile App for Youth in High-Stress Situations	Empath Corporation
66		Analysis, Design, and Development of the EKSPERTO App: An On-Demand Integrated Service providing App for Displaced and Certified Workers	Cagayan State University
67		Design and Development of a MSME Profiling and Network Portal with MSME Services Recommender System	West Visayas State University
68		Design and Development of a Low-Cost Mobile Data Acquisition System for Small Crafts	Aklan State University
69		Advanced Electrode Materials for Energy Supply and Storage	Bicol State College of Applied Sciences and Technology
70		Establishment of IoT Research Laboratory and Training Center	University of Perpetual Help System DALTA - Molino

71		Establishment and Operationalization of Integrated Food and Environmental Testing Laboratory (IFETL) in Antique	University of Antique
72		Development of Immunobooster Drink from Undervalued Local Plants, a WVCIEERD Proposal	Iloilo Science and Technology University
73		Project AutoLABS: RFID-based Automated Equipment Borrowing and Management System with Mobile App Reservation for School Laboratories	Adamson University
74		PUVs Patterns and Attitude on the Streets using Artificial intelligence and Data Analytics (PASADA)	Technological Institute of the Philippines - Quezon City
75		SUNSHARE: A renewable energy blockchain marketplace application for a clean community	University of the Cordilleras
		PHSW21	
		Training Program for PCIEERD Researchers with University TTO	
79		Regional S&T Consortia	Multiagency
80		PCIEERD Human Resource Development Program	Multiagency
81		Impact Assessment of DOST/PCIEERD Funded Project	Multiagency
82		Young Innovators Program	Multiagency
83		Financial Support for the Information Dissemination and Promotion of Technologies	Multiagency
84		Project Management/Assessment and Policy Development Program	Multiagency
85		Balik Scientist Program	Multiagency
86		Total Quality Managemet Enterprise System	Multiagency
Already reported in 1st, 2nd or 3rd Qtr			

**Number of Projects Monitored
(October - December 2021)**

	Program Title	Project Title	Implementing Agency
1	Science, Technology and Innovations for Productivity and Competitiveness Program	Technical Support for DOST Regional Food Innovation Centers	Industrial Technology Development Institute (ITDI)
2		Management of Dredged Materials: Characterization, Treatment, and Disposal (CharTeD DreaM)	Industrial Technology Development Institute
3	NICER Program: Center for Advanced Materials for Clean Energy Technologies using Indigenous Materials (CAMCET)	Project 2. Fabrication of Nanostructured Silica-based Nanocomposite Membranes for Proton Exchange Membrane Fuel Cells (PEMFCs) Applications	Mapua University

4	NICER: Center for Advanced Materials for Clean Energy Technologies based on Indigenous Materials (CAMCET)	Project 3. Plant-Derived Biochar as Fabric-Based Electrode Materials for Supercapacitor Devices	University of Santo Tomas
5		Center for Astronomy Research and Development: ASTRONOMICAL NEAR EARTH OBSERVATION LIGHT POLLUTION (ANEO-LiPo)	UP Diliman
6		Development of Low Heat and Low Humidity (LH)2 Drying System for DOST Malnutrition Reduction Program (DOST-MRP) Facilities	Food and Nutrition Research Institute (FNRI)
7		Sustainable Technology - Assisted Route Planning for Region VI (STARPLAN VI)	De La Salle University
8		Development of Nanosilica-based Anti-Corrosion Coating Formulations for Carbon Steel Reinforcement Used in Farm Structures	UP Los Banos
9		Project 2: Hydrological Characterization of Boracay Island's Groundwater System and Nabaoy River Watershed Using Isotope Techniques	Philippine Nuclear Research Institute
10	NICER: Program Boondock: A Mountain Engineering Center Towards Sustainable Infrastructure and Upland Water Security	Project 4. Development of Artificial Groundwater Recharge Facility for Drought and Flooding Mitigation	Water Resources Research Development and Extension Center
11		Specific Earthquake Ground-Motion Levels to Help Increase the Seismic Resiliency of Government Infrastructures, Residential and Medium-to-High Rise Buildings in Pangasinan, Tarlac, Metro Iloilo-Guimaras, Cauayan City, Butuan City and Mati City	Philippine Institute of Volcanology and Seismology (PHIVOLCS)
12	Decision Support Tools for Intelligent Transport System (ITS)	Enhancement of Transportation Management Software (E-TraMS)	UP Diliman
13		Determination of the Mineral Processing Operating Parameters for Ores in Cabadbaran City and Business Model Development for the Sustainable Operation of Gold-Copper Pilot Plant in Caraga	DOST Region XIII
14		Parallel Testing of the Traditional Gold Extraction Process versus CLINN-GEM Technology of UP-DOST Characterization of Tailings and Monitoring of the Gold-Copper Pilot Plant in Jose Panganiban, Camarines Norte	DOST - Region V
15		Development of Column-Packed Adsorbent for Chrome Recovery from Tanning Wastewater	Philippine Nuclear Research Institute (PNRI)
16	Integrated Mapping, Monitoring, Modelling and Management System for Manila Bay and Linked Systems (Im4Manilabay)	Development of an Integrated Mapping, Monitoring, and Analytical Network System for Manila Bay and Linked Environments (MApABLE)	UP Diliman

