



HRIDD ROADMAPS

Human Resource Development Program (HRDP) Roadmap

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Overall Strategies

Human Resource

- Engagement/pre-engagement of potential/interested HRDP proponents/researchers prior to Call For Proposals (CFPs)
- Sustained support in highly specialized training to increase number of personnel equipped with highly specialized skills

R&D Technologies

- Increased exposure of R & D grantees in novel fields especially abroad that will eventually be translated to applied R&D proposals

Facilities / Services

- Strengthen the promotion of HRDP grants
- Increased engagement and grants to aid component programs that have a significant exposure and experience to novel and game-changing fields along with increased end expanded
- papers, presentations, services that will be useful nationwide

S&T Policies

- Development of guidelines to increase entitlements and benefits for the pool of researchers and personnel

10M

Call for Proposals for HRDP

Implementation of HRDP, RIEETOOL & PROSPPER

New HR Projects

- Roundtable on Next Generation Researchers
- Block Chain Training
- HRDP for Quantum
- Satellite development

2021

- Capacity building on the 6 component programs under HRDP, including the RIEETOOL, PROSPPER

2022

- Implementation of 2 new programs for PCIEERD project personnel – PROSPPER & RIEETOOL
- Evaluated 3 PROSPPER and 4 RIEETOOL proposal
- Supported 7 Support for Conduct of Conference, with 3 ongoing proposals
- Supported 1 Research Attachment
- Supported 1 RIEETOOL project

2023

- Supported 27 targets for the existing 6 HRDP component programs and supported 3 RIEETOOL projects and 1 PROSPPER project
- 10 researchers & project managers trained on project management
- 2 new HRD programs supported for R&D Management

2024

- Supported 27 targets for the existing 6 HRDP component programs and supported 3 RIEETOOL and 1 PROSPPER project
- Support 2 new programs on Block Chain, 2 next generation researchers and 2 quantum
- Supported 2 projects for HRDP Quantum

2025

- Supported 27 targets for the existing 6 HRDP component programs and supported 3 RIEETOOL and 1 PROSPPER project and PR

2026

- Supported 27 targets for the existing 6 HRDP component programs and supported 3 RIEETOOL and 1 PROSPPER project

2027

- Supported 27 targets for the existing 6 HRDP component programs and supported 3 RIEETOOL and 1 PROSPPER project

2028

- Supported 27 targets for the existing 6 HRDP component programs and supported 3 RIEETOOL and 1 PROSPPER project

15M

Call for Proposals for HRDP

Implementation of HRDP, RIEETOOL, PROSPPER

Capability Bldg activities on:

- Quantum mechanics
- Quantum Technology
- Industry 4.0
- Blockchain
- Microelectronics IC design
- Earth observation
- Optics & photonics
- nanotechnology
- AI

18M

Call for Proposal for HRDP

Implementation of HRDP, RIEETOOL, PROSPPER

- Quantum mechanics
- Quantum Technology
- Satellite Comm
- Satellite Dev
- Earth Observation
- Optics & photonics
- AI

Review and updating HRDP guidelines & policy

20M

Call for Proposals for HRDP

Implementation of HRDP, RIEETOOL, PROSPPER

- Optics & photonics
- Nanofabrication
- Materials for energy
- Advanced materials
- AI

25M

Call for Proposals for HRDP

Implementation of HRDP, RIEETOOL, PROSPPER

- Optics & photonics
- Nanofabrication
- Materials for energy
- Advanced materials
- AI

25M

Call for Proposal for HRDP

Implementation of HRDP, RIEETOOL, PROSPPER

- Optics & photonics
- Materials for energy
- 4D/3D printing with AI
- AI

25M

Call for Proposal for HRDP

Implementation of HRDP, RIEETOOL, PROSPPER

- Optics & photonics
- Materials for energy
- 4D/3D printing with AI
- AI

25M

Call for Proposal for HRDP

Implementation of HRDP, RIEETOOL, PROSPPER

- Optics & photonics
- Materials for energy
- 4D/3D printing with AI
- AI

Overall Outcomes

Human Resource (HRDP)

- Increased exposure of Filipino researchers to different capacity building opportunities
- Increased engagement of researchers in the in the regions
- Increased MS and PhD graduates in the industry, energy and emerging technology sectors
- Capacitate researchers on R & D management
- Identify new and emerging field that need HRD support

R&D Technologies

- Increased R & D workforce that are ready to conduct, present and extend research initiatives and S&T innovations

Facilities / Services

- Increased use of researchers on DOST and other facilities and services

S & T Policies

- New HRDP Policies and Guidelines on highly specialized trainings related to PCIEERD sectors and novel technologies acquired from research attachments and visiting experts

