

Department of Science and Technology
METALS INDUSTRY RESEARCH AND DEVELOPMENT CENTER
Major Projects, Programs and Activities, Beneficiaries, and Status of Implementation for FY2018
as of July 31, 2018

	Project Title	Project Duration	Project Type (as source of fund)	Project Objectives	Beneficiaries	Implementing Division	Total Budget	Status as of July 31, 2018
ADVANCED TRANSPORT SYSTEM PROGRAM (HYBRID ELECTRIC TRAIN)								
1	Performance Testing and Evaluation of Prototype Trainset (Year II)	Jan. 1, 2018 to Dec.31, 2018	DGIA	The project aims to test and evaluate the developed prototype train set prior to commercialization	Philippine National Railways (PNR), Transport Sector, Commuting Public	Materials and Processes Research Division	20,000,000.00	-Initial testing of Hybrid ElectricTrain (HET) was conducted at PNR Mamatid Station -Coordination of activities with PNR
2	Development of Semi-Permanent Coupler for Hybrid Electric Train	April 1, 2018 to December 31, 2018	GAA-Internal	1. To fabricate and test the prototype coupler 2. To come up with final design (fabrication drawings, manuals, etc.) of train coupler	Philippine National Railways (PNR), Transport Sector, Commuting Public	Materials and Processes Research Division	100,000.00	Machined parts and components
3	Development of Anti Climbing Mechanism for Hybrid Electric Train	April 1, 2018 to December 31, 2018	GAA-Internal	1. To fabricate and conduct actual tests to the anti-climbing mechanism 2. Analyze and optimize to come up with the final design (fabrication, drawing, manuals, etc.)	Philippine National Railways (PNR), Transport Sector, Commuting Public	Materials and Processes Research Division	100,000.00	Simulation testing
ADVANCED TRANSPORT SYSTEM PROGRAM (HYBRID ELECTRIC ROAD TRAIN)								
4	Modification of Road Train Energy Storage System Using Lithium Ion Batteries	March 1, 2017 to October 31, 2017 Extension 1: Nov.1- Dec. 31, 2017 Extension 2: Jan. 1 to March 31, 2018	GIA	This project aims to modify the energy storage system of the Road Train to improve its acceleration, safety, energy recovery and power sharing capabilities, and mobility.	Metals and Engineering Industry, Transport Sector, Commuting Public	Analysis and Testing Division	4,678,300.00	For finalization of project terminal report. Target date of oral presentation to Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) is on 20 Aug 2018.