17	Integrated Mapping, Monitoring, Modelling and Management System for Manila Bay and Linked Systems (Im4Manilabay)	Integrated Waste Analysis, Survey and Technological Options (IWASTO)	UP Diliman
18		Application of Radiation Techniques in the Geochemical Characterization of Cobalt and other Valuable Metals in the Selected Metallic Deposits	Philippine Nuclear Research Institute (PNRI)
19		Technology Innovations for Mathematical Reasoning, Statistical Thinking and Assessment	Ateneo De Manila University
20	Bamboo Musical Instruments Innovation Research and Development Program	Documentation of Philippine Indigenous Bamboo Musical Instruments	Forest Products Research and Development Institute
21		Liquefaction Hazard Assessment for Resilient Schools in GMMA: A Liquefaction Probabilistic Model using Non-Invasive Geophysical Techniques and Limited Probe Hole	Philippine Institute of Volcanology and Seismology (PHIVOLCS)
22	CRADLE	Design and Development of a Mechanical Garlic and Cashew Chipper	Holy Angel University
23	CRADLE 2020	Diachronic Representation and Linguistic Study of Filipino Word Senses Across Social and Digital Media Contexts	De La Salle University
24	CRADLE	Development of a Liner-Enhanced Curing Vessel for Salted Egg Production for Eggciting Traditions	Philippine Institute of Volcanology and Seismology
25		Philippines - Quantitative Lahar Impact and Loss Assessment under changing Land Use and Climate Scenarios	PHIVOLCS
26		Waste to Wealth: Value-Adding Approaches to Transform Cacao (Theobroma cacao L.) Pod Husk Towards Economic Development	Isabela State University - Echague Campus
27		Design of Highly Active Kapok Fiber Electrodes for Energy Applications	UP Diliman
28	Integrated Mapping, Monitoring, Modelling and Management System for Manila Bay and Linked Systems (Im4Manilabay)	Eco-System Modeling and Material Transport Analysis for the Rehabilitation of Manila Bay (e- SMART)	UP Diliman
29		Kapok fibers absorbent with customizable hydrophobicity/hydrophilicity for oily water and wastewater treatment	UP Diliman
30	CRADLE	Application of Natural Antioxidants Derived from Sugarcane for Food, Food Supplement and Cosmetics Production Formulations	UP Los Baños
31	NICER Program: Center for Advanced Materials for Clean Energy Technologies using Indigenous Materials (CAMCET)	Project 2. Fabrication of Nanostructured Silica-based Nanocomposite Membranes for Proton Exchange Membrane Fuel Cells (PEMFCs) Applications	University of Santo Tomas

32		Development of a Gamma Computed Tomography Imaging Device for Industrial Applications (GAIA)	Philippine Nuclear Research Institute (PNRI)
33		Development of Food Reference Materials for Nutrition Labeling for Use of Local Testing Laboratories (Phase 3) Implementation of ISO 17034:2016 Quality Management System in the Development of Rice Flour Reference Materials	Food and Nutrition Research Institute (FNRI)
34		Establishment of Halal Assurance System for Selected Food Ingredients (Dried and Powdered Onion, Garlic, Black Pepper and Chili)	Industrial Technology Development Institute (ITDI)
35		Development of Halal Compliant Dehydrated Food Products from Selected Food Materials (Fruits, Vegetables and Rootcrops)	Industrial Technology Development Institute (ITDI)
36		Integrated Flood and Water Resources Management in ASEAN Basins for Sustainable Development	Isabela State University
37	3D Philippines: 3D Visualization and Analysis of Surface and Sub-Surface Data in the Philippines	Project 1. Geotechnical Mapping of Metro Manila Subsoil (GEMMMS)	De La Salle University
38	Valorization of Coal Fly Ash: Resource Recovery of Critical and Strategic Elements, and Environmental Applications (VAL-CREE)	Recovery of Rare Earth Elements and Strategic Elements from Coal Fly Ash by Hydrometallurgical Techniques	Mindanao State University-Iligan Institute of Technology
39	Value-Addition of Philippine Iron and Iron Rich Mineral Resources	Project 1. Technical Study on the Use of Synthesized Laterite-Iron Sand as Feed Material for Shaft Furnace Ironmaking Technology	Mines and Geosciences Bureau
40	Value-Addition of Philippine Iron and Iron Rich Mineral Resources	Project 2. Recovery of Scandium from Laterite-based Pig Iron Slag by Dry Digestion and Precipitation Methods	Mines and Geosciences Bureau
41	Materials for Sustainable Construction and Recyclables Applied to Projects (M-SCRAP)	Project 2. Green Fiber-reinforced Polymer (FRP) Composites as an Innovative Repair System for Earthquake-prone Historical Buildings	De La Salle University
42		Development of Innovative Food Products from Colored Philippine Tubers and Root Crops through the UPLB-DOST Food Innovation Center	Industrial and Technology Development Institute (ITDI)
43		Valorization of Agri-food Waste: Ultrasound-assisted Extraction of Oil and Polyphenols from Cherry Rejects of Cordillera Grown Arabica Coffee	UP Baguio
44		Development of Draft Standards and Recommended Code of Practice for Processing of Peanut Butter	Industrial and Technology Development Institute (ITDI)
45		Safe, Efficient, and Sustainable Solar-Assisted Plug-In Electric Boat (Sessy E-Boat)	Mapua University
46	R&D Block Grant: S&T for a Resilient Community Against the Pandemic (STRAP) Program	Stunt Science: A Physics Simulator Mobile Game	Western Institute of Technology (WIT)