VISION
Sustained supply of next generation researchers on IET in the country

Institution Development Program (IDP) Roadmap

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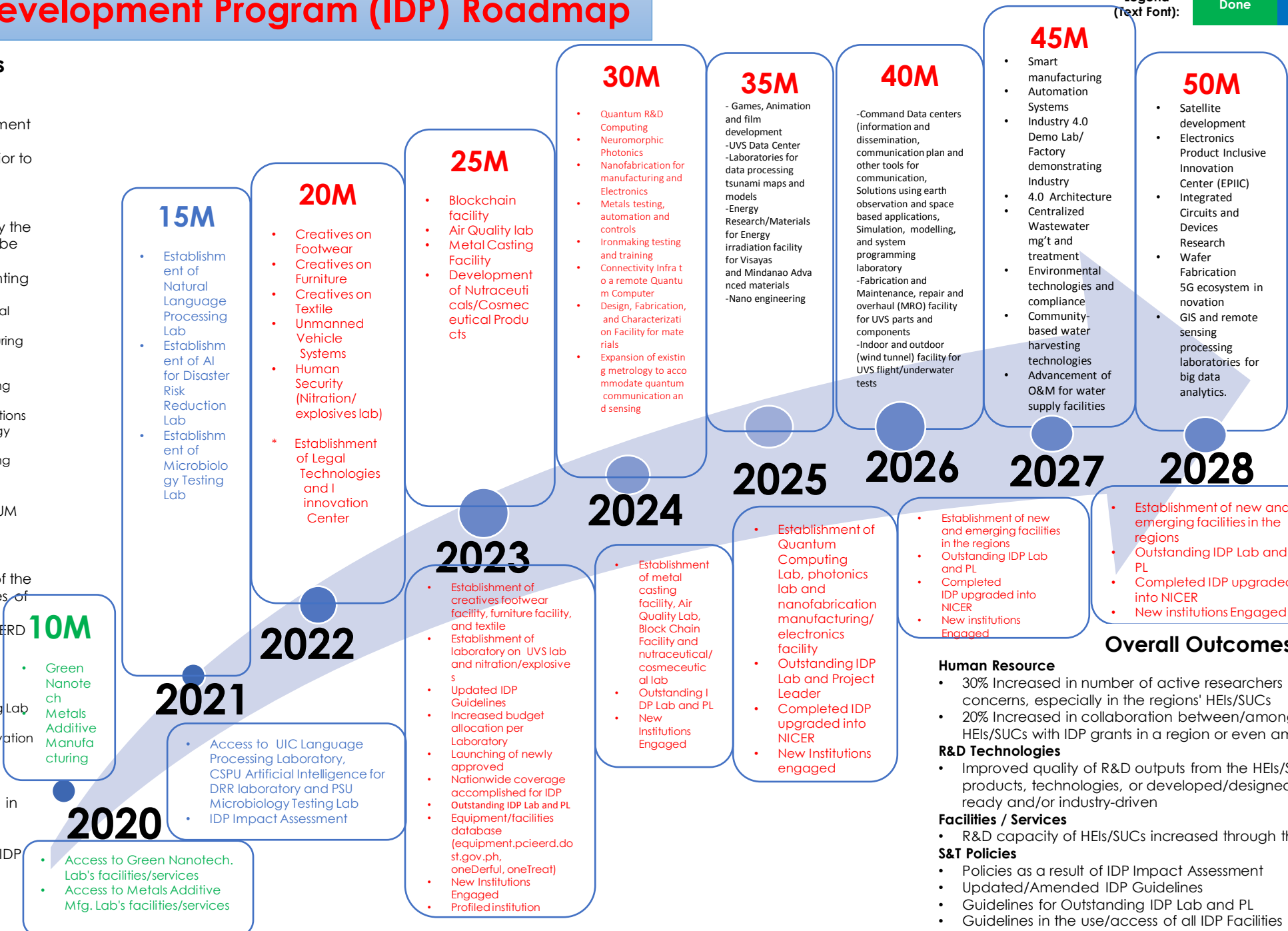
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Overall Strategies

- Human Resource**
- Engagement/pre-engagement of potential/interested IDP proponents/researchers prior to IDP CFPs
 - Development of specialized/field-specific training/s for researchers by the different IDP labs that can be open or offered to parties beyond the IDPs' Implementing Institutions
 - Green/Environmental Nanotechnologies
 - Additive Manufacturing
 - Natural Language Processing R&D
 - Quantum Computing
 - AI Applied to DRR
 - GIS for DRR Applications
 - Applied Microbiology
 - Industry Immersion
 - Quantum Computing

- R&D Technologies**
- Publications, patents and UM for IDP projects/programs
- Facilities / Services**
- Establishment/upgrading of the various laboratories/facilities of HEIs/SUCs that have R&D framework aligned to PCIEERD Sectoral Concerns
 - Natural Language Processing Lab
 - AI for Disaster Lab
 - Microbiology Testing Lab
 - Legal Sector Technologies/Innovation hub/center

- S&T Policies**
- Development of guidelines in the use/access of all IDP Facilities and/or Services
 - Updating/amendment of IDP Guidelines



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- Green Nanotech Lab's facilities/services
- Metals Additive Manufacturing

2020

- Access to UIC Language Processing Laboratory, CSPU Artificial Intelligence for DRR laboratory and PSU Microbiology Testing Lab
- IDP Impact Assessment

