

**Philippine Council for Industry, Energy and Emerging Technology Research and Development  
2015 List of New and On-going Projects with Beneficiaries**

	<b>Project Title</b>	<b>Status</b>	<b>Implementing Agency</b>	<b>Beneficiaries</b>
<b>KRA 3: Rapid, Inclusive and Sustainable Economic Growth</b>				
<b>Competitive Industries</b>				
<b><i>Electronics Industry</i></b>				
1	Establishment and Operation of Philippine Electronics Product Development Center	On-going	Advanced Science and Technology Institute (ASTI)	1. Electronics Companies, BPOs and other members of the supply chain 2. Academe and training Institutions 3. Engineers' and Technicians' Associations 4. Government Facilities and Services, Industrial Parks 5. Venture Capitalist, SMEs 6. OEMs, ODMs, Resellers
2	Establishment of the Advanced Device and Materials Testing Laboratory (ADMATEL)	On-going	Industrial Technology Development	Philippines' Semiconductor & Electronics Industry
3	Establishing the Philippine Institute of Integrated Circuits	On-going	Electrical and Electronics Engineering Institute, UP Diliman	1. Companies engaged in IC Design and Development activities 2. Venture Capital 3. PEZA Zones and industrial Parks 4. Universities and Institutes 5. Start-up companies 6. Government 7. Semiconductor Manufacturing
<b><i>Manufacturing</i></b>				
<b><i>National R&amp;D Program for Natural Rubber Processing and Rubber Products Manufacturing</i></b>				
4	Integration of Testing Services for Rubber and Rubber Products	On-going	Industrial Technology Development	Philippine Rubber Industries Association
5	Empirical Modeling of Rubber Compounds using Active Design of Experiment	New	College of Engineering, UP Diliman	Local rubber manufacturers
<b><i>Smart Textiles Biopolymers R&amp;D</i></b>				
6	Photocatalytic Multi-Functional Natural Fiber-blended Technical Textiles and Materials	On-going	Philippine Textile Research Institute (PTRI)	Textile and garment industry
7	Durable and Regenerable Biocidal Hydantoin-Grafted Polyester and Ligno cellulosic Fiber Containing Textiles	On-going	Philippine Textile Research Institute (PTRI)	Textile and garment industry

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8	Improving the Quality of Solid Cocoa Liquor Including Molded Cocoa Nibs and Developing the Capability of Small Scale Processors in the Manufacture of	Completed	Industrial Technology Development Institute (ITDI)	1. Cacao farms 2. Cacao Products Processors
<b><i>Mining and Minerals</i></b>				
9	Black Sand Mineral Characterization	New	National Institute of Geological Sciences, UP Diliman	1. LGUs whose locales have black sand mining 2. Scientists and Engineers 3. Private sector
<b><i>S&amp;T Program for Responsible Mining in Mindanao</i></b>				
10	Assessment of Aquatic Biodiversity in Selected Mining Environs in Mindanao	On-going	Caraga State University, University in Southern Mindanao	1. Philippine Government 2. Caraga Region 3. Researchers 4. LGUs 5. Local Community
11	Monitoring, Assessment and Profiling of Artisanal and Small-scale Mining (MAP-ASM) in Key Areas in Mindanao	On-going	Caraga State University, University in Southern Mindanao	1. Philippine Government 2. ASGM Community 3. Mining Industry 4. Researchers 5. LGUs 6. Local Community
12	Contamination Pathway and Pollution Management of Mining in Mindanao	On-going	Caraga State University, University in Southern Mindanao	1. Philippine Government 2. Mining Industry 3. Researchers 4. LGUs 5. Local Community
13	Rehabilitation of Areas Affected by Mining in Mindanao Towards Eco-restoration	On-going	Caraga State University, University in Southern	1. Local Community 2. Mining Industry 3. Agriculture sectors 4. Environmentalists
14	Alternative Technology for Processing of Chromite and Laterite Ores: Fe-Ni-Cr Alloy Production	On-going	Mindanao State University - Iligan Institute of Technology (MSU-IIT)	Mining and Minerals Industry (Nickel companies and others)
15	ICT Support to Responsible Mining in Mindanao	On-going	Caraga State University, University in Southern Mindanao	1. Philippine Government 2. Mining Industry 3. Researchers 4. LGUs 5. Local Community
16	Development of an Alternative Technologies for Small-Scale Gold Mining in CARAGA and	On-going	Mindanao State University - Iligan Institute of	Small - scale Mining Companies

