

PCIEERD R&D Priority Thrusts

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22 February 2018



DEPARTMENT OF SCIENCE AND TECHNOLOGY
PHILIPPINE COUNCIL
FOR INDUSTRY, ENERGY,
AND EMERGING TECHNOLOGY
RESEARCH AND DEVELOPMENT
(DOST-PCIEERD)

INNOVATION COUNCIL
FOR INDUSTRY, ENERGY AND EMERGING TECHNOLOGIES (DOST-PCIEERD)

Mandate and Function

VISION

The PCIEERD envisions to be recognized for the quality of its people, leadership and performance and contribute to the nation's productivity and competitiveness.

MISSION

To lead and partner with public and private institutions in generating S&T policies, strategies and technologies that will contribute significantly to national development.



Formulate policies and provide R&D directions, plans, programs and strategies for S&T – based delineated sectors



Coordinates, evaluates and monitors R&D programs, projects and activities



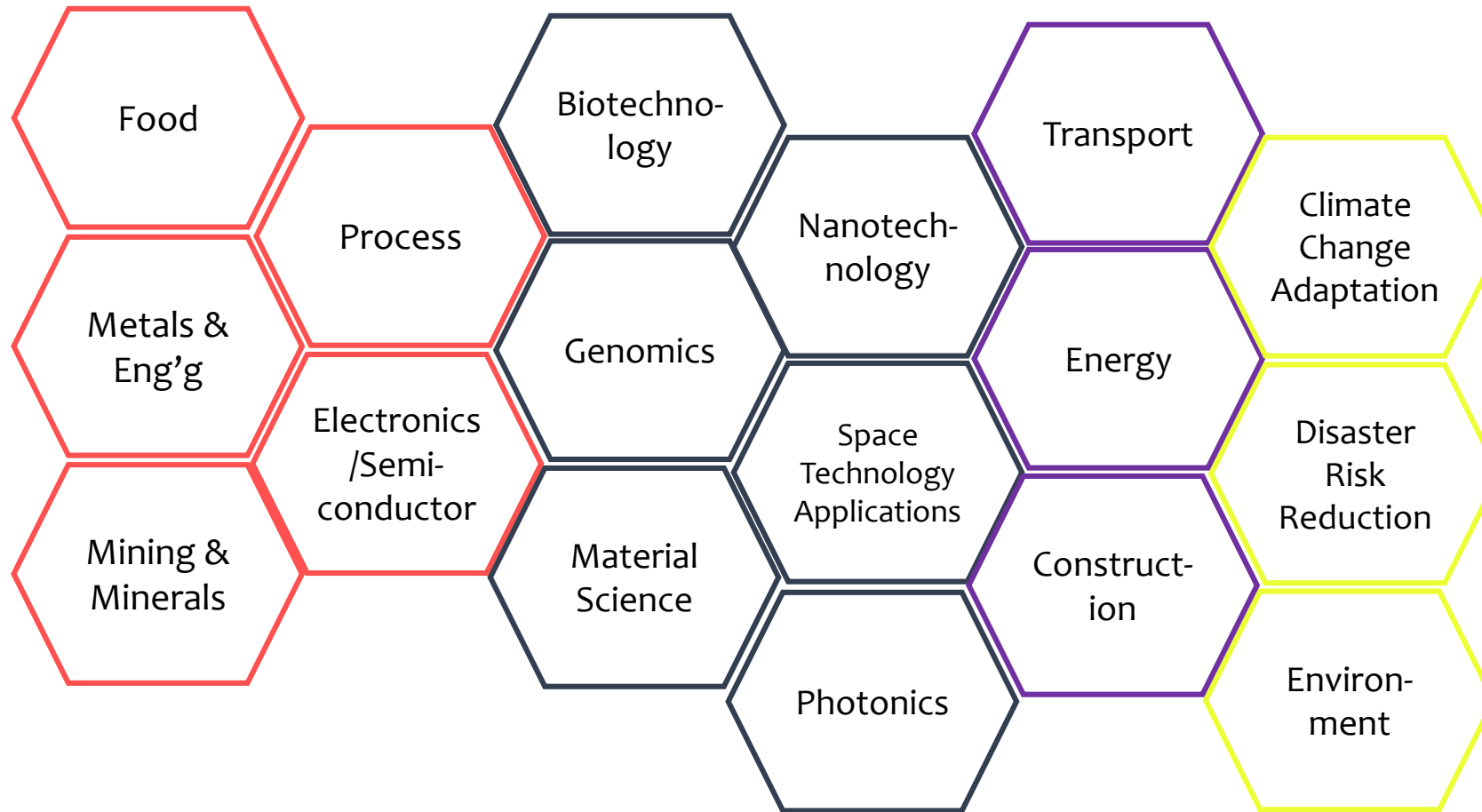
Programs and allocates government and external funds for R&D and generates external resources to support its programs