2021

- Establishment of Natural Language Processing Lab
- Establishment of AI for Disaster Risk Reduction Lab
- Establishment of Microbiology Testing Lab

2022

- Creatives on Footwear
- Creatives on Furniture
- Creatives on Textile
- Unmanned Vehicle Systems
- Human Security (Nitration/explosives lab)
- Establishment of Legal Technologies and Innovation Center

2023

- Blockchain facility
- Air Quality lab
- Metal Casting Facility
- Development of Nutraceu tical/Cosmeceutical Products
- Establishment of creatives footwear facility, furniture facility, and textile
- Establishment of laboratory on UVS lab and nitration/explosives
- Updated IDP Guidelines
- Increased budget allocation per Laboratory
- Launching of newly approved
- Nationwide coverage accomplished for IDP Outstanding IDP Lab and PL
- Equipment/facilities database (equipment.pcieerd.dost.gov.ph, oneDerful, oneTreat)
- New Institutions Engaged
- Profiled institution

2024

- Establishment of metal casting facility, Air Quality Lab, Block Chain Facility and nutraceutical/cosmeceutical lab
- Outstanding IDP Lab and PL
- New Institutions Engaged

2025

- Quantum R&D Computing
- Neuromorphic Photonics
- Nanofabrication for manufacturing and Electronics
- Metals testing, automation and controls
- Ironmaking testing and training
- Connectivity Infra to a remote Quantum Computer
- Design, Fabrication, and Characterization Facility for materials
- Expansion of existing metrology to accommodate quantum communication and sensing

2026

- Games, Animation and film development
- UVS Data Center
- Laboratories for data processing tsunami maps and models
- Energy Research/Materials for Energy irradiation facility for Visayas and Mindanao Advanced materials
- Nano engineering

2027

- Command Data centers (information and dissemination, communication plan and other tools for communication, Solutions using earth observation and space based applications, Simulation, modelling, and system programming laboratory
- Fabrication and Maintenance, repair and overhaul (MRO) facility for UVS parts and components
- Indoor and outdoor (wind tunnel) facility for UVS flight/underwater tests

2028

- Smart manufacturing Automation Systems
- Industry 4.0 Demo Lab/ Factory demonstrating Industry
- 4.0 Architecture
- Centralized Wastewater mg't and treatment
- Environmental technologies and compliance
- Community-based water harvesting technologies
- Advancement of O&M for water supply facilities

50M

- Satellite development
- Electronics Product Inclusive Innovation Center (EPIIC)
- Integrated Circuits and Devices Research
- Wafer Fabrication
- 5G ecosystem innovation
- GIS and remote sensing processing laboratories for big data analytics.

Overall Outcomes

- Human Resource**
- 30% Increased in number of active researchers in PCIEERD sectoral concerns, especially in the regions' HEIs/SUCs
 - 20% Increased in collaboration between/among the industries and the HEIs/SUCs with IDP grants in a region or even among regions
- R&D Technologies**
- Improved quality of R&D outputs from the HEIs/SUCs assisted such that products, technologies, or developed/designed systems are market-ready and/or industry-driven
- Facilities / Services**
- R&D capacity of HEIs/SUCs increased through the IDP
- S&T Policies**
- Policies as a result of IDP Impact Assessment
 - Updated/Amended IDP Guidelines
 - Guidelines for Outstanding IDP Lab and PL
 - Guidelines in the use/access of all IDP Facilities and/or Services

Vision:
Established new facilities and services *in the regions* where our researchers will have sustained access.

HRIDD REGIONAL CONSORTIA ROADMAP

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Human Resources

- Create new programs to strengthen the collaboration, capacity and expertise in the region
- Conduct of consultation meetings, Focus Group Discussions and pre-engagements meeting
- Capacity Building on project management and expert engagement through trainings, seminars and workshops

R&D Technologies

- Open and Directed Call for Regional Research Institutions
- Provide R&D grants for new researchers and institution to increase consortia membership
- Creating New Programs for industry-academe and government collaborations
- Strengthen Promotions and disseminations of consortia projects and funding opportunities