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<b><i>Program for Rehabilitation and Restoration of Mined-Out Areas Through Phytotechnologies</i></b>				
17	Conservation of Native Metallophytes, Phytochemistry of Nickel Hyperaccumulators and Phytostabilization to Restore	On-going	College of Forestry and Natural Resources, UP	Mining industry
18	Metal Bio-Indicator Plant Species of the Philippines	On-going	De La Salle University (DLSU)	1. LGUs 2. Environmental managers 3. Mining industry 4. DENR 5. Community
19	Copper and Arsenic Recovery as a post mining activity using Indigenous Plant	On-going	Ateneo de Manila University (ADMU)	1. Caraga State University 2. Philex Mines in Surigao 3. Small - scale Miner in Surigao
20	Field-testing of the Integrated Gold-Copper Mineral Processing Plant in the Regions (Compostela Valley)	On-going	DOST Region XI	1. Small-scale Mining (SSM) Industry 2. SSM Mining Communities and associations 3. SSM operators in Compostela Valley and Academic Institutions
<b><i>Support to Industry Competitiveness</i></b>				
<b><i>Software Applications for Education</i></b>				
21	Development of a Filipino Language Writing Tool	New	De La Salle University (DLSU)	1. Teachers and students in Philippine schools 2. Linguists and Filipino language planners
22	Developing an Automated Reading Tutor for Elementary Students of Filipino	New	Electrical and Electronics Engineering Institute (EEEI),	Filipino students in the second or third level of elementary education
23	Developing Closed Captioning Systems for Philippine Languages	New	Electrical and Electronics Engineering Institute (EEEI),	1. Researchers (engineers, computer scientist, computational linguistics, etc.)
24	Human Hands as Input Device for an Immersive Virtual Reality Experience	New	Electrical and Electronics Engineering Institute (EEEI),	1. Developers of virtual reality (VR) applications 2. Games and entertainment industry
25	Development of Interactive Software and Teaching Guides for Grades 7-10 Mathematics	New	Ateneo de Manila University (ADMU)	Students and teachers in Public and Private Schools
26	Versatile Instrumentation System for Science and Research	New	National Institute of Physics, UP	Philippine secondary and tertiary schools

	<b>Project Title</b>	<b>Status</b>	<b>Implementing Agency</b>	<b>Beneficiaries</b>
	<i>Development of Nanobiosensors and Nanostructured Materials from Agricultural By-products for Enhancement of Food and Agricultural Productivity and for Environmental Sensing and Remediation</i>			
27	Project 1. Bench-scale production of Filters for the Removal of Arsenic from Contaminated water using Modified Biopolymer-Silica Nanocomposite Material	New	Institute of Chemistry, UP Los Baños	1. Filipino consumers 2. Farmers and their families 3. Businesses involved in water distribution 4. Leisure resorts (e.g. hot spring resorts, etc.)
28	Project 2. Bench-scale Production of Nanosensors for the Detection and Analysis of Arsenic in Contaminated Water	New	Institute of Chemistry, UP Los Baños	1. Filipino consumers 2. Farmers and their families 3. Businesses involved in water distribution 4. Leisure resorts (e.g. hot spring resorts, etc.)
29	Project 3. Bench-scale Production of Hand-held Nanosensors for Methane using Zinc Oxide Film	New	Institute of Mathematical Sciences and Physics, UP Los Baños	1. Researchers in the physical, biological, and agricultural sciences 2. Livestock and poultry farms 3. Aquaculture and crop farms 4. Fertilizer and pesticide manufacturers 5. Government agencies (DOH, DENR, DA, DOST) 6. Academe (universities and other academic units)
30	Project 4. Bench-scaling of the Production of Cellulosic Nanocrystals from Kawayang-tinik ( <i>Bambusa blumeana</i> ) and its Utilization for Renewable	New	College of Forestry and Natural Resources, UP Los Baños	1. Local residents 2. Agri-based enterprises engaged in fruit production 3. Construction industry 4. Semiconductor industry
31	Project 5. Production of Nanosilica from Rice Hulls and Rice Hull Ash and Bench scale Verification of the Production of Biodegradable Packaging using Cassava Starch-RHA Nanosilica	New	College of Engineering and Agro-industrial Technology, UP Los Baños	1. Food packaging industries 2. Plastic industries
32	Molecularly Imprinted Polymers (MIPs) for the Targeted Purification of Natural Compound	On-going	Ateneo de Manila University (ADMU)	1. Herbal medicine and Pharmaceutical industries 2. Farmers