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5	Testing for Standardization and Optimization of Five-Coach Hybrid Road Train - Phase 3	Jan. 1 to June 30, 2018 Extension 1: July 1 - August 30, 2018	GAA-Internal	To promote, optimize the design, and field test the Hybrid Electric Road Train in preparation to the design and development of a pilot commercial model for use as local mass transport alternative.	Metals and Engineering Industry, Transport Sector, Commuting Public	Analysis and Testing Division	2018 expenditures charged to GAA fund	- Completed final testing on tire edurance testing of Light Centrally-Powered Hybrid Electric Road Train (LCRT). - Terminal report for finalization. Target date of oral presentation to PCIEERD is on 20 Aug 2018.
ADVANCED TRANSPORT SYSTEM PROGRAM (AUTOMATED GUIDEWAY TRANSIT SYSTEM)								
6	System Expansion of 120-Passenger per Coach Capacity Automated Guideway Transit (AGT) System	Jan 1 2017 to April 30, 2018 Extension 1: May 2018 to July 2018	GAA-Internal	The project generally aims to perform prototype improvements and come up with design of other components of the AGT system in Bicutan in preparation for technology certification.	Metals and Engineering Industry, Transport Sector, Commuting Public	Materials and Processes Research Division	2018 GAA budget: 2,410,722 (1,400,000 + 1,010,722 add. funding)	- Completed functional tests for the electrical auxiliaries, door clusters and speed settings - Completed stationary test for the air compressor, traction motors, synchronization of the rotation of differential motors for both AGT coaches. -Ongoing terminal report writing
7	AGT-UP End of Project	June 1,2018 to December 31,2018	GIA	1. To implement the AGT end of project activity in UP Diliman, that is, to dismantle the AGT test track, stations, and all other related structures 2. Inform the public that the dismantling is the last step of the Research and Development by engaging in public information campaign through various media platforms	Metals and Engineering Industry, Transport Sector, Public	Materials and Processes Research Division	15,770,000.00	- Completed draft of the following Terms of Reference 1. Hiring a communication consultant 2. Supply of labor, materials and equipment for the deconstruction of AGT test track, stations and all other structures - The preparation of a Crisis Communication Plan is 10% completed.
MACHINE BUILDING PROGRAM								
8	Design and Development of 1 KW Pico Hydro Turbine	May 01, 2015 to July 1, 2018 Extension: July 1 - October 31, 2018	GAA-Internal	To design and develop a 1KW pico hydro turbine	Metals and Engineering Industry	Prototyping Division	100,000.00	Fabrication ongoing (Test Rig)
9	Design and Development of Hand Tractor with Gear Transmission	Feb. 1, 2018 to Jan. 1, 2019	GAA-Internal	To design and develop a hand tractor with gear transmission	Agricultural Sector, Metals and Engineering Industry	Prototyping Division	1,200,000.00	Updating design and gear stimulation
10	Development of a Sugar Cane Juicer for Community based Organic Muscovado Production	July 2017-June 2018 Extension 1: July 1, 2018-August 15, 2018	Contract Research	To develop Sugarcane Juicer for Community-Based Organic Muscovado Production.	Agricultural Sector, Metals and Engineering Industry	Prototyping Division	115,566.00	Awaiting sugarcane from RU for testing.

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11	Design Improvement of Gear Transmission System for Riding-Type Rice Transplanter (Design Improvement of a Rice Transplanter Transmission System)	June 2018 - June 2019	Contract Research	1. Design an improved gear transmission system for rice transplanter using KISSsoft gear software 2. Fabricate the gear transmission system for rice transplanter 3. Test and evaluate the functionality of the gear transmission system	Agricultural Sector, Metals and Engineering Industry	Prototyping Division	648,830.00	-Literature review -Concept design and modelling
12	Pre-Commercialization Service of Rice Transplanter Attached (RTA) and Rice Harvester Attached (RHA) for Hand Tractor (Y2)	June 1, 2017 to Nov 30, 2018	GIA	To support the commercialization of the RHA and RTA technologies through the conduct of pre-commercialization activities.	Metals and Engineering Industry	Prototyping Division	1,995,116.60	Bidding activities for the consultancy regarding feasibility study and business plan
13	Development of Ceramic Equipment	July 1, 2017 – December 31, 2018	GIA	To develop 12-units of Electric Potter's Wheel and 5-units of Jigger and Jolly Machines	Metals and Engineering Industry	Prototyping Division	1,858,000.00	Drafting utility model registration
14	Development of Automatic Trash Rake for Malabon	Feb. 1, 2018 to Aug. 1, 2019	GIA	To develop and install automatic trash rake facility for Malabon	Metals and Engineering Industry	Prototyping Division	9,000,000.00	-Awaiting the result of the soil test analysis -Structural design and costing for finalization
15	Improvement of Gong Fabrication Processes through S&T Intervention	Feb. 1, 2018 to Jan. 1, 2019	GIA	To improve gong fabrication processes through S&T intervention	Metals and Engineering Industry	Prototyping Division	3,587,228.80	-Design and fabrication of tooling, jigs and fixtures -Trial production of gong -Optimization of production process including standardization of dimension and intonation of gong
MATERIALS AND MINERALS PROCESSING PROGRAM								
16	Investigation of Effects of Chemistry and Casting Parameters in the Performance of Austenitic Manganese Steels	April 1, 2018 to March 31, 2019	GAA-Internal	1. To investigate the effects of carbon and manganese to the hardness and/or hardenability of austenitic of austenitic manganese steel 2. To investigate the effects of grain refiners to the hardness and/or hardenability of austenitic of austenitic manganese steel 3. To investigate the effects of casting temperatures to the hardness and/or hardenability of austenitic of austenitic manganese steel	Metals and Engineering Industry	Materials and Processes Research Division	500,000.00	- Awaiting melting / casting of test coupons (this activity was put on hold because the furnace is currently non operational). - Continuing purchase of production supplies.