Facilities/Services

Increase access of regional researchers availing DOST facilities and services

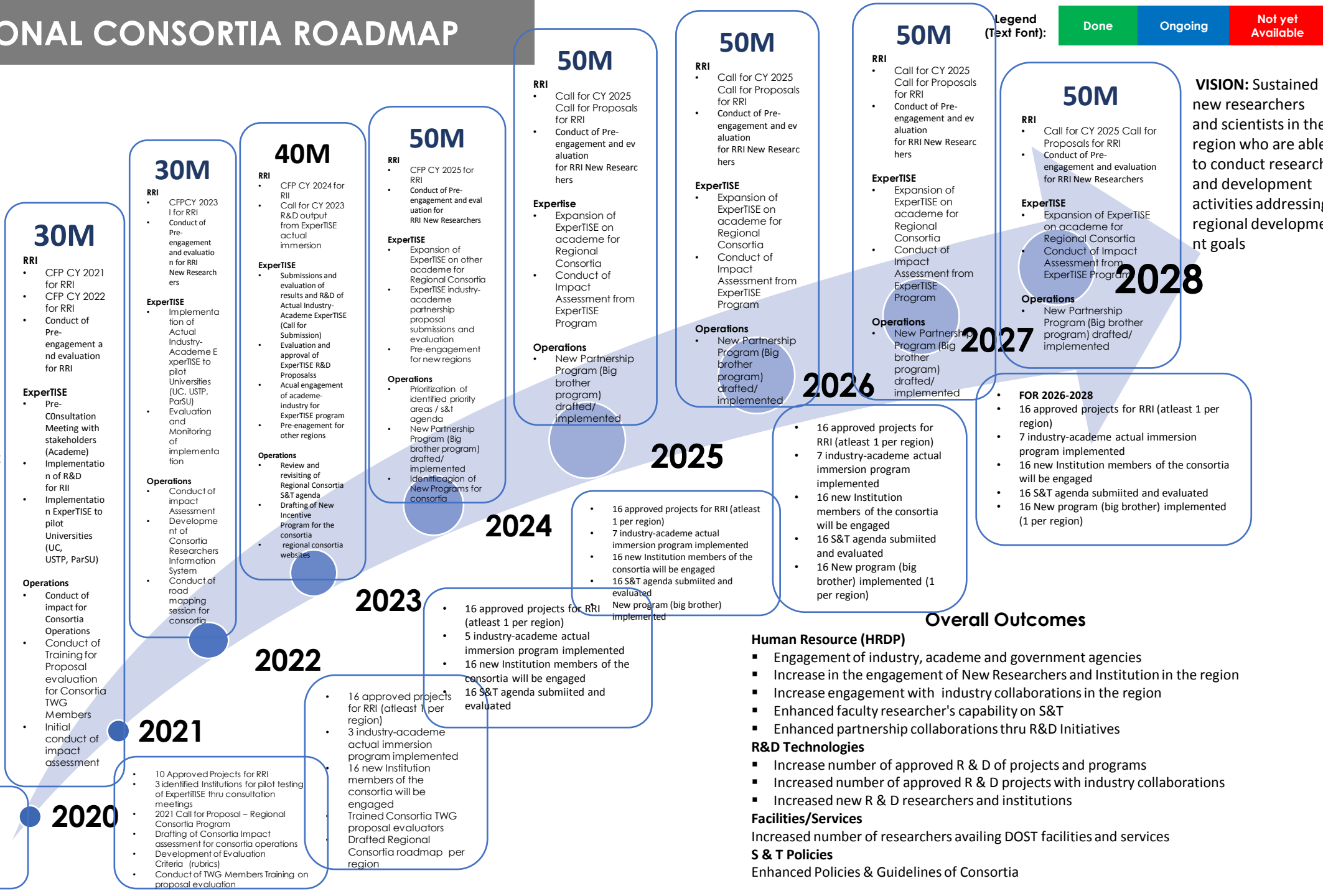
S & T Policies

- Review and Assess the Consortia policies and guidelines
- Alignment to DOST DPMIS submission of proposals/ evaluation
- Implementation of Evaluation Proposal Guidelines

VISION: Sustained new researchers and scientists in the region who are able to conduct research and development activities addressing regional development goals

10M
Regional Consortia Program

- 16 Regional Consortia Revitalized
- Trainings / Capacity Building
- Prioritization of Regional R&D Agenda



30M

- CFP CY 2021 for RRI
- CFP CY 2022 for RRI
- Conduct of Pre-engagement and evaluation for RRI

- ExpertISE**
- Pre-Consultation Meeting with stakeholders (Academe)
 - Implementation of R&D for RRI
 - Implementation of ExpertISE to pilot Universities (UC, USTP, ParSU)

- Operations**
- Conduct of impact for Consortia Operations
 - Conduct of Training for Proposal evaluation for Consortia TWG Members
 - Initial conduct of impact assessment

30M

- RRI**
- CFPCY 2023 for RRI
 - Conduct of Pre-engagement and evaluation for RRI New Researchers

- ExpertISE**
- Implementation of Actual Industry-Academe ExpertISE to pilot Universities (UC, USTP, ParSU)
 - Evaluation and Monitoring of implementation

- Operations**
- Conduct of impact Assessment Development of Consortia Researchers Information System
 - Conduct of road mapping session for consortia

40M

- RRI**
- CFP CY 2024 for RRI
 - Call for CY 2023 R&D output from ExpertISE actual immersion

- ExpertISE**
- Submissions and evaluation of results and R&D of Actual Industry-Academe ExpertISE (Call for Submission)
 - Evaluation and approval of ExpertISE R&D Proposals
 - Actual engagement of academe-industry for ExpertISE program
 - Pre-engagement for other regions

- Operations**
- Review and revisiting of Regional Consortia S&T agenda
 - Drafting of New Incentive Program for the consortia regional consortia websites