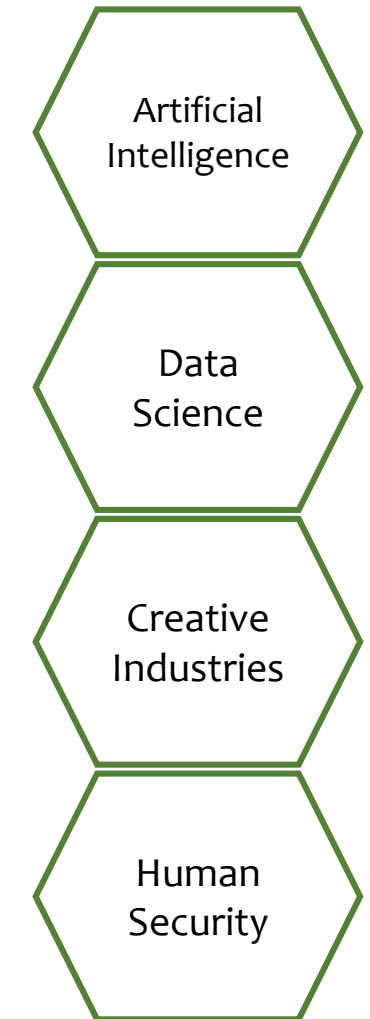
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Sectoral Coverage