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33	Bridging the Competency Gap Phase 2	On-going	Philippine Council for Industry, Energy and Emerging Technology Research and	1. Researchers 2. Academe
34	Space Science and Technology Applications Capacity Building and Infrastructure Planning	New	Regulus Space Tech	1. Philippine government 2. Universities 3. Private companies and agencies
<b><i>Institutionalization and Strengthening of Technology Business Incubation and Technology Transfer</i></b>				
35	Green Technology Business Incubation (GTBI) Facility in West Visayas State University	On-going	West Visayas University (WVSU)	Start - up entrepreneurs
36	Innovation Hub: UP Diliman	New	Electrical and Electronics Engineering Institute, UP Diliman	1. Research and Development institutions 2. Academe 3. Startups 4. SMEs 5. Government and non-government organizations
37	Bringing DOST R&D Technologies to the Market	New	UP Enterprise for Technopreneurship	1. R&D proponents 2. Investors 3. Industry partners/Private sector
38	Boosting Delivery of ITDI-DOST Training Services through Development and use of e-learning Packets	New	Regional Cooperation and Training Section Industrial Technology Development	Small and Medium Enterprises
39	Screening, Categorizing and Initial Market Validation of PCIEERD Technologies	New	Hybridigm Consulting Inc.	Industries
40	Information Dissemination and Promotion of Technologies	On-going	Philippine Council for Industry, Energy and Emerging Technology Research and	1. Researchers 2. Academe 3. General Public
41	PCIEERD Human Resources Development Program	On-going	Philippine Council for Industry, Energy and Emerging Technology Research and	1. Researchers 2. Academe

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42	Policy Development, Planning and Advocacy	On-going	Philippine Council for Industry, Energy and Emerging Technology Research and	1. Researchers 2. Academe
43	S&T International Cooperation Program	On-going	Philippine Council for Industry, Energy and Emerging Technology Research and	1. Researchers 2. Academe
44	Support to Regional S&T Consortia	On-going	Regional Consortia	1. Researchers 2. Academe
<b><i>Food Industry</i></b>				
<b><i>Microbial colorants and Bioflavorants</i></b>				
45	Production, Characterization and Application of Red Pigment Produced by <i>Monascus Purpureus</i> M1018	On-going	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP	1. Food, cosmetic and pharmaceutical industries 2. Textile
46	ISO/IEC 17043:2010 Accreditation	On-going	Food and Nutrition Research Institute (FNRI)	1. DOST Regional Standards and Testing Laboratories (RSTL) and Research and Development Institutes (RDIs) 2. Small and Medium Enterprises (SMEs)
<b><i>Development of Plasma Technologies for Non-Thermal Sterilization of Food Products,, Packaging and Contact Surfaces,, and Enhancement of Food Packaging Properties</i></b>				
47	Project 1. Development of Plasma Technology for the Sterilization of Food Products, Packaging, and Contract	On-going	College of Human Economics, UP Diliman	1. Food processing industry 2. R&D 3. Testing laboratories
48	Setting-up of One-Stop-Shop Laboratory Services for Global Competitiveness (ONELAB) - HALAL Laboratory	New	DSOT Regional Offices IV-A and XI	Industries
49	Dev't. of Competence of the DOST Food Innovation Center	New	Industrial Technology Development	Food Innovation Centers (FIC)