50M

- RRI**
- CFP CY 2025 for RRI
 - Conduct of Pre-engagement and evaluation for RRI New Researchers

- ExpertISE**
- Expansion of ExpertISE on academe for Regional Consortia
 - ExpertISE industry-academe partnership proposal submissions and evaluation
 - Pre-engagement for new regions

- Operations**
- Prioritization of identified priority areas / s&t agenda
 - New Partnership Program (Big brother program) drafted/ implemented
 - Identification of New Programs for consortia

50M

- RRI**
- Call for CY 2025 Call for Proposals for RRI
 - Conduct of Pre-engagement and evaluation for RRI New Researchers

- ExpertISE**
- Expansion of ExpertISE on academe for Regional Consortia
 - Conduct of Impact Assessment from ExpertISE Program

- Operations**
- New Partnership Program (Big brother program) drafted/ implemented

50M

- RRI**
- Call for CY 2025 Call for Proposals for RRI
 - Conduct of Pre-engagement and evaluation for RRI New Researchers

- ExpertISE**
- Expansion of ExpertISE on academe for Regional Consortia
 - Conduct of Impact Assessment from ExpertISE Program

- Operations**
- New Partnership Program (Big brother program) drafted/ implemented

50M

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- Call for CY 2025 Call for Proposals for RRI
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- ExpertISE**
- Expansion of ExpertISE on academe for Regional Consortia
 - Conduct of Impact Assessment from ExpertISE Program

- Operations**
- New Partnership Program (Big brother program) drafted/ implemented

50M

- RRI**
- Call for CY 2025 Call for Proposals for RRI
 - Conduct of Pre-engagement and evaluation for RRI New Researchers

- ExpertISE**
- Expansion of ExpertISE on academe for Regional Consortia
 - Conduct of Impact Assessment from ExpertISE Program

- Operations**
- New Partnership Program (Big brother program) drafted/ implemented

- FOR 2026-2028**
- 16 approved projects for RRI (atleast 1 per region)
 - 7 industry-academe actual immersion program implemented
 - 16 new Institution members of the consortia will be engaged
 - 16 S&T agenda submitted and evaluated
 - 16 New program (big brother) implemented (1 per region)

Young Innovators Program (YIP) Roadmap

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Overall Strategies

Human Resource (HRDP)

- Support R&D initiatives of young researchers from proposal writing up to project implementation

R&D Technologies

- Potential application for IP and protection of technology outputs

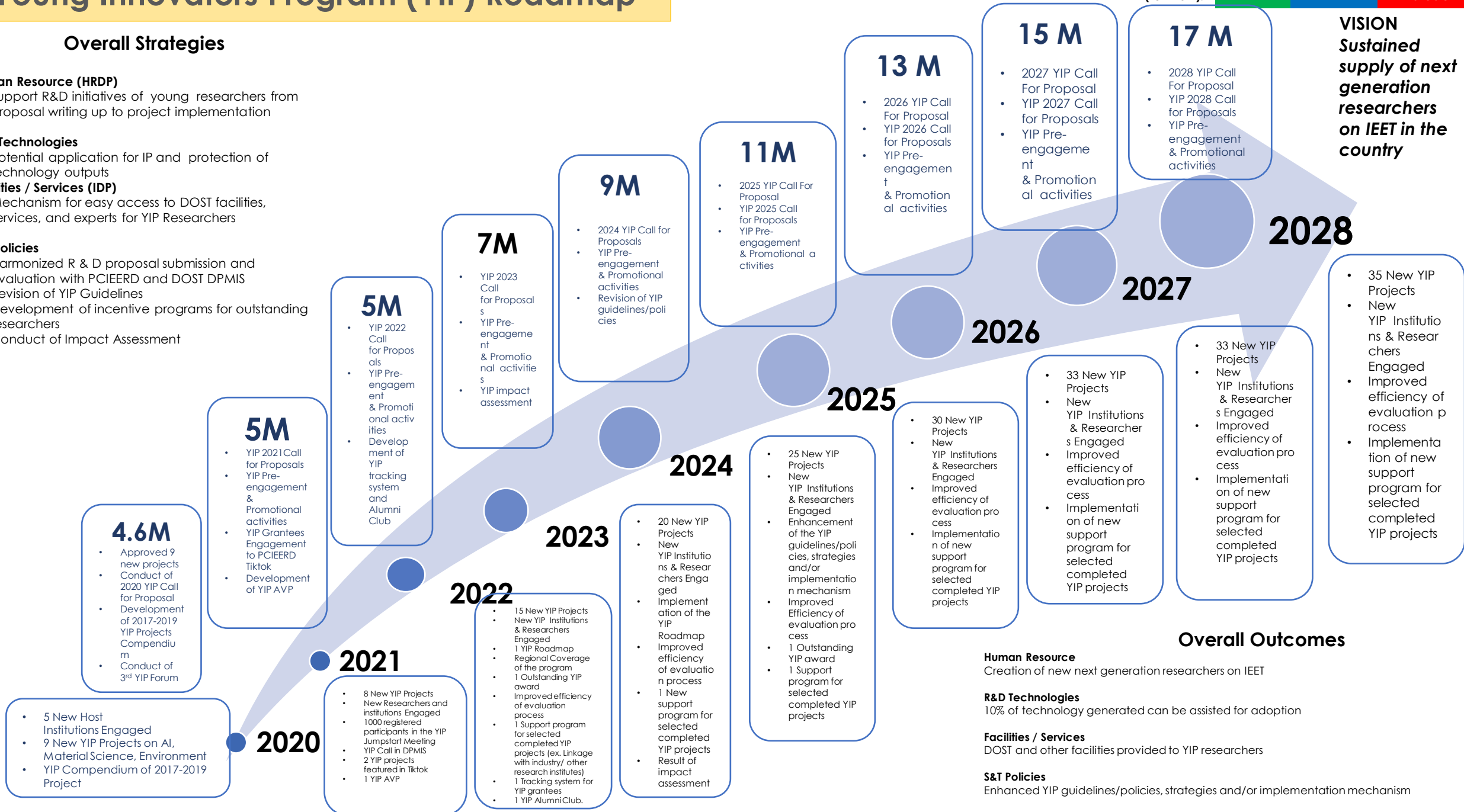
Facilities / Services (IDP)