47	CoBUILDTex (Constructions and Buildings using Indigenous Locally - developed Natural Textiles): Natural Textile Fiber-Based Innovations for Green and Smart Structural Applications	Project 1. Natural Textiles as Innovative Formwork and Reinforcement for Freeform Concrete Structures	UP Diliman
48	CoBUILDTex (Constructions and Buildings using Indigenous Locally - developed Natural Textiles): Natural Textile Fiber-Based Innovations for Green and Smart Structural Applications	Project 2. Natural Fiber-based Technical Textiles for Smart Indoor Installations	Philippine Textile Research Institute
49		SUGPO: Sustainable mine waste management Using modified hydrothermal carbon from prawn shells, and Geochemical modelling of Pathways of contaminants from mine tailings	Mindanao State University-Iligan Institute of Technology
50		Imahe Labs: An Educational Game for Chemistry in the Senior High School and Junior High School sectors of Baguio City	University of the Cordilleras
51		Port Capacity Analysis and Route Optimization for Local Maritime Administration	UP Diliman
52	Autonomous Societally Inspired Mission Oriented Vehicles (ASIMOV)	Project 1. Harmonized Aerial Watch and Knowledge-based Survey (HAWKS)	UP Mindanao
53	Autonomous Societally Inspired Mission Oriented Vehicles (ASIMOV)	Project 2. Robot for Optimized and Autonomous Mission-Enhancement Responses (ROAMER)	UP Mindanao
54	NICER:Establishment of the e-Trike Research and Development Center	Project 1. Design, Development and Fabrication of the Different Parts and Assembly of e-Trike	Cagayan State University - Tuguegarao (Carig)
55	NICER:Establishment of the e-Trike Research and Development Center	Design, Fabrication and Testing of Electrical and Electronic Systems of a Locally Developed E-Trike	UP Diliman
56	R&D Block Grant: S&T for a Resilient Community Against the Pandemic (STRAP)	Printed Electronic Devices for the New Normal: Temperature Sensor Patch, Electrochemical Sensor Array Patch for Face Masks and Air Circulators, and Antiviral Nanotech for Air Circulator Filters	Ateneo de Manila University
57	CRADLE 2020	IoT (Internet of Tubig): Development of smart water meter wireless network	UP Diliman
58	Higher Education Institution Readiness For Innovation & Technopreneurship (HEIRIT)	HEIRIT: Adamson University Neo Science and Technology Incubation Center (AduNEST-INC)	Adamson University
59	NICER:Establishment of the e-Trike Research and Development Center	The Viability Assessment of e-Trike Project in Region 2	Cagayan State University - Tuguegarao (Carig)
60		PECTIN-CARRAGEENAN MIXTURES: High Precision Characterization of Hydrogel Heterogeneity Properties with Optical Tweezers and FESEM Imaging	University of San Carlos
61		Mathematical Resources for Distance Learning Utilizing Community LTE Networks and Television Frequencies	Ateneo De Manila University

62		Development of Framework and Materials for Distance and Remote Learning via Datacasting	De La Salle University
63		Performance Evaluation of Natural Textile Fibers (NTFs) and Technology Transfer of RYPIC Facility in Miagao, Iloilo	Philippine Textile Research Institute
64		PROMT: Philippines Remediation of Mine Tailings	Philippine Nuclear Research Institute (PNRI)
65		A Framework for the Sustainable Development of Marine Mineral Resources in the Philippines	Mines and Geosciences Bureau (MGB)
66	Young Innovators Program	SPHERE: An Ultrawideband Technology based Innovation for Search and Rescue Operations in the Philippines	Mapua University
67	Young Innovators Program	Fungal chitosan- based Microbeads: A Heavy Metal Soil-based biobiosorbent	Polytechnic University of the Philippines
68	Young Innovators Program	Proton-Exchange Membrane (PEM) Fuel Cell Using Electrode Processed from Kaong Waste Product	Cavite State University
69	Young Innovators Program	LaBioRem: Landfill Bioremediation through Biodegradative activities of Pleurotus ostreatus (Oyster Mushroom) to High Density Polyethylene (HDPE) and other biodegradable polymers	Angeles University Foundation
70	Young Innovators Program	Synthesis of nanocellulose from durian rinds for the preparation of a self- healing smart concrete with augmented mechanical properties	University of Mindanao - Bolton
71	Ships Ballast Water and Biofouling Treatment Systems for Marine Vessels (SAILS) Program	Project 1. Port And Ballast Water Baselines Using Ecological, Microbiological And Edna Approaches (PORTEC)	University of the Philippines Manila
72		Optimization of the Operational Capabilities of Hydromet Sensors in Line with International Standards (WMO Standards) for Effective Weather, Flood Warning (CBFEWS) and Application to Research	Philippine Atmospheric, Geophysical and Astronomical Services Administration
73		Weather and Climate Science for Service Partnership for South East Asia: Building Safer Community to Weather and Climate Variability through Science and Innovation (WCSSP)	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
74		CATfish: A Modular Mini-Autonomous Underwater Vehicle System	UP Diliman
75	Accelerated R&D Program for Capacity Building of Research and Development Institutions and Industrial Competitiveness: Collaborative Research and Development to Leverage Philippine Economy (CRADLE)	Enhanced Forecasting Model for Complex Water Supply Systems of the East Service Area of Metro Manila	Asian Institute of Management (AIM)

