

SOUTH EAST ASIA

Philippines





Innovate UK





**UNDERSTANDING
THE PHILIPPINES' INNOVATION
SYSTEM**

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Disclaimer: Data presented in this report was collected in early 2018 and may not accurately represent current efforts of stakeholders in the innovation ecosystem in the Philippines.

1. COUNTRY PROFILE

COUNTRY PROFILE

1.1 INTRODUCTION

Population:
103.2 Mill
GDP in
\$ Billion:
205.52

INDICATOR	PHILIPPINES
Global Innovation Index Rank (2017) ¹	32.48 (73 of 127)
Global Competitiveness Index (2017) ²	57 th of 138
Gross domestic Expenditure of R&D (GERD) as a % of GDP (2013) ³	0.13788
High-Technology Exports in % of manufactures exports (2015) ⁴	53.064
Patents per million people (2016) ^{5,6}	60.44
Per cent growth in total patent applications between (2015-2016) ⁷	-7.27
Time in hours required to start a business (2016) ⁸	28
% of the 18-64 population who believe they have the right skills and knowledge to start a business (2015) ⁹	69%

1 Global Innovation Index, 2017

2 World Economic Forum, 2017

3 United Nations, 2013

4 The World Bank, 2015

5 Intellectual Property Office of the Philippines, 2016

6 Philippine Statistics Authority, 2016

7 Intellectual Property Office of the Philippines, 2015-2016

8 The World Bank, 2016

9 Global Entrepreneurship Monitor, 2015

COUNTRY PROFILE

1.1 INTRODUCTION

Over the past decade it is evident that the Philippines has been growing not only economically but also in infrastructure, as the country continues to advance its ICT offshoring industry, which is a main contributor to its service market. The Global Innovation Index suggests this infrastructure expansion as the reason for the Philippines' increase in rank.¹ In 2016 the Philippines had a GDP of US\$305 billion, with its largest contributions from the service sector followed by a growing industrial sector.² This growth in GII and GDP shows a clear disconnect when it comes to the R&D activities within the country, with GERD consistently being reported to be under 0.2%. The average GDP growth of 6.8% that has held steady for several years has been buoyed primarily by remittances from the diaspora and not organic growth through innovation.^{3,4}

Developing the technology to support growing innovation in the Philippines is reliant on the capacity of the country to produce more innovators. However, in a 2013 study CHED reported that only 17% of undergraduates take courses in science, technology, engineering, agriculture and maths (STEAM) programmes and only 9% of post-graduate students take up STEAM courses, leading to few skilled innovators and faculties to teach STEAM programmes.⁵

The R&D output in the Philippines is also hampered by the lack of facilities in the various research institutions in the Philippines.

Commercialising technology from the investment side has been difficult with the focus of venture capital on investing more in scaled-up businesses. A lot of technologies rely on government funding just to be developed, not to be scaled-up. The low level of angel investment in the Philippines can be attributed to the lack of success stories and proper investment education available.

There has been a rise in startup activity around the two prominent investing groups Kickstart and Ideaspac. Both are the respective investment arms of the telecommunication duopoly in the Philippines, providing mid-range investment and helping budding startups to develop and eventually reach IPO. However, their portfolio of investments initially focused on similar telecommunication technologies, with their portfolio only recently expanding into other ventures. Most local firms import mature technologies from advanced countries, lacking either the inclination or skillset (or both) to master or reverse engineer the imported technology.⁶

No policy incentives have been successful at easing the gap between actors in the innovation system, which is characterised largely by a lack of awareness or outright mistrust between agencies and organisations.