- Mechanism for easy access to DOST facilities, services, and experts for YIP Researchers

S&T Policies

- Harmonized R & D proposal submission and evaluation with PCIEERD and DOST DPMIS
- Revision of YIP Guidelines
- Development of incentive programs for outstanding researchers
- Conduct of Impact Assessment

VISION
Sustained supply of next generation researchers on IJET in the country



Overall Outcomes

Human Resource

Creation of new next generation researchers on IJET

R&D Technologies

10% of technology generated can be assisted for adoption

Facilities / Services

DOST and other facilities provided to YIP researchers

S&T Policies

Enhanced YIP guidelines/policies, strategies and/or implementation mechanism

Balik Scientist Program (BSP) Roadmap

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Overall Strategies

Human Resource

- Promotional activities to encourage Filipino scientists to serve and give back to the Philippines and share their knowledge and expertise
- Technical training of Host Institutions and R & D personnel on new technologies and techniques to accelerate their R & D
- Engagement of Balik Scientists to various PCIEERD and BSP events
- Engagement of Balik Scientist on PCIEERD Tiktok
- Intensive promotion and pre-engagement activities with potential Host Institutions and Balik Scientist
- Engagement of repatriated BS as program supervisor for PCIEERD's R&D roadmap

R&D Technologies

- Submission of R & D project/program proposal to DOST or other funding institutions
- Availability of new technologies in the R & D Institutions that can be applied for technology transfer
- Development of program for BSP R&D Grant

Facilities / Services

- Strengthening of the research capabilities of the host institutions through submission of IDP project proposal for possible funding

S&T Policies

- Conduct of BSP Impact Assessment
- Revisit the BSP entitlements and incentives
- Development of the supplemental guidelines and Achievement Award guidelines
- Development of program for BSP R&D Grant
- Support to new programs for Balik Scientist after their engagement

VISION
Sustained supply of science and technology experts from abroad who are Filipino or foreigners of Filipino descent with appropriate expertise to serve our country and accelerate economic development through research and development

2028

2027

2026

2025

2024

2023

2022

2021

2020

64M

- Materials science
- Nanotechnology
- Energy efficiency
- Transportation
- Engineering
- Analytical Chemistry
- Convergence of Tech transfer on TAPI's HIRANG Project
- Creative Industries
- Human Security (Defense S&T)
- Emerging Technologies

43M

- Biotechnology
- Nanotechnology
- Data science
- Other areas aligned with the needs of Consortia/IDP
- Conduct of BSP Impact Assessment

62M

- Creative Industry
- Human Security
- Space Technology Applications
- Other areas aligned with the needs of R&D divisions/consortia/IDP
- Implementation of BSP Impact Assessment's results
- Engagement of repatriated BS as program supervisor for PCIEERD's R&D roadmap
- Establish new BSP Roadmap

65M

- Balik Scientist for priority areas aligned with the needs of R&D divisions/consortia/IDP
- Engagement of repatriated Balik Scientist as program supervisor for PCIEERD's R&D roadmap

65M

- Balik Scientist for priority areas aligned with the needs of R&D divisions/consortia/IDP
- Engagement of repatriated Balik Scientist as program supervisor for PCIEERD's R&D roadmap

65M

- Balik Scientist for priority areas aligned with the needs of R&D divisions/consortia/IDP
- Support to new Balik Scientist Program (BSP) under R&D Grant

65M

- Balik Scientist for priority areas aligned with the needs of R&D divisions/consortia/IDP
- Support to new Balik Scientist Program (BSP) under R&D Grant

65M

- Balik Scientist for priority areas aligned with the needs of R&D divisions/consortia/IDP
- Support to new Balik Scientist Program (BSP) under R&D Grant