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17	Development of Environment-Friendly Anodizing Process (Chrome-free) by Using Boric-Sulfuric Acid Solution	April 1, 2018 to December 31, 2018	GAA-Internal	To develop environment-friendly anodizing process (chrome-free) by using boric-sulfuric acid solution	Metals and Engineering Industry	Materials and Processes Research Division	200,000.00	- Delivery of chemicals and materials is still on-going. - Preparation of laboratory area and chemicals to be used has started
18	Design and Optimization of Austenitic Manganese Steel Liners for Philippine Aggregates and Mineral Processing	June 1, 2016 to May 31, 2018	GIA	Design and optimize performance and value of austenitic manganese steel crusher liners; Demonstrate the capability through actual testing and evaluation of the developed liners; Promote the capability to beneficiary industries such as the aggregate, mining and metal casting industry.	Metals and Engineering Industry	Materials and Processes Research Division	3,587,228.80	Terminal report for submission
19	Technical and Economic Feasibility Study to Determine the Most Suitable Ironmaking Technology for the Value Adding of Philippine Magnetite Resources (PCIEERD-funded)	Jan. 1, 2017 to Jun. 30, 2018 Extension 1 July 1, 2018 to Sept. 30, 2018	GIA	To provide technological solutions to obtain maximum benefit from the value adding of iron resources in the Philippines particularly for the integration of the iron and steel industry.	Metals and Engineering Industry	Materials and Processes Research Division	4,750,000.00	- Walk through presentation re: technical study and financial study by DASTUR last July 2, 2018 - On the last week of July, a pre-feasibility study on "The Setting Up of a Philippine Iron Making Facility" was submitted by DASTUR.
20	Technical and Economic Feasibility Study to Determine the Most Suitable Ironmaking Technology for the Value Adding of Philippine Magnetite Resources (Board of Investment-funded)				Metals and Engineering Industry	Materials and Processes Research Division	4,750,000.00	

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CAPABILITY BUILDING / OTHERS								
21	Establishment and Strengthening of Information and Communication Technology (ICT) Infrastructure (ICT INFRA) and Business Online Solution System (BOSS) of the Center in Support to the Productivity and Competitiveness of the M&E Industries	Jan. 1, 2018 to Dec. 31, 2018	DGIA	The project aims to address concerns related to ICT infrastructure and information systems requirements of the Center.	Metals and Engineering Industry	Planning and Management Division	4,440,000 (2018 Budget)	<ul style="list-style-type: none"> - Completed technical requirements (airconditioning units). Submitted job acceptance for processing of payment. - Submitted purchase request for repair of fiber optic cable. PR was approved by the management, awaiting for the purchase order P.O. - Conducted Seminar/training on DPA and information Security Awareness on July 5-6, 2018 at the Platinum Auditorium thru KPMG. Submitted job acceptance for both training and catering services - Trial version of network monitoring tool was installed on July 3, 2018. License key was received on July 10, 2018. For full implementation starting August 2018. - Provided virtual private network connection for E2E completed on July 12, 2018. - Presentation of updates by E2E on July 16, 2018. Attended by select PMD and FAD staff. E2E submitted progress report on July 20, 2018. Submitted 44 FAD reports to E2E and job acceptance for partial payment (30%). - Presentation of PMIS systems updates on July 27 2018. Presented dashboard feature - Ongoing development of OneShop, additional module for heat treatment and dashboard feature - Look for possible training providers.
22	Tensile Strength Characterization of Quenched and Self-Tempered (QT/TMT) Reinforcing Coupled and Welded Steel Bars	May 01, 2018 to July 31, 2018	GAA-Internal	The general objective of the project is to determine the tensile characteristics of selected locally available weldable coupled reinforcing steel bars.	Metals and Engineering Industry	Analysis and Testing Division	386,940.00	<ul style="list-style-type: none"> Test Sample Preparation - Cutting and Labelling of samples - Machining (threading) - Sample Preparation (for metallography) - Sample Preparation (for Chem analysis) - Preparation of UTM <p>Welding of samples</p>