¹ Global Innovation Index, 2017

² Aldaba, 2017

³ World Bank, Unknown

⁴ Moneytis, Unknown

⁵ Arroyo, 2018

⁶ Key Informant Interview

1.2 STATISTICAL HIGHLIGHTS

- The total private sector investment in the Filipino startup ecosystem since 2017 is \$37.4 million, with the largest amount of \$15.4 million given to a real estate startup.¹
- The workers employed in the Philippines are reported to make up 42% of the population with the lowest unemployment rate (for 2016) of 5.4% in the past decade.²
- GDP in the Philippines continues to exceed market predictions, with a record growth rate of 6.9% in 2016.²
- Growth in the agricultural sector has seen a record low, with a rate of -1.3%, compared with recorded employment in agriculture, forestry and fishing comprising 25.5% of the labour force.²
- CHED data reports that only 3,300 of science, technology, engineering, agriculture and mathematics (STEAM) faculty have a PhD degree.³

1 e27, 2017

2 ADB, 2018

3 Juanillo, 2015

COUNTRY PROFILE

1.3 HIGHLIGHTS OF KEY INNOVATION PROGRAMMES

- **SLINGSHOT PH:** Slingshot MNL is an initiative led by the Foreign Trade Service Corps (FTSC) of the Department of Trade and Industry (DTI) and the Filipino startup community, in partnership with the leading startup institution in the country, IdeaSpace Foundation. It is a pioneering event that brought over 30 speakers, 100 local startups and 1,300 attendees from business, academic and investment communities together in 2015¹. Widely considered as the launch of the Philippines as a startup hub, Slingshot has been held annually since 2015 as the national summit for startups and innovation.²
- **GO NEGOSYO:** Go Negosyo is a private-sector supporter of the Philippine Center for Entrepreneurship (PCE), a non-stock, non-profit organisation that advocates a positive enterprise culture among Filipinos. Within four years, Go Negosyo was able to undertake over 30 roadshows all over the country, produce a TV show, create a website portal for entrepreneurs, and launch bestselling books. They help the country's budding MSME industry, not only by providing a wide network, but also mentoring and providing access to funding through their angel network.³
- **BALIK SCIENTIST PROGRAM:** Established in 1975, the Balik Scientist Program (BSP) of the Department of Science and Technology (DOST) is a repatriation-assistance programme to bring Filipino scientists, experts and professionals back into the country to share their expertise and knowledge with local partners to accelerate scientific, agro-industrial, and

economic development. They recruit over 15 scientists a year for short-term projects and 1-2 scientists for long-term engagements.⁴

- **DOST TECHNOLOGY BUSINESS INCUBATORS (TBIS):** TBIs are facilities where startups are hosted and provided with business development support. Initiated in the 1990s, TBIs are expected to guide startups from an idea to a viable product⁵. Currently, there are 14 TBIs across the country funded by DOST.⁶ One of these TBIs is QBO – a private-public partnership with DOST, DTI, JP Morgan, and Ideaspace. QBO is hosted from the offices of the Department of Trade and Industry (DTI) building, linking entrepreneurs to the services and support they need. QBO is DTIs' support to the startup community, particularly targeting startups with viable business propositions.⁷ Another spinoff of the DOST TBI programme is the Startup Research Programme (launched in 2017) which provides funding for startups to complete the R&D stage of their ventures.⁸
- **USAID - STRIDE:** The Science, Technology, Research and Innovation for Development (STRIDE) Programme of the USAID aims to stimulate economic growth by boosting science and technology research. While the key focus of STRIDE activities are universities and technology transfer, the programme also sponsored a recently completed study-tour of innovation systems in the US. Government officials visited key innovation facilities in the US, and were then tasked to present a strategy for the Philippine innovation ecosystem.⁹