70M

- Balik Scientist for priority areas aligned with the needs of R&D divisions/consortia/IDP
- Support to new Balik Scientist Program (BSP) under R&D Grant

- At least 73 BSP engagements
- At least 5 new host institutions
- At least 1 Balik Scientist engaged as program supervisor for PCIEERD's R&D roadmap
- At least 5 BS Achievement Award

- At least 61 BSP engagements
- At least 5 new host institutions
- At least 1 Balik Scientist engaged as program supervisor for PCIEERD's R&D roadmap
- At least 5 BS Achievement Award

- At least 59 BSP engagements
- At least 5 new host institutions
- At least 1 Balik Scientist engaged as program supervisor for PCIEERD's R&D roadmap
- At least 5 BS Achievement Award

- At least 58 BSP engagements
- At least 5 new host institutions
- At least 1 Balik Scientist engaged as program supervisor for PCIEERD's R&D roadmap
- At least 5 BS Achievement Award
- BSP Grants-in-Aid Guidelines

- At least 61 BSP engagements
- At least 5 new host institutions
- At least 1 Balik Scientist engaged as program supervisor for PCIEERD's R&D roadmap
- At least 4 BS Achievement Award

- 61 BSP engagements
- At least 1 Repatriated BS engaged as program supervisor for PCIEERD's R&D roadmap
- At least 3 BS Achievement Award
- Revised/updated MC on BSP incentives

- 41 BSP engagements
- At least 5 new host institutions
- At least 1 repatriated BS engaged as program supervisor for PCIEERD's R&D roadmap
- 1 policy recommendation on the career of the BS after engagement
- At least 2 BS Achievement Award
- Balik Scientist Association
- BSP Impact Assessment
- Implementation of Balik Scientist Program (BSP) Roadmap
- R&D Grant

- 41 BSP engagements
- 6 new host institutions
- 4 publications
- 22 technologies/projects
- 41 people services
- At least 1 Balik Scientist Achievement Awardee
- Implementation of online application

Overall Outcomes

Human Resource

- 50% increase in the number of the Balik Scientist Awardees
- 30% increase in the number of Host Institutions assisted
- Nationwide coverage of BSP
- Global reach of the program

R&D Technologies

- New technologies from BSP experts

Facilities / Services

- Linkage and collaboration engaged thru BSP experts
- Enhanced host institution's existing facilities and research capabilities

S&T Policies

- New policies/guidelines based on the BSP Impact Assessment
- Amended BSP Guidelines
- Achievement Award Guidelines
- BSP Grants-in-Aid Guidelines
- Policy on the available support to Balik Scientist after their engagement
- New BSP roadmap

Good Governance through Data Science and Decision Support System (GODDESS) Roadmap

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Vision
Mainstream the use of data science and analytics in local and national government units and agencies.

Overall Strategies

Human Resource

- Engagement/pre-engagement of potential/interested proponents/researchers with background in Data Science and Analytics prior to Call For Proposals (CFPs)
- Strengthen promotions of Data Science and Analytics researches and projects to NGAs and LGUs that can be a potential end user of data-driven management systems
- To expand GODDESS projects throughout the regional level
- Forged partnerships with the identified NGAs & LGUs