76	Advanced Additive Manufacturing R&D Program (AMCen)	Research on Advanced Prototyping for Product Innovation and Development using Additive Manufacturing Technologies (RAPPID-ADMATEC)	Metals Industry Research and Development Center (MIRDC)
77		Synthetic Aperture Radar (SAR) and Automatic Identification System (AIS) for Innovative Terrestrial Monitoring and Maritime Surveillance	Advanced Science and Technology Institute (ASTI)
78	e-Asia Joint Research Program	Fundamental Study of the Physical Properties of Metal Oxide Single Nanowires and Nanoparticles for Bio-nanosensing	De La Salle University
79		Fabrication of Graphene-based Nanostructure Substrates for Applications in Ultrasensitive Detection	UP Diliman
80		BRAVE: Bomb Removal Automated Vehicle	De La Salle University
81		SCaRP: Simulating Cascading Rainfall-triggered Landslide Hazards in the Philippines	Mapua University
82	SEA-EU (Southeast Asia-Europe Joint Funding Scheme)	Metal Oxide Hybrid Structured Barriers for Stable Energy Devices	De La Salle University
83	NICER: Program Boondock: A Mountain Engineering Center Towards Sustainable Infrastructure and Upland Water Security	Project 2. Improving the Livelihood of MSMEs thru Cable Supported Water and Transport Infrastructure	Saint Louis University
84	R&D Block Grant: S&T For a Resilient Community Against the Pandemic (STRAP)	Nanocellulose Self-Disinfecting (NACS) Filter: R & D Validation of an Innovative Low-Cost Nanotech-based Face Masks	Caraga State University
85	Value-Addition of Philippine Iron and Iron Rich Mineral Resources	Project 3. Refining Laterite-based Crude Pig Iron for Specific Product Applications	Metals Industry Research and Development Center
86		Handum: The Design, Implementation, and Analysis of a Digital/Mobile Game-based Learning Tool for Primary and Secondary Education	UP Diliman
87	Scaling Up Climate Information Services for Societal Benefits (CLIM'UP)	Project 2. Development of Prediction and Warning System on Sub-Seasonal Scale of Extreme Events Associated with Monsoon in the Philippines (Monsoon@Ph)	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
88	Scaling Up Climate Information Services for Societal Benefits (CLIMUP)	Project 1. Development of high-resolution observation-based gridded sub-daily climate data for the Philippines (ClimGridPh)	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
89		MR. Tour Guide: A Cultural Adaptive Mapping Platform using Mixed Reality	Batangas State University
90		A Link-Up of Geomatics and Social Science Research for the Development of Smart Cities (LUNGSOD) Project	UP Diliman

91	3D Philippines: 3D Visualization and Analysis of Surface and Sub-surface Data in the Philippines	Optimization of the GeoRiskPH Integrated System through Risk Assessments, Site Suitability Models and 3D Visualizations to Aid Policy and Decision-Making (3D Earth Risk)	Philippine Institute of Volcanology and Seismology (PHIVOLCS)
92		PAVE-Prototype Automated Visual Survey Equipment	UP Diliman
93	CRADLE Challenge 2020:	CYANanobot: Miniaturized Boat-assisted Data Acquisition for Automated Cyanide Monitoring in Wastewater using Optical Nano-sensor	Caraga State University
94	2020 DOST-MOST Joint Research Program (JRP)	SMART INK: Artificial Intelligence-Assisted Development of a 3D Printing Nano-Structured Carrageenan Hydrogel	University of San Carlos
95	DOST-MOST	The Development of High-performance and Low-cost Membrane Electrode Assembly for Alkaline Fuel Cell Based on Ion/Electron Dual Conducting Catalyst Layers	UP Diliman
96	Terahertz Research and Innovation Program Leading to Commercially-Viable THz Time Domain Spectroscopy Systems	Project 4. THz Spectroscopic Fingerprinting of Controlled Substances Relevant to Human Health and Security	UP Los Baños
97		Building Bonds between Academe and Industry: Formulation of Vitrified Bonding Materials for Locally Manufactured Aluminum Oxide and Silicon Carbide Grinding Wheels	Ateneo de Manila University
98		PATURO: Platform for Assessment and Tracking of Urbanization-Related Opportunities	Asian Institute of Management (AIM)
99	STRAP (S&T for a Resilient Community Against the Pandemic)	iJuanderer: An Augmented Reality-based Gamified Local Tourism and Cultural Heritage Promotion and Preservation	DOST-Philippine Science High School - Office of the Executive Director
100	STRAP (S&T for a Resilient Community Against the Pandemic)	Haynayan AR: An Augmented Reality-Based Lesson for the Improvement of Learning Achievement in Cell Biology for the STEM Curriculum	DOST-Philippine Science High School - Office of the Executive Director
101	R&D Block Grant: S&T for a Resilient Community Against the Pandemic (STRAP)	A Game-based Mobile Learning Platform for Social Studies	Mariano Marcos State University
102		Smarter Philippines through Data Analytics R&D, Training and Adoption (SPARTA)	Development Academy of the Philippines
103	CRADLE 2020	baTID: RFID-band for personalized body temperature monitoring	Ateneo de Manila University
104	NICER: Program Boondock: A Mountain Engineering Center Towards Sustainable Infrastructure and Upland Water Security	Project 3. Upland River and Spring Water Assessment and Management	University of the Cordilleras
105	NICER Program: Center for Advanced Materials for Clean Energy Technologies using Indigenous Materials (CAMCET)	Project 1. Biomass-Derived Nanomaterials as Novel Electrocatalyst Components for Direct Ethanol Fuel Cells	University of Santo Tomas