¹ Department of Trade and Industry, 2015

² Department of Trade and Industry, 2015

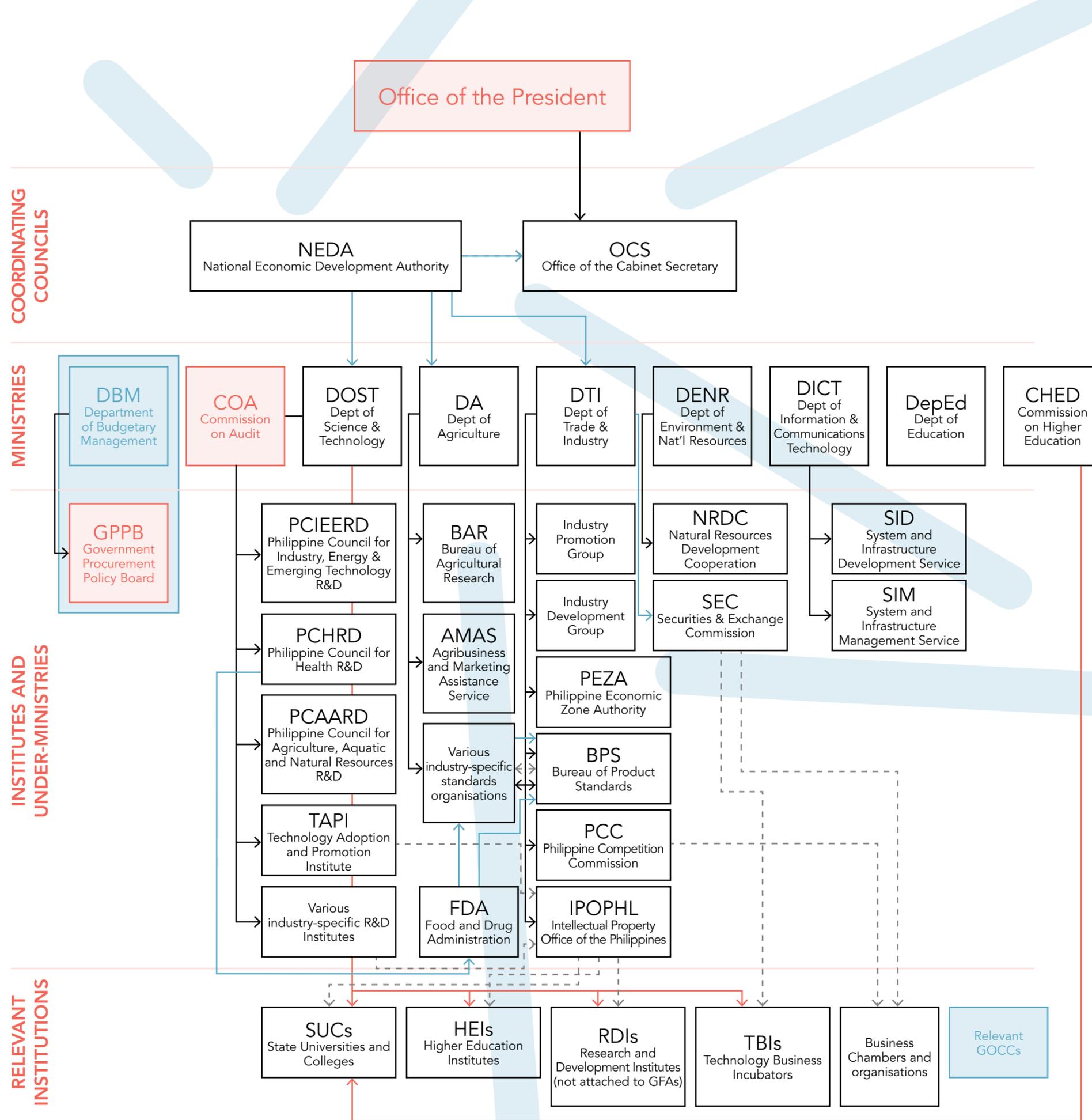
³ GoNegosyo, unknown

⁴ Department of Science and Technology, Unknown

COUNTRY PROFILE

1.4.1 INSTITUTIONAL MAP OF THE INNOVATION SYSTEM

The Philippines does not have a defined national innovation system in place. This diagram describes the key innovation players in government and their roles. Agencies related to each other pertains to agencies connected through affiliation or membership in decision-making bodies like councils, authorities and boards. It should be noted that the DBM, GPPB and PS (private sector) provide funds while COA and GPPB perform auditing for all of government. This imbues these agencies with nearly the same control over innovation resources as the Office of the President.