R&D Technologies

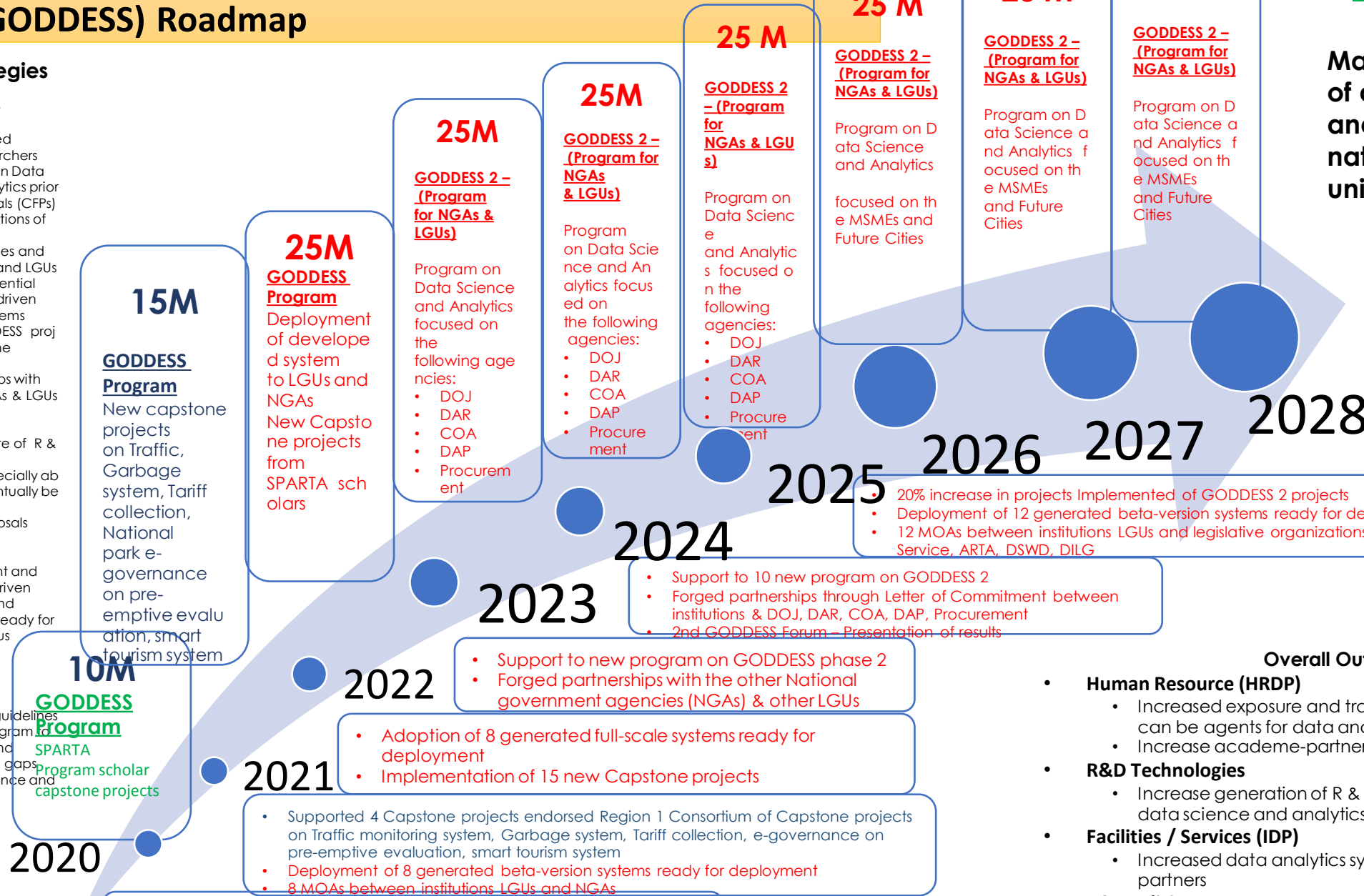
- Increased exposure of R & D grantees in novel fields especially abroad that will eventually be translated to applied R&D proposals

Facilities / Services

- To promote current and upcoming data-driven support systems and solutions that are ready for adoption of various beneficiaries.

S&T Policies

- Development of guidelines to refocus the program to accommodate and address real world gaps through Data Science and Analytics



15M
GODDESS Program
New capstone projects on Traffic, Garbage system, Tariff collection, National park e-governance on pre-emptive evaluation, smart tourism system

25M
GODDESS Program
Deployment of developed system to LGUs and NGAs
New Capstone projects from SPARTA scholars

25M
GODDESS 2 – (Program for NGAs & LGUs)
Program on Data Science and Analytics focused on the following agencies:
• DOJ
• DAR
• COA
• DAP
• Procurement

25M
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• DOJ
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25 M
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• DOJ
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• COA
• DAP
• Procurement

25 M
GODDESS 2 – (Program for NGAs & LGUs)
Program on Data Science and Analytics focused on the MSMEs and Future Cities

25 M
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25 M
GODDESS 2 – (Program for NGAs & LGUs)
Program on Data Science and Analytics focused on the MSMEs and Future Cities

- Supported projects on data analytics such as Senior Citizen welfare services (FSUU), PhilRice, OCD Region 2, Iloilo LGU
- Capstone projects from Learning-at-scale and SPARTA learners

- Supported 4 Capstone projects endorsed Region 1 Consortium of Capstone projects on Traffic monitoring system, Garbage system, Tariff collection, e-governance on pre-emptive evaluation, smart tourism system
- Deployment of 8 generated beta-version systems ready for deployment
- 8 MOAs between institutions LGUs and NGAs

- Adoption of 8 generated full-scale systems ready for deployment
- Implementation of 15 new Capstone projects

- Support to new program on GODDESS phase 2
- Forged partnerships with the other National government agencies (NGAs) & other LGUs

- Support to 10 new program on GODDESS 2
- Forged partnerships through Letter of Commitment between institutions & DOJ, DAR, COA, DAP, Procurement
- 2nd GODDESS Forum – Presentation of results

- 20% increase in projects Implemented of GODDESS 2 projects
- Deployment of 12 generated beta-version systems ready for deployment
- 12 MOAs between institutions LGUs and legislative organizations, DBM, Civil Service, ARTA, DSWD, DILG

- Overall Outcomes**
- Human Resource (HRDP)**
 - Increased exposure and training of Filipino researchers that can be agents for data analytics projects for LGUs & NGAs.
 - Increase academe-partnership in LGUs
 - R&D Technologies**
 - Increase generation of R & D project proposals related to data science and analytics.
 - Facilities / Services (IDP)**
 - Increased data analytics system adoptable to the needs of partners
 - S&T Policies**
 - Improved policies on academic linkages in the Regions, Industries, LGUs, LGA as target partners in terms of data science and analytics solutions.