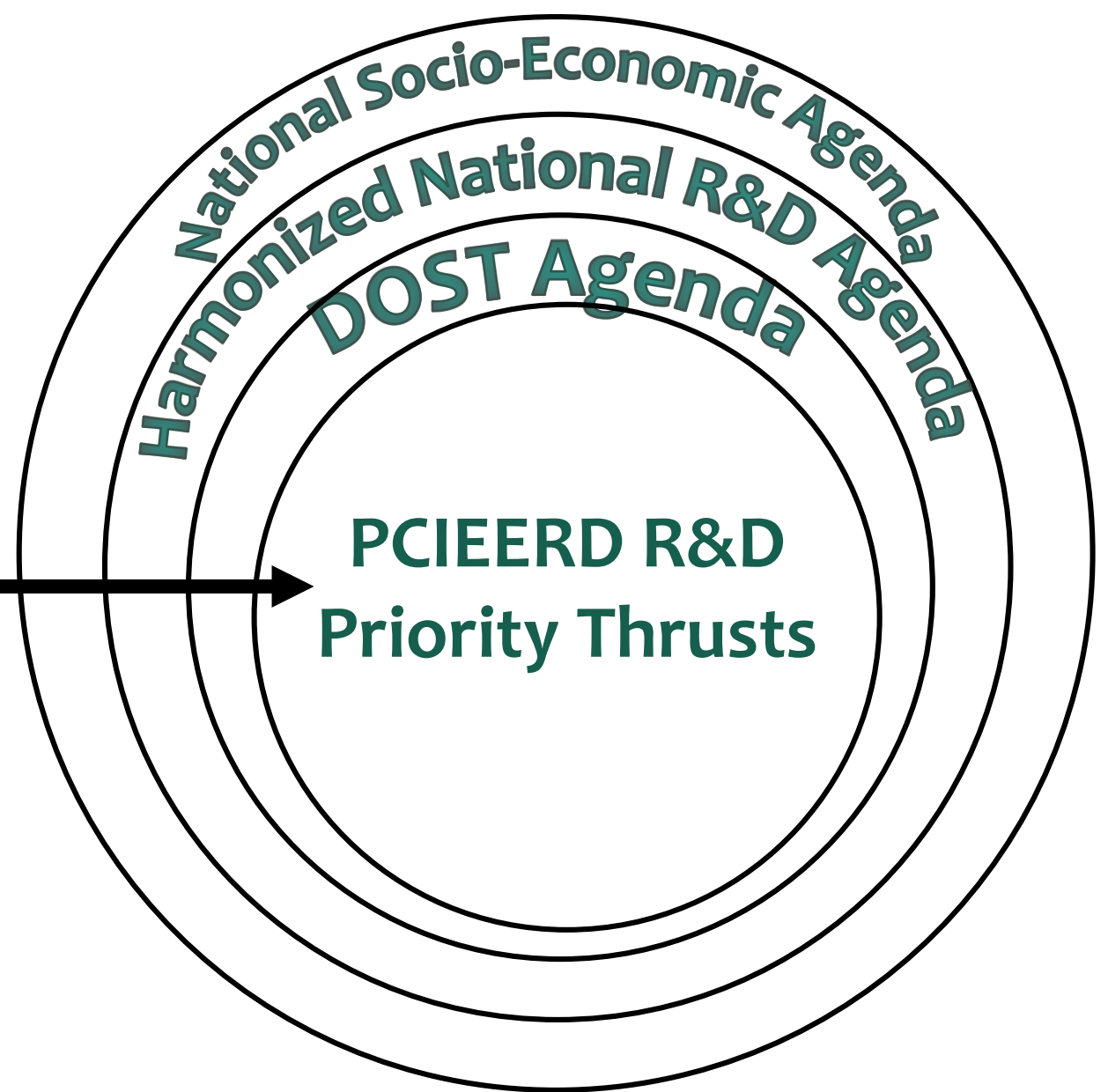


New Priority Areas



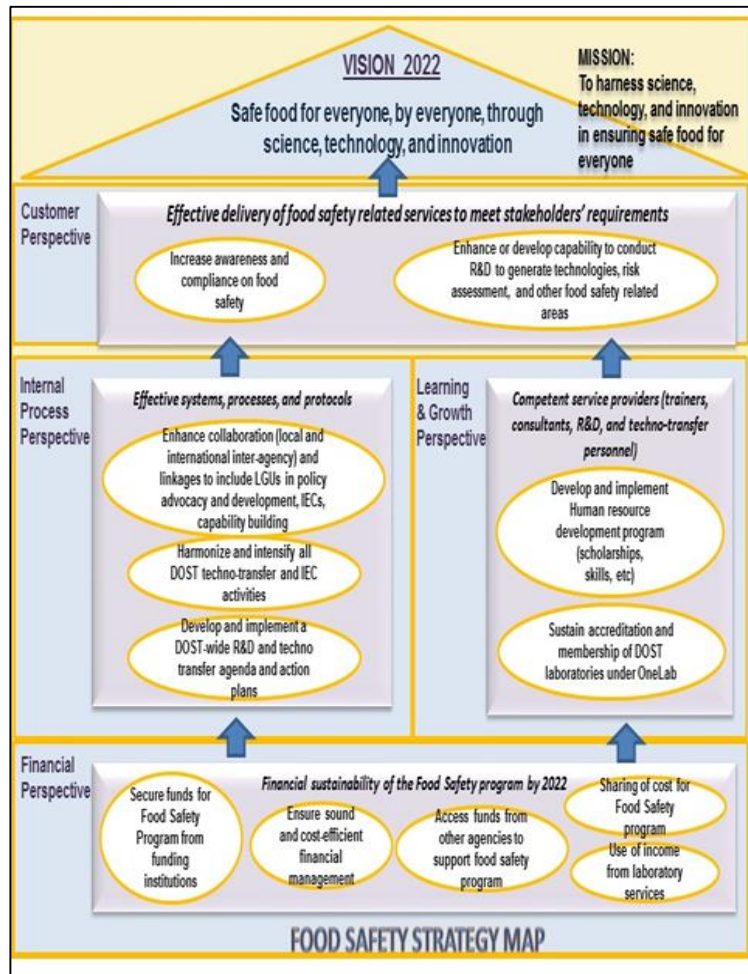
PCIEERD's Alignment to:

- *Appropriate Technologies for Industry Competitiveness*
- *Sustainable Energy*
- *Sustainable Mass Transport*
- *Environment, Climate Change Adaptation and Disaster Risk Reduction*