COUNTRY PROFILE

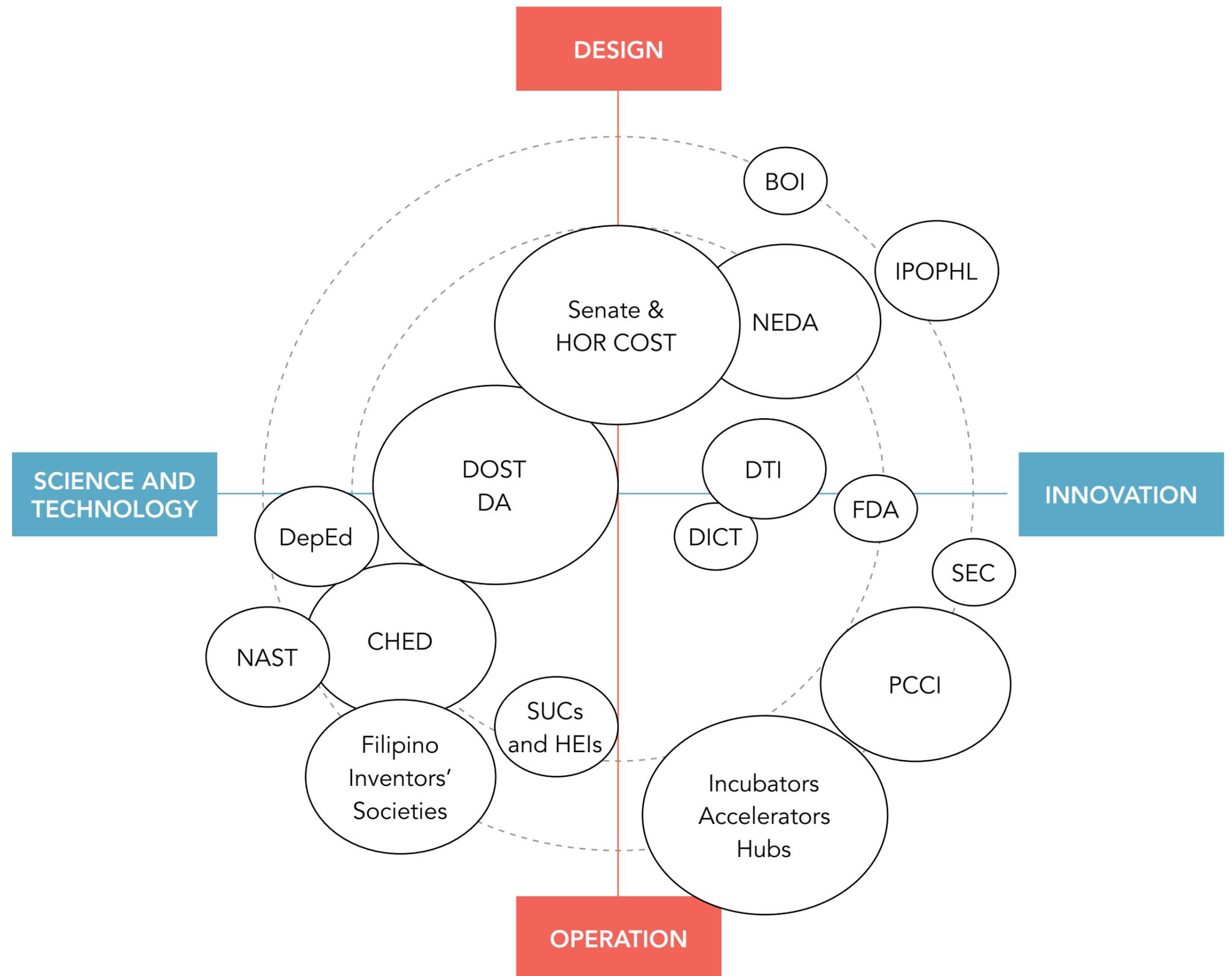
1.4.2 ROLE AND INFLUENCE DIAGRAM OF KEY MINISTRIES AND AGENCIES

This diagram represents key innovation players in the Philippines. It should be noted that innovation policy is within the scope of both the executive and legislative branches of government, although the executive is more explicitly in the business of innovation policy.