106	Higher Education Institution Readiness For Innovation & Technopreneurship (HEIRIT) Development Program for Starting TBIs	HEIRIT: ESTABLISHMENT OF DOST-ISAT U K'DRA 1905 TECHNOLOGY BUSINESS INCUBATOR (KTBI)	Iloilo Science and Technology University
107		Philippine Groundwater Outlook (PhiGO)	Ateneo De Manila University
108	Securing Water Resources in Tourist Destinations in the Philippines: Pilot Study in Boracay Island (Comprehensive Water Resources Assessment and Management Plan for Nabaoy River Watershed and Boracay Island)	Project 1. Water for Tourism: A Science-Based Water Resource Monitoring and Management Planning Guide for Tourist Destinations in the Philippines	Ateneo de Manila University
109		AQUADRONE: UAV Assisted Deployment System for Water Quality Monitoring	University of Santo Tomas
110		Development of Chicken Egg White Powder and Granules from Low Value Edible Shell Eggs	UP Diliman
111	Integrated Food Safety Program	Prevalence of Heavy Metals and Pesticide Residues in Milled Rice and White Corn Grits in the Philippines	National Food Authority-Food Development Center
112		Unmanned Aerial System (UAS) with Passively Rotating Spherical Shell for Close-proximity Inspection of Infrastructure	Mindanao State University-Iligan Institute of Technology
113		Towards Leveling- up OneLab for Research, Development and Innovation (OneLab Transition)	Industrial and Technology Development Institute (ITDI)
Already reported in 1st, 2nd or 3rd Qtr			

**2018 - 2020 Completed Projects with Publications/Conference Presentations/IP Filed or Approved
(October - December 2021)**

180 out of **327** completed projects from 2018-2020: **55%**

	Project Title
1	Establishment of the Mindanao University of Science and Technology Digital Incubation Hub
2	Establishment of BatStateU Center for Technopreneurship and Innovation (Technology Business Incubation)
3	A Vision-Based Vehicle Counter for Traffic Monitoring (VEMON)
4	PNRI Graduate Student Research Grant Program (GSRGP)

5	Strategic Communication Approaches to Boost the Philippine Textile Research Institute Promotions
6	Development of a Material Science and Polymer Chemistry Laboratory
7	Forward Osmosis System using locally-made membrane from Nata-de-coco for the production of rehydration water and application for desalination
8	Regional scales of variability in precipitation (RSVP)
9	Embedding of Functional Materials Onto Paper for Antimicrobial and Electromagnetic Shielding Applications
10	Pulp-To-Print: Development of Print-Ready Cellulose Composites from Underutilized Sources
11	Green Synthesis and Functionalization of Carbon Quantum Dots from Biowaste for Biomedical and Industrial Applications
12	Discover Diwata 1 (A Joint Project between PCIEERD & Museo Pambata)
13	Coal Ash as a Resource of Rare Earth and Strategic Elements in the Philippines: Amenability to Metallurgical Processing
14	Characterization of Tailings and Monitoring of the Integrated Gold-Copper Mineral Processing Pilot Plant in Benguet
15	Synergistic effect of Forward Osmosis and Capacitive De-Ionization for Water Purification and Recovery
16	Project 1. Molecular characterization of bacterial community from Manleluag alkaline spring through next-generation sequencing of 16S rDNA
17	Project 2. Isolation and screening of alkaliphilic bacteria from Manleluag alkaline spring producing an industrially important enzyme
18	Development of a Commercial Prototype Automated Guide-way Transit System in UP Diliman
19	Performance Testing and Evaluation of Prototype Trainset (Year 2)
20	Development of a Customized Local Traffic Simulator (LocalSim Phase 2)
21	Production of Nanocellulose from Indigenous Natural Fibers and Agricultural Wastes
22	Antibacterial Effects of Polypyrrole Hybrid Composites Against Foodborne Bacteria

23	Fabrication of Copper Oxide Electrode for Supercapacitor Application
24	Potentiodynamic Polarization Study to Determine the Corrosion Susceptibility of 316L Stainless Steel Pins in Simulated Body Fluid
25	A Bacteriophage-based Electrochemical Impedance Biosensor for Salmonella Detection in Milk Samples
26	Layer-by-layer polycation-CYP27B1 biosensor for the Electrochemical Detection of 25-hydroxyvitamin D3
27	Development of a Low-energy Ion Source System for the Synthesis of Diamond-like Carbon Films
28	Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion Processes
29	ANEEME: Synthesizing And Sharing Animation Building Blocks For Rapid Creation of 3D Motion Scenes
30	Development of Interactive Software and Teaching Guides for Grades 7-10 Mathematics
31	Innovation Hub: Diliman
32	Design, Fabrication and Performance Evaluation of Black Sand Collectors
33	Cartography of Old Informs the New (COIN)
34	Development, Characterization and Performance Evaluation of Polymeric Separation Membrane for Industrial Applications using Local Materials
35	Sonochemical Synthesis of Cobalt Oxide and Copper Oxide Nanostructures as Electrodes in Photoelectrochemical Water-Splitting Applications
36	InteliSENSE: A Progress Monitoring Tool for Children with Special Needs
37	Technical and Economic Feasibility Study to Determine the Most Suitable Ironmaking Technology for the Value Adding of Philippine Magnetite Resources
38	Optimization Of Ready-To-Drink Sweet Potato Leaf Extract (SPLE) Beverages Through The UP- DOST Food Innovation Facility
39	Automated Real-Time Monitoring System (ARMS) for Ambuklao, Binga, and San Roque Dams
40	Setting up a Concrete Petrography Laboratory for Quality Control of Construction Projects
41	Development of a Functional and Durable Pervious Concrete Pavement for Local Roads and Parking Lots