Appropriate Technologies for Industry Competitiveness

Food Safety and Quality



Countryside Development

Natural Dyes and Colorants



Hands-on Laboratory Work on Pigment Extraction



Photo Credits to PTRI

Regional R&D Consortia

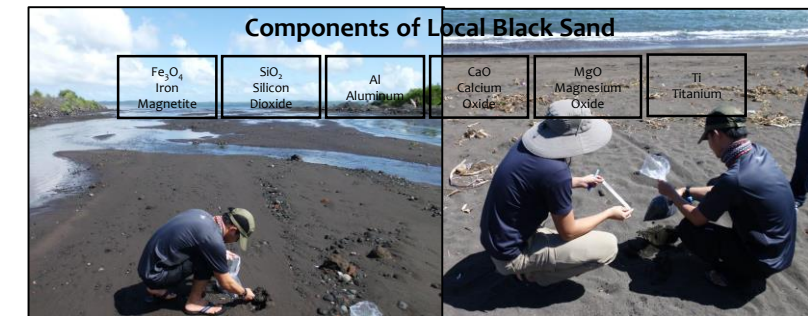


Mining and Minerals

Copper and Gold Pilot Plant in the Regions



Black Sand Mineral Characterization



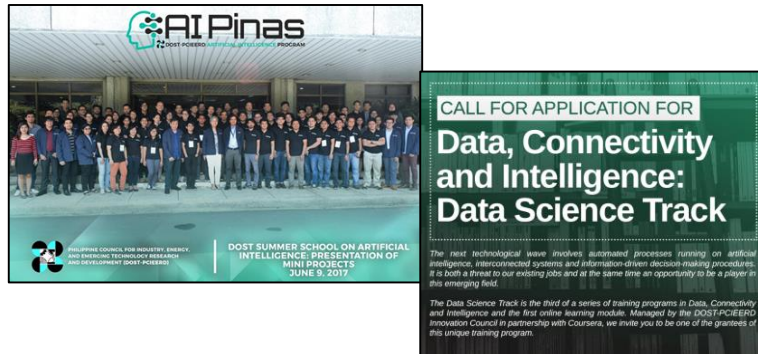
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Appropriate Technologies for Industry Competitiveness

ICT, Electronics, and Semiconductor

Artificial Intelligence and Data Science



BayanihaNets



Metals and Engineering

Automated Multi-Commodity Heat Pump Dryer



Metrology Program



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Sustainable Energy

Renewable Energy and Energy Efficiency Systems

WattSmart Energy Management System



Value Added Functional Materials

Nanostructured Electrocatalyst Composites for Direct Ethanol Fuel Cells (DEFC): Preparation, Characterization, and Performance Evaluation

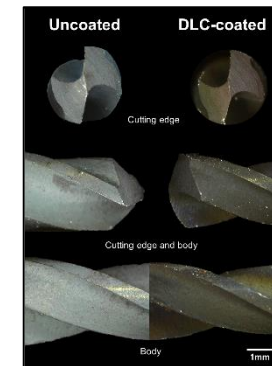
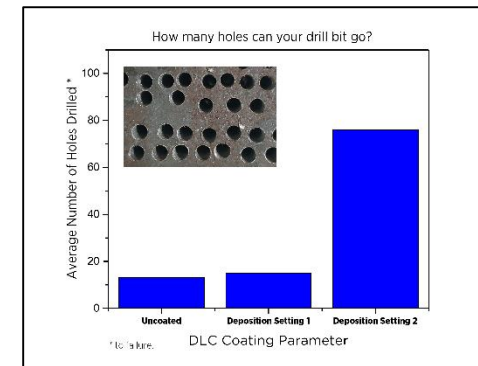


DEFC-LED Performance based on PdNi/C Anode Catalyst
Fuel: 1.0 M Ethanol (7 mL)
Oxidant: Ambient Air
➤ Light intensity lasts for **1.5 hours**

Pd- and Pt-based Catalysts
Synthesized alternative anode catalysts materials that are cheaper and more efficient than the commercially available

DEFC-LED Performance based on PtSn/C Anode Catalyst
Fuel: 1.0 M Ethanol (7 mL)
Oxidant: Ambient Air
➤ Light intensity lasts for **2 hours**

Development of a Low-Energy Ion Source System for the Synthesis of Diamond-like Carbon Films



Preliminary experimental data on coated and uncoated drill bits



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Sustainable Mass Transport

Alternative Mass Transport Systems and Components

Hybrid Electric Road Train



Hybrid Trimaran

Development of a Hybrid
Trimaran Fast Craft
Passenger Cargo Vessel
Using Multi Engine and
Alternative Energy Source
from Ocean Waves