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23	Supporting Philippine Companies in the Preparation and Implementation of an Aerospace Quality Management System (AQMS) aligned with AS9100 Requirements	November 1, 2016 to October 31, 2017 Proposed Extension: August 2018- March 2019	GIA	The project aims to enhance the competitiveness of the Philippine aerospace sector by supporting selected companies in the preparation and implementation of an aerospace quality management system (AQMS) leading to AS9100 certification.	Aerospace Industry, Metals and Engineering Industry	Planning and Management Division, Technology Diffusion Division	8,400,000.00	-Resubmitted letter of request for project extension to DTI-BOI last July 12, 2018 -Trainings 80% Completed 4 of 5 trainings identified -Consultancy 10% Conducted bidding for 150 consulting man days (for awarding) -Study Visit (Foreign) 100% Aeromart Nagoya (AMFudolig) -Study Visit (Local) Visited five (5) local AS9100 Certified companies and six (6) beneficiary companies
24	Capability Building for Enhancing the Competitiveness of Tool and Die Industry through the Engagement of Local and Foreign Expert (DiMo GURU)	January - June 2018 Extension 1: July 2018- October 2018	GIA	To enhance the competitiveness of the local tool and die sector through the engagement of foreign and local experts to provide technical assistance in specialized techniques, best processes and procedures relevant to tool, die and mold making.	Metals and Engineering Industry	Prototyping Division	2,000,000.00	-Prepared documents for the upcoming trainings: 1. Advanced 3-Axis and 5-Axis CNC Milling 2. Advanced Die Designing 3. Advanced Mold Designing - Started the conduct of a 10-day advanced 3-Axis CNC Milling on July 30, 2018 with a Malaysian die and mold expert as resource person
25	Enhancing ONELAB for Global Competitiveness - (OneLAB V2- Phase 2)	Feb. 1, 2018 to Jan. 1, 2019	GIA	Enable the network of laboratories (OneLab) to provide global access to comprehensive testing and calibration services at a single touch point	Metals and Engineering Industry	Analysis and Testing Division	2,502,433.60	- Implemented the new services of the Auto-parts tesing laboratory e.g tire endurance test, seatbelt and vibration. - Physical targets e.g. no. of services, samples tested, no. of customer served, were also attained. - Promoted One-Lab services during the NSTW
26	Strengthening of the DOST Regional Metrology Laboratory Services – Phase 2	March 15, 2018 to March 19, 2019	GIA	1. To enhance the calibration capability of MIRDC Instrumentation and Metrology Laboratory on Dimensional and Physical Metrology calibration 2. To conduct awareness and advocacy seminars, and trainings 3. To harmonize five (5) calibration procedures with RMLs 4. To maintain the scope of ISO 17025 accreditation 5. To sustain the delivery of accurate and reliable services	Metals and Engineering Industry	Analysis and Testing Division	4,404,528.00	- Conducted 4 advocacy seminars for Dimensional Metrology and Calibration of Basic Measuring Instruments (Batch 1, Batch 2), Calibration of Balances and Pressure Gauges, and Calibration of Hygrometer and Thermometry last June 19, 2018 with a total of 175 participants. - Notarized documents submitted for the importation of the standards. - Bidding scheduled on Aug 9, 2018 for the deadweight pressure tester