42	Modification of Road Train Energy Storage System using Lithium Ion Batteries
43	Utilization of Industrial By-Product Currimao Steel Slag for Green Concrete Products
44	Harmonization of Food Safety Training Module for Food Manufacturing
45	Project 2: LiDAR, Hyperspectral and Sonar Remote Sensing of Seagrass Meadows (SEARS)
46	Project 3: Geosimulation of Mangroves and Seagrass Vegetation Dynamics (GEOSIMAS)
47	Development of HFDR Ship Tracking Algorithm Software for Maritime Surveillance, Search and Rescue
48	Project 5. Remote Sensing Product Development
49	Project 1. Advanced Traffic Pollution Monitoring and Analysis System Based on Data Collected from Air Quality Sensors, Engine Status Sensors and GPS Trackers Installed on Selected PUVs in Metro Manila (ATMAS)
50	Project 1. Preparation of Imprinted poly(phenylenediamine) /poly(thiophene)-TiO ₂ Nanoparticle Functionalized Electrodes for the photoelectrochemical sensing of organophosphorus pesticides
51	Project 2. Synthesis of TiO ₂ -Conducting polymer Nanospheres for the photocatalytic and photoelectrocatalytic degradation of organic pollutants
52	Project 3. Preparation and Properties of Transition Metal- and Nitrogen-Doped Titania photocatalysts by Hydrothermal Methods
53	Testing for Standardization and Optimization of five Coach Hybrid Road Train Phase III
54	System Expansion of the 120-Passenger per Coach Capacity Automated Guide-way Transit System
55	Dried Cassava Grates Processing and System Optimization
56	Establishment of Shelf-Life of Vacuum Fried Okra developed by ITDI Main FIC
57	Development of a Shelf-Stable Fermented Heirloom Rice "Binubudan"
58	Enhancing the Natural Science Research Center Laboratories of Central Mindanao University

59	Establishment of a Pampanga State Agricultural University (PSAU) Bio-energy Laboratory
60	Establishment of Renewable Energy Laboratory and Demonstration Park
61	Project 3. Extraction, Characterization, and Application of Natural Colorants in Nutritional Food Products
62	Water - Energy - Nutrient Nexus in the Cities of the Future
63	Regional Disaster Science and Management S&T Capacity Development (Phase III)
64	Specific Earthquake Ground-Motion to help Enhance the Seismic Resiliency of Residential and Medium-to-High Rise Buildings in Metro Cebu and Metro Davao
65	Metro Manila Transportation Network: Big Data Analytics and Applications (MMTN:BDAA)
66	Binary Gels-Rheology of Two-Component Biopolymer Hydrogels Investigated Using Optical Tweezers and Non-Linear Rheometry
67	Optical Trap-Mediated Interaction Between Cancer Cells and Elucidated Compounds from Vegetable Extracts in PEMF (Pulsed Electromagnetic Field) Background Energy
68	Ultrafast MBE-Grown Terahertz Photoconductive Antenna Devices
69	Innovation And Technopreneurship Hub (ITech) (Caraga TBI)
70	Enhancement of Prototype and Assessment of Product Marketability of Machibox (A Robotics Kit for Stem-Based Learning)
71	Rurok Bikes: Variable Geometry And Efficient Suspension Pedalling Platform
72	Development of Geographic Information System (GIS) Innovation Laboratory
73	Project 1: Geo-SAFER Zamboanga Peninsula: Systematic Assessment of Flood Effects and Risks in the Zamboanga Peninsula, Mindanao, Philippines
74	Project 2: Geo-SAFER Northern Mindanao/ Cotabato: Systematic Assessment of Flood Effects and Risks in Northern Mindanao And Cotabato, Philippines
75	Project 3: Geo-SAFER Agusan: Systematic Assessment of Flood Effects and Risks in the Agusan River Basin, Caraga Region, Mindanao, Philippines

76	Project 5: Geo-SAFER Southeastern Mindanao: Systematic Assessment of Flood Effects and Risks in Southeastern Mindanao
77	One Click: Android/Web-based Student Response and Understanding Visualizer
78	Fringe-area Data Access by Transient Altitude Provision
79	Techno - Economic Feasibility Study of Micro-Grid in A Remote Community
80	Development, Standardization, and Characterization Studies of Tupig, Bukayo, and Bibinka-Region 1 Native Delicacies
81	Project 1. Monitoring and Assessment of Planting Activities and other Applications (MAPA2)
82	Project 2. Remote Assessment for Irrigation Networks (RAIN)
83	Project 1. Investigating the Tectonic Evolution of Northern and Central Philippine Arcs through Geochemistry and Geophysics
84	Project 2. Coastal Tectonics of Central Philippine Islands and Its Implications for Seismic Hazards
85	Project 3. Geophysical Characterization of the Western Philippine Subduction Zones
86	Upgrading and Enhancing the Capacity of the Packaging Technology Division in Packaging Research and Innovation
87	Project 1. Typhoon Formation, Structure and Intensity Change in Western NP and Wave Observation and Modeling
88	Project 2. Heavy Rain Monitoring and Forecasting in the Mountainous Area and Early Warning Landslides
89	Project 3. Observations and Dynamical Downscaling of Seasonal and Sub-seasonal Forecasts
90	Production of NanoCellulose Crystals: Powder, Advanced and Derivative Products for Various Industry Applications
91	PUP College of Engineering Sensors and Mechatronics Laboratory
92	Project 1. Commercial Scale Verification Of Natural Dyes For Textiles
93	Standards And Testing Automated Modular Platform (STAMP)