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	<b>Sustainable Energy</b>			
50	Synthesis of Metal Nanowires and Their Application in Foldable Transparent Conducting Electrode	On-going	Department of Metallurgical and Material Engineering, UP	1. Local semiconductor and electronics industries 2. Local energy & mining industries 3. Academe and Researchers
51	Synthesis of Flexible Nanohybrid Supercapacitor based on Conducting Polymers and Metal Oxides	On-going	Institute of Chemistry, UP Diliman	1. Energy storage devices manufacturers 2. Portable devices users 3. Transportation market
52	Development of Ink Using Carbon from Straight Pyrolysis of Glycerol as Electrodes in Printed Electronics	On-going	School of Science and Engineering, Ateneo de Manila University	1. Electronics and Energy Sector 2. Health and Agriculture (for bioelectronics sensing) 3. Biodiesel Industry
53	Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion Processes	On-going	Chemical Engineering Department, De	1. Researchers 2. Academe
54	Development of a Low-Energy Ion Source System for the Synthesis of Diamond-like Carbon Films	On-going	Department of Metallurgical and Material Engineering, UP Diliman	1. Agricultural sector 2. Woodworking 3. Metalworking 4. Machining 5. Manufacturing 6. Automotive
55	Fabrication of a Solid-State Rechargeable Li-ion Battery using $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$ as solid electrolyte for Energy Storage Applications	On-going	Department of Metallurgical and Material Engineering, UP	1. Academe 2. Industries
56	Nanostructured Electrocatalyst Composites for Direct Ethanol Fuel Cell: Preparation, Characterization and Performance Evaluation	On-going	Research Center for the Natural and Applied Sciences, University of	Electronics Industries
57	Fabrication of Supercapacitors Using Indigenous Textiles as Electrode Materials	New	Research Center for the Natural and Applied Sciences, University of	1. Energy sector 2. Consumer electronics field, especially emergency defibrillators 3. Agricultural and transportation
58	Showcasing of Eco Business Model in Government Offices through Retrofitting of Energy	New	Technological University of the Philippines (TUP)	1. Department of Science and Technology (DOST) 2. Government Offices

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	<b><i>Smartwire Program</i></b>			
59	Energy Efficient Data Acquisition and Conditioning for the Smartwire Sensor Node Project	On-going	Electrical and Electronics Engineering Institute, UP	1. Energy Sector 2. Semiconductor Industry 3. Academe
60	Integrated Energy Harvesting Storage and Regulation of the Smartwire Sensor Node	On-going	Electrical and Electronics Engineering Institute, UP	1. Energy Sector 2. Semiconductor Industry 3. Academe
61	Energy Ultra - low Power Computation and Communication for the Smartwire Sensor Node	On-going	Electrical and Electronics Engineering Institute, UP	1. Energy Sector 2. Semiconductor Industry 3. Academe
	<b><i>BAYANIHANETS: Building Robust and Sustainable Cooperative Community Networks</i></b>			
62	Development of a Multipath Transport Protocol	New	Electrical and Electronics Engineering Institute College of Engineering, UP Diliman	Internet users
63	Application Framework for Robust Communications transport over Community	New	Networking and Distributed Systems Group,	1. Software developers 2. Communities needing a community
64	Development of Routing Metrics for High Throughput and Congestion Free Routing over Wireless Community Mesh Networks	New	Department of Information Technology, College of Engineering, Central Luzon	1. Communities, individuals, and groups needing community wireless mesh networks 2. Engineers and Application Developers
	<b><i>Engineering Design, Modeling, Assessment Tools and Development of Renewable Energy System</i></b>			
65	Tidal Current Energy Integrated Resource Assessment and Spatial Planning Tool	On-going	Department of Geodetic Engineering, UP Diliman	1. Department of Energy 2. Financial Institutions 3. Local Government Units 4. People of the Philippines, Energy Sector (Government and Private)
66	Biojet Fuel Production from Coconut Oil	On-going	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP	1. Policy makers 2. Government institutions 3. Law makers 4. Aviation industry



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<b><i>Smart Grid Technology for Filipino Households</i></b>				
67	Design and Development of a Smart Home Platform	On-going	Electrical and Electronics Engineering Institute, UP	1. Electricity consumers 2. Electric utilities 3. Society 4. Policy maker and developer
68	Design and Development of an Advanced Metering Infrastructure (AMI) Emulator Platform	On-going	Electrical and Electronics Engineering Institute, UP	1. Electricity consumers 2. Electric utilities 3. Society 4. Policy Makers and Regulator
69	Prepaid Metering and Smart Home System : Technology Acceptance and Technology Feature Studies	On-going	Electrical and Electronics Engineering Institute, UP Diliman	1. Electricity consumers 2. Distribution utilities 3. Transmission and generation utilities 4. Society 5. Policy Makers and Regulator 6. Technology Developers and Providers
<b>Sustainable Mass Transport</b>				
<b><i>Intelligent Transport System (ITS) Program</i></b>				
70	An Integrated and Optimal Scheduling of a Public Transport System in Metro Manila (PUBFix)	On-going	De La Salle University (DLSU)	1. Department of Transportation and Communications (DOTC) 2. Metro Manila Development Authority (MMDA) 3. Passengers 4. PUV Operators
71	Development of a Customized Local Traffic Simulator	On-going	National Center for Transportation Studies, UP Diliman	1. Department of Transportation and Communications (DOTC) 2. Metro Manila Development Authority (MMDA) 3. Edsa Passengers 4. PUV Operators
72	Contactless Apprehension of Traffic Violators on 24-Hour Basis and All-Vehicle Detection System (CATCH-ALL)	New	De La Salle University (DLSU)	1. Vehicle owners 2. Riding Public 3. Community home owners 4. Business sectors 5. Government policy makers 6. Traffic enforcers
73	Simulation and Evaluation of an AGT System Passenger Stations - Phase 2	On-going	Metals Industry Research and Development Center (MIRDC)	AGT UP-Diliman