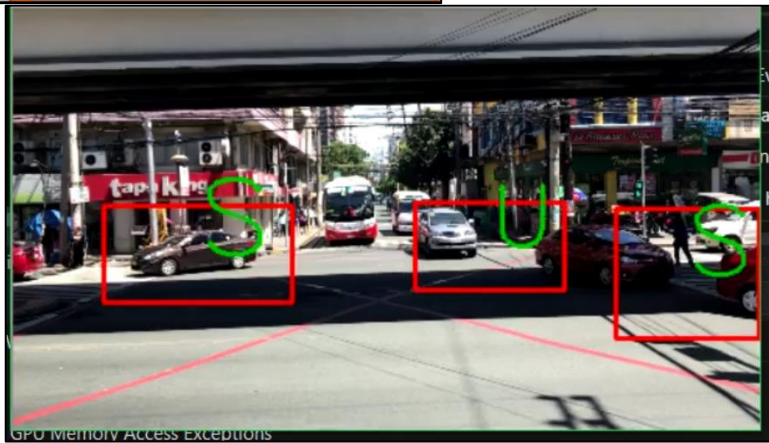
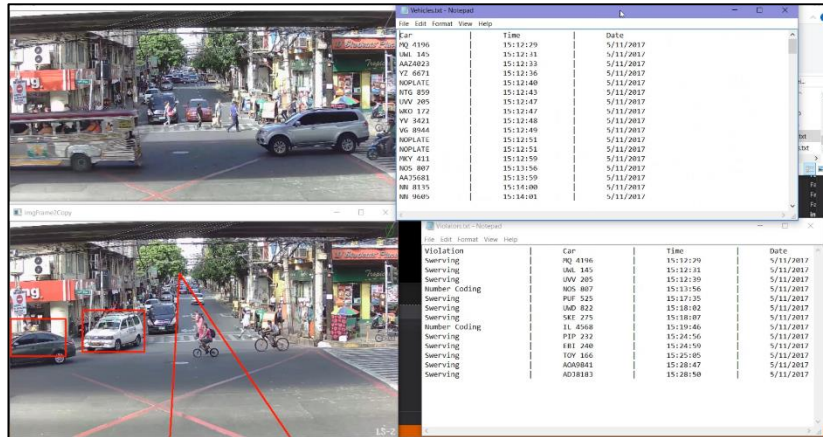
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Sustainable Mass Transport

Traffic/Mobility

Contactless Apprehension of Traffic Violators on 24- Hours Basis and All-Vehicle Detection System (Catch-All)



Customized Local Traffic Simulator (LOCALSIM)



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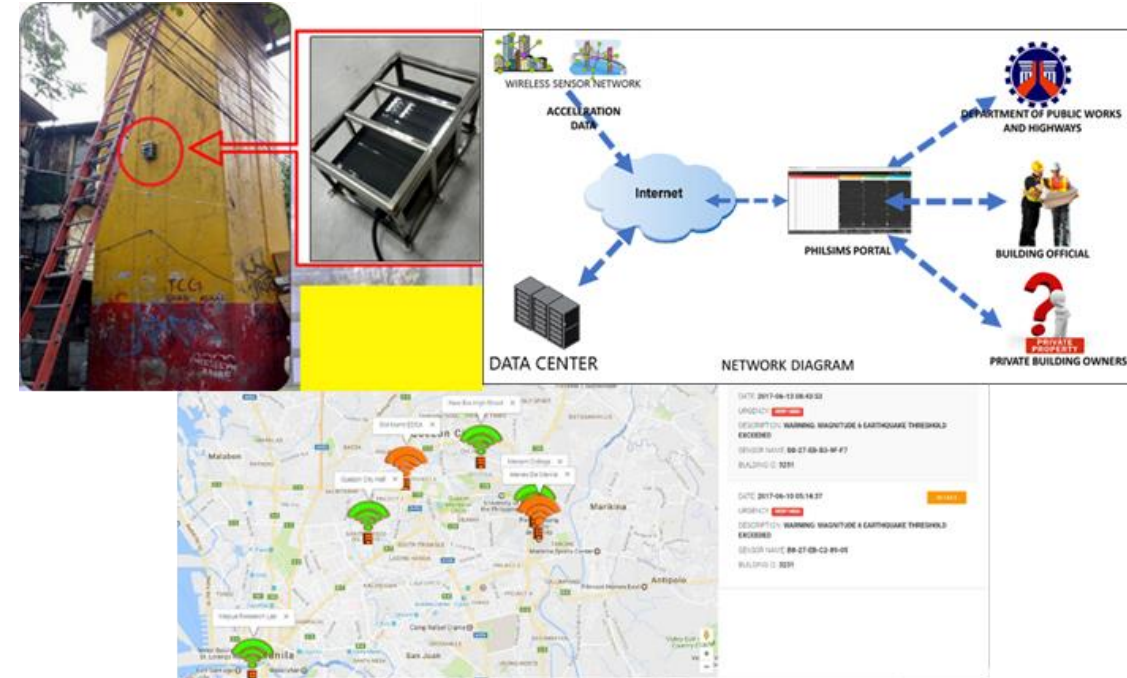
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Environment, DRR, and CCA