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LOCALLY FUNDED PROJECTS								
27	Upgrading of MIRDC Laboratory and Admin Building	Jan. 2018 - December 2018	GAA-LFP	1. To complete retrofitting, rehabilitation and renovation/upgrading of offices, laboratories, conference rooms, auditoriums and comfort rooms, including lobby, hallways and landing areas of the ATD Building; 2. To construct and install elevator unit; rehabilitate low voltage switch gear (LVSG), including provisions for electrical and mechanical works. 3. To extend the useful life of the ATD Building and ensure long-term safety, reliability and strengthen its seismic resistance required for modern buildings.	Metals Industry Research and Development Center	FAD	12,000,000.00 (2018 Budget)	-Retrofitting Phase III -25% accomplishment of surface finishing and carbon fiber application. -Renovation Phase III -Conducted post qualification on July 21, 2018. -On-going processing of documents for awarding of contract .
28	Repair of Perimeter Fence of the Center	Jan. to December 2018	GAA-LFP	1. To repair and upgrade the existing perimeter fence with deteriorated steel fences and collapsing concrete walls in view of wear and tear. 2. To construct electrical components for lamp posts for night visibility, painting for prevention of rust of steel wire mesh and painting and plastering of concrete walls to prevent deterioration caused by changing weather conditions. 3. To repair and do re-asphalting of the Center's roads.	Metals Industry Research and Development Center	FAD	5,000,000.00 (2018 Budget)	-1st negotiated bid opening on July 3, 2018 (failed) 2nd negotiated bid opening on Aug. 7, 2018



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29	Rehabilitation of the Mechanical Workshop II (MWS II) Building	Jan. 2018 to Dec. 2018	GAA-LFP	To renovate and improve the Mechanical Workshop (MWS II) Building.	Metals Industry Research and Development Center	FAD	16,000,000.00 (2018 Budget)	- Some activities indicated in the gantt chart were delayed due to lack of manpower, unstable weather condition and lack of planning procedure -The following are the actual accomplishments as of July 31, 2018: • Clearing and grubbing • Speaker layout and ceiling chipping • Ceiling speaker installation/ auxiliary works • LAN Cable Installation • Installation of TF wire for Auxiliary System • Excavation works of foundation /construction of switchgear room and transformer room • Construction of roofing and trusses of the LVSG/Transformer room • Fabrication of PVC pipes used in electrical works • Excavation and layout for grounding • Installation/ Cad welding of bare copper conductor • Installation of wire for lightning arrester • Construction of elevator shaft • Painting works
30	Construction of New Cistern Tank and Upgrading of Center's Water Supply	Jan. 1, 2017 to Dec. 31, 2018	GAA-LFP	1. To construct a new cistern tank that will serve as an additional reservoir to meet the increasing water demand of the Center. 2. To install rain catchment tanks as additional source of water supply. 3.To install fire hydrants in each building in compliance with BFP requirements.	Metals Industry Research and Development Center	FAD	8,000,000.00 (2018 Budget)	-40% accomplishment for steelworks of 75cu.m. cistern tank and rain water tanks
NATIONAL SCIENCE AND TECHNOLOGY WEEK (NSTW) 2018 PROJECTS								
31	MIRDC Participation to the Celebration of the 2018 National Science and Technology Week (TAPI Funds)	June 1, 2018 to December 31, 2018	GIA	To participate in the celebration of Regional Science and Technology Week (RSTW)	Metals and Engineering Industry	Technology Diffusion Division	200,000.00	Awaiting for instruction from regional offices regarding the technologies to be featured on their RSTW

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32	MIRDC Participation to the Celebration of the 2018 National Science and Technology Week (DOST Funds)	July 1, 2018 to December 31, 2018	GIA	To participate in the celebration of the 2018 National Science and Technology Week (NSTW) and Regional Science and Technology Week (RSTW)	Metals and Engineering Industry	Technology Diffusion Division	917,800.00	Participated in RSTW exhibit on July 6-9, 2018 (Davao City) and NSTW exhibit on July 17-21, 2018 (World Trade Center in Pasay City)
33	Implementation of Committee on Physical and ICT Logistics Activities for the CY 2018 NSTW	June 1, 2018 to December 31, 2018	GIA	In-charge of the physical and ICT logistics activities for the CY 2018 NSTW	Metals and Engineering Industry	Technology Diffusion Division	1,619,500.00	In-charge of the physical and ICT logistics activities for the CY 2018 NSTW


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