94	Development of a Raman Microscopy and Spectroscopy (RMS) Setup
95	Establishment of a Plasma Physics Laboratory for Materials Processing Applications
96	Cyber-physical Transportation System
97	Recycling and Recyclability Index for End-of-Life Jeepneys
98	Development of Food and Non-Food Products from Abalone
99	Development of Freeze-Dried Local Alternative Flavors for Ice Cream
100	Product Development and Commercialization of Iqube Home Kit
101	Establishment of the Technology Management System and Structure of the Ateneo De Manila University
102	Development of Gourmet Salt Products and Micro-sized Salt in Laboratory Scale
103	Project 6: Suitability Models for Guiding Mangrove Replanting Efforts (SUITMAPS)
104	Project 8: Multi Agent Systems for Simulating Policy Scenarios on Blue Carbon Ecosystems (BLUEMASSPOLIS)
105	Project 1: Design and Fabrication of an Airframe for Medium-Range, Short Take Off and Landing UAV
106	Project 2: Development of a Flight Controller for a Modular UAV
107	Project 3: Cooperative UAV Missions and Applications with Custom Communications and Imaging Capabilities
108	Design and Improvement of Gong Fabrication Processes Through S&T Intervention
109	Design and Development of a PLC-Based High Capacity Tissue Culture Growth Chamber
110	Development and Social Media Reading Tool for Filipinos
111	Beta Testing of Biotechnology Kits for Stem Education
112	Development of Data Analytics, Big Data, and Artificial Intelligence to Build A Smart Restaurant Management Platform
113	Enhancement of K-12 Grading System Towards Intelligent Computing Environment through Wela School Innovation (Responsive Monitoring System For Educational Institution)

114	Development of Earthquake Intensity Monitoring System
115	Project 1. Microsatellite BUS Development for Philippine Microsat
116	Monitoring and Evaluation of Batch II Complementary Food Technology Adoptors
117	Enhancement of Prototype and Market Readiness of R-TAP (an advanced pressure management system for water utilities)
118	Doubling The Reach through Information, Education and Communication (IEC) Campaign
119	Enhanced S&T Experience using Leading-Edge Learning Additions and Realities (STELLAR)
120	Strengthening the Core
121	Project 1. Production of Nutritional Food Products for Conflict Stricken Areas
122	Project 2. Implementation of GarNESupp (Gardening, Nutrition Education, Supplementary Feeding) Model in Conflict-stricken area (Marawi)
123	Portable Potable Water Equipment for Disasters and Emergencies (PWEDE)
124	Establishment of Spray Drying Technology and Equipment for the Regional FICs (Batch 2)
125	Tabang MARAWI (Malnutrition Alleviation and Health Restoration through After-War Interventions)
126	Field Testing and Technology Validation of the E-Procurement System (ePS) for Government Agencies
127	Summer Training Camp for High School Students on Genomics and Bioinformatics at the Philippine Genome Center
128	Fabrication and Performance Evaluation of Abaca Fiber-Reinforced Composites for Boat Application
129	Establishment of a Plasma Laboratory for Materials Processing Applications
130	Universal Sensing Meter for Instruction & Laboratory Experiments (U-SMiLE)
131	Generalized Automated Microfluidics and Micro-actuator Assembly (GAMMA)
132	Angular Goos-Hänchen Shift: An Optical Phenomena for Ultra Thin Film Thickness Measurement

133	Fabrication of Highly C-axis Oriented YBCO Superconducting Thin Films by Sedimentation Deposition
134	Project 1. Development of Microprocessor for Wireless Sensor Network Application
135	Project 2. Power Management Unit using Low Drop-out Regulator and Switched Capacitor DC-DC Converters
136	Project 3. Design of Indoor Light Energy Harvesting for Wireless Sensor Network Applications
137	Flood Risk Assessment for Mitigation and Effective Response (FRAMER) of Riverine Towns in Selected River Basins in Cavite, Batangas, and Quezon Provinces using Most Recent LiDAR DEM
138	Geospatial Assessment and Modelling of Urban Heat Islands in Philippine Cities (GUHeat)
139	Formulation of a Settlements Development Model in New Growth Areas in the Philippines
140	Fire Check: Urban Fire Hazard Mapping and Fire Spread Modeling
141	Sustainable Wastewater Treatment Systems with Nutrient (SWAN) Recovery
142	MCWQM: Multi-platform and Cross-Sensor Water Quality Monitoring
143	Electromagnetic Radar Technique For Water Detection
144	Post-Treatment of Food Processing Wastewater Effluent for Nutrient Removal
145	Design review, design finalization and production assessment of a locally fabricated optical aerosol monitor (ROAM)
146	Project 1. Antibiotics, Endocrine Disruptors and Heavy Metals in Laguna Lake Water: Impacts on Food and Water Security
147	Project 2. Microbial Source Tracking in Selected Tributaries of Laguna de Bay
148	Project 3. TRACe Fish – Trace Organics and Metals in Commodity Fish: Method Optimization, Extent of Contamination and Health Risk Due to Fish Intake
149	Establishment of the PTRI "Perfect Fit" Textile Product Development Center