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74	Test and Evaluation of 120-Passenger per Coach Capacity Automated Guide-way Transit System - Phase 2	On-going	Metals Industry Research and Development Center (MIRDC)	Transportation Sector
75	Performance Testing of Five-Coach Centrally Powered Hybrid Electric Road Trains for Local Applications - Phase 2	On-going	Metals Industry Research and Development Center (MIRDC)	1. Bay City, Pasay 2. BRT Cebu
<b>KRA 5: Integrity of the Environment and Climate Change Adaptation and Mitigation</b>				
<b>Environment, Climate Change Adaptation and Disaster Risk Reduction</b>				
76	Microbial Production of Xylitol from the Hydrolysis Products of Selected Agricultural Wastes	New	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP	1. Confectionery, Food and Pharmaceutical industries 2. Corn farmers
77	Large Scale Production of Laccase from Trametes sp. for Food and Beverage Applications	New	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP	1. Textile Industries 2. Pulp and paper industries 3. Environmental cleanser producers
78	Development of Sustainable Integrated Biological Wastewater Treatment Systems for the Food	On-going	Industrial Technology Development	Quick Service Restaurants
79	Deployment and Field Testing of Eco-Friendly Septic System	Completed	Mapua Institute of Technology (MIT)	1. Department of Environment and Natural Resources (DENR) 2. Department of Tourism (DOT) 3. Local Government Unit of Malay 4. Provincial Government of Aklan 5. Tourism Infrastructure and Economic Zone Authority
80	Design, Fabrication and Evaluation of Monitoring and Sampling Devices for Particulate	On-going	Institute of Chemistry, UP Diliman	Department of Environment and Natural Resources (DENR)
81	Radiation-induced grafting of nonwoven fabrics for waste water treatment to meet Class C effluent	New	Philippine Nuclear Research Institute (PNRI)	Industries with heavy metals in the wastewater
82	Design and Development of Aerial Mapping and Imaging Systems and Standards	On-going	Ateneo Innovation Center	1. Agricultural Industry (Farmers) 2. Focused Local Research by Academic Institutions 3. Government Implementation Agencies 4. Local Government Units

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83	Project e-Bayanihan: A Nationwide Web – Mobile Based System for Participatory Disaster	On-going	Ateneo de Manila University (ADMU)	Nationwide
84	Development of Temporary Shelter System for Disaster Stricken Areas	On-going	UP Building Research Service	<ol style="list-style-type: none"> <li>1. End users during disaster</li> <li>2. Government Agencies/DRRM authorities</li> <li>3. Local manufacturers for shelter system</li> <li>4. TOR for architects, engineers and experts</li> </ol>
85	Marine Weather Forecasting using High Frequency Doppler Radar	New	Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA)	<ol style="list-style-type: none"> <li>1. Line agencies</li> <li>2. Resource manager</li> <li>3. Industry</li> <li>4. Policy makers</li> <li>5. Educators</li> <li>6. Scientists</li> <li>7. General public</li> </ol>
86	Regional Disaster Science and Management S&T Capacity Development (Phase II)	New	Isabela State University	<ol style="list-style-type: none"> <li>1. Local Government Units</li> <li>2. Regional and Local Disaster Risk Management Council</li> <li>3. State Universities and Colleges</li> <li>4. Vulnerable communities</li> </ol>
87	Flood Sensor, Development, installation and monitoring of Urban Flooding in Metro Manila	On-going	Advanced Science and Technology Institute (ASTI)	<ol style="list-style-type: none"> <li>1. General commuting public</li> <li>2. Hydrometeorologists, climatologists and other researchers</li> <li>3. Other concerned government agencies</li> <li>4. Private industry &amp; Local Government Units</li> <li>5. Residents and business entities situated near flood prone streets</li> </ol>