S&T Water Environment Program



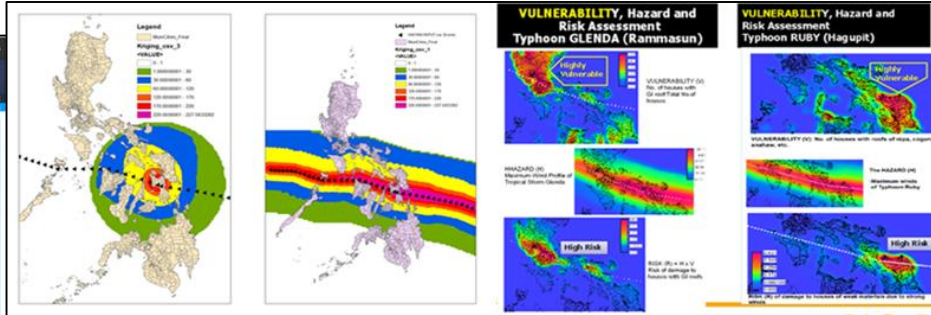
Critical Infrastructure Program



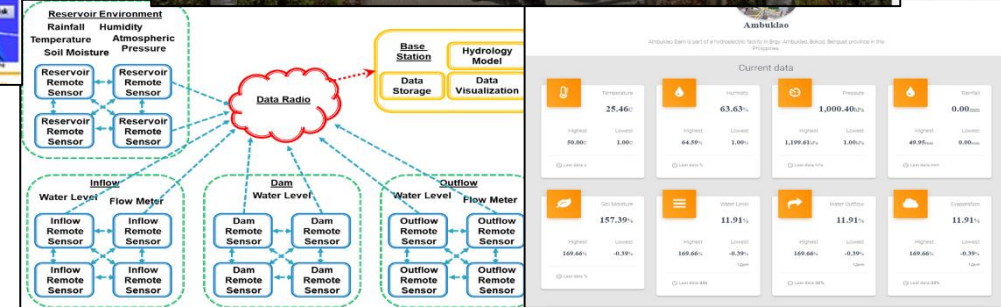
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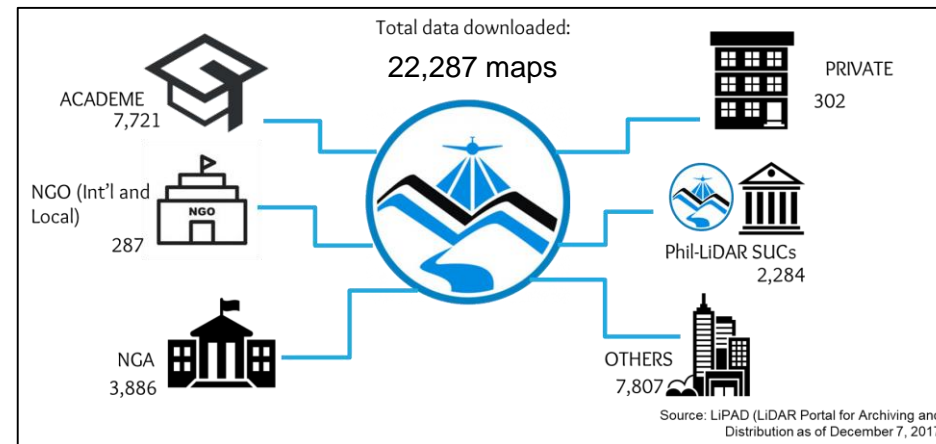
Environment, DRR, and CCA



DRR-CCA S&T-based Decision Support Tools



Space Technology Application



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Human Security



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