150	Enhancement, Field Validation and Market Readiness Detection of of DNA-based Nanobiosensor for the E. coli, E. coli 0157:H7 and Salmonella enterica in Food, Feed and Farm Produce
151	CharM - Charging in Minutes Spinoff Project - Technology Development for Manufacturability and Open-water Market Validation
152	FASTRAC: Product Testing and Market Validation of Marine Nanocoat for Anticorrosion, Antibarnacle, AntiUV coating for ship applications (OLD: Product Testing and Market Validation of Marine Nanocoat for Anticorrosion, Antibarnacle, AntiUV, coating for ship vessel applications)
153	Commercial Development of Production, Application and Full Market Study of Monascus Red Colorant
154	Mindanao Scale Up Program for DOST-iDEYA-TBI
155	Training and Internship Program for Increased Local Bioinformatics Utility and Expertise
156	UP Cebu Cybersecurity Research and Extension Center
157	Development of a Wastewater Filtration System Using Indigenous Materials
158	Development of an Alternative Credit Scoring Model applying Machine Learning in FinancingFarmers
159	PCIEERD NSRI Research Grant
160	Field and Market Testing of ILAWA: Renewable Power Generation Using Recycled Anodic Material for Small Fishing/Touring Vessels
161	Fermentation and Purification Research to Produce Food Grade, Pharmaceutical-Grade, and Polymer Grade Lactic Acid
162	Prototype Development of Natural Fiber-Thermoplastic Composites from Agricultural and Industrial Wastes for Industrial Applications
163	Prototype Development of the Deepwater Operation 3D Visual Mapping and Inspection System (PD-DOMAINS)
164	Enhancing Man-Machine Interaction through Intelligent Conversational Agents
165	Development of a Passive Neutron Spectrometry System (PNSS)
166	Remote Sensing and Data Science: DATOS Helpdesk

167	A Dispersive Long-Wave Model for Predicting Coastal Flooding due to Storm Surges and Surface Waves in Manila Bay
168	Mapping of offshore active faults for resilient coasts
169	Project 1. Design, Prototyping of Salt Processing Equipment (Washer, Dryer, Iodizer, Crystallizing Pan, Furnace, Concentrator (Ion exchange membrane)
170	Assistance in the Commercialization of DOST Funded Technologies in Caraga State University
171	Self-Healing Materials Based on Cyclodextrin and Ferrocene Self-Assembly towards Formulation of Coatings
172	Establishment of Halal Assurance System for Bakery Products
173	Establishment of an Additive Manufacturing Research Laboratory
174	Establishment of the University of San Carlos Center for Advanced Computational Modelling and Simulation (CACoMS)
175	Acquisition of Laboratory Equipment in Support of the facility for Nanotechnology R&D in Central Luzon State University
176	Development of a Design Guideline Using Finite Element Analysis (FEA) for Semiconductor Packages
177	Development of a Philippine Indigenous Instrument Sounds Database
178	Research and Development Project to Rehabilitate and Enhance Productivity in Lahar and Ash-Laden Areas in Central Luzon
179	Development of a System that Can Determine and Classify the Layout Correctness of Integrated Circuit Layout Blocks using Machine Learning
180	Master of Research and Development Management

**Priorities in the Harmonized National R&D Agenda (HNRDA)
(October - December 2021)**

	Topics/Areas	With Ongoing Projects
1	Food and Nutrition Security	X
2	Countryside Development	X
3	Competitive Industries	X

4	Delivery of Social Services	X
5	Intelligent Transportation Solutions	X
6	Renewable Energy and Energy Storage Solutions	X
7	Human Security	X

**List of Partners/Implementing Agencies
(October - December 2021)**

NO DUPLICATION

1	Adamson University	Aklan State University
2	Aklan State University	Angeles University Foundation
3	Angeles University Foundation	Bicol State College of Applied Sciences and Technology
4	Asian Institute of Management (AIM)	Cavite State University
5	Ateneo De Manila University	De La Salle University Science Foundation, Inc.
6	Batangas State University	ECFULFILL INC.
7	Bicol State College of Applied Sciences and Technology	Empath Corporation
8	Bicol University	Joypulchra Ofamen Sarabia / Ofamen Cacao Farm
9	Bulacan State University	Mindanao State University at Naawan
10	Cagayan State University	NUTRICOACH, INC.
11	Cagayan State University - Tuguegarao (Carig)	OLERN INC
12	Capiz State University - Burias Campus	Pirfs Multimedia Distribution Services
13	Caraga State University	Platform Technologies, Inc.
14	Cavite State University	University of Antique
15	Cebu Institute of Technology - University	University of Cebu
16	De La Salle University	University of Perpetual Help System DALTA - Molino
17	De La Salle University Science Foundation, Inc.	UP Visayas
18	Development Academy of the Philippines	Virtualahan, Inc.
19	ECFULFILL INC.	W.V.J.A Foods Product Manufacturing
20	Empath Corporation	Water Resources Research Development and Extension Center
21	Holy Angel University	Wayvent Innovations, Inc.
22	Iloilo Science and Technology University	
23	Isabela State University	
24	Isabela State University - Echague Campus	
25	Joypulchra Ofamen Sarabia / Ofamen Cacao Farm	
26	Mapua University	
27	Mariano Marcos State University	
28	Mindanao State University - Iligan Institute of Technology	
29	Mindanao State University at Naawan	

30	Mines and Geosciences Bureau (MGB)
31	National Food Authority - Food Development Center
32	NUTRICOACH, INC.
33	OLERN, INC.
34	Pirfs Multimedia Distribution Services
35	Platform Technologies, Inc.
36	Polytechnic University of the Philippines
37	Saint Louis University
38	Silliman University
39	Technological Institute of the Philippines
40	Technological Institute of the Philippines - Quezon City
41	University of Antique
42	University of Cebu
43	University of Mindanao - Bolton
44	University of Perpetual Help System DALTA - Molino
45	University of San Carlos
46	University of Santo Tomas
47	University of Southeastern Philippines
48	University of the Cordilleras
49	UP Manila
50	UP Baguio
51	UP Cebu
52	UP Diliman
53	UP Los Baños
54	UP Mindanao
55	UP Visayas
56	Virtualahan, Inc.
57	W.V.J.A Foods Product Manufacturing
58	Water Resources Research Development and Extension Center
59	Wayvent Innovations, Inc.
60	West Visayas State University
61	Western Institute of Technology