This diagram shows that most agencies are concentrated on the operations side of science and technology. Agencies in this area are primarily focused on developing, funding and recognising researchers and scientists. Conversely, agencies on the design side of innovation control trade and business policy. Finally, it is striking that there are no agencies in the design of science and technology. Perhaps this is because policy discussions in this area are held within individual agencies; as there is no coordinating council specifically for science and technology design-oriented policies, the coordination does not usually happen. In the case of laws or national policies, it is usually the Senate and HOR COST's job to convene these agencies together.

Level of influence: the bigger the size of the bubble, the more influence in the innovation system.

This influence map is indicative and reflects the insights of the project team rather than a formal statement of roles and structures.



COUNTRY PROFILE

1.5 GLOSSARY OF INSTITUTIONAL ABBREVIATIONS AND ACRONYMS

- **AMAS:** Agribusiness and Marketing Assistance Service
- **BAR:** Bureau of Agricultural Research
- **BPS:** Bureau of Product Standards
- **CHED:** Commission on Higher Education
- **COA:** Commission on Audit
- **DA:** Department of Agriculture
- **DENR:** Department of Environment and Natural Resources
- **DepEd:** Department of Education
- **DICT:** Department of Information and Communications Technology
- **DOST:** Department of Science and Technology
- **DTI:** Department of Trade and Industry
- **EDC:** Export Development Council
- **FDA:** Food and Drug Administration
- **GOCCs:** Government Owned and Controlled Corporations
- **GPPB:** Government Procurement Policy Board
- **HEIs:** Higher education institutions
- **HOR:** House of Representatives (Congress)
- **IPOPHL:** Intellectual Property Office of the Philippines
- **NAST:** National Academy of Science and Technology
- **NEDA:** National Economic Development Authority
- **NRDC:** Natural Resources Development Cooperation
- **OCS:** Office Of The Cabinet Secretary
- **PCAARD:** Philippine Council for Agriculture, Aquatic and Natural Resources R&D
- **PCC:** Philippine Competition Commission
- **PCHRD:** Philippine Council for Health R&D
- **PCIEERD:** Philippine Council For Industry, Energy & Emerging Technology R&D
- **PEZA:** Philippine Economic Zone Authority
- **RDIs:** Research and Development Institutes (not Attached to Government Financed Agencies)
- **SEC:** Securities and Exchange Commission
- **SID:** System and Infrastructure Development Service
- **SIM:** System and Infrastructure Management Service
- **ST&I:** Science, technology and innovation
- **SUCs:** State Universities and Colleges
- **TAPI:** Technology Adoption and Promotion Institute

1.6 STRENGTHS AND WEAKNESSES ANALYSIS

HUMAN CAPITAL/ KNOWLEDGE ASSETS

STRENGTHS

The country has a young and thriving population with good science education:

- Data (2016) provided by CHED reports STEAM (science, technology, engineering, agriculture and maths)⁶ enrolments to be at 39.0% of total enrolments.⁵
- Higher education institutes in the Philippines maintain 12-13% faculty members with PhDs.⁵
- Scopus (2015) data shows that the Philippines scores 11% above world average for citation impact.⁴
- The Philippine Statistics Authority reports the median age in 2015 to be 24.5 y/o, with the working-age population (15-64 y/o) making up 63.4% of the total population.⁷

WEAKNESSES

The country does not have the critical mass of engineers and scientists to support its innovation efforts:

- There were only 89 scientists and engineers per million people in the Philippines in 2002.²
- Only 18% of undergraduates were enrolled in STEAM courses in AY 2014-2015. There are fewer postgraduates (9%). Only 12% of STEAM faculty have doctorate degrees.¹
- Annually, about 16,000 science and technology (S&T) professionals leave the country to work abroad; most are female and the majority are bound for Saudi Arabia. They make up 6% of the total population of Overseas Filipino Workers (OFWs), comprised mostly of midwives and nurses, and engineers.³

1 Juanillo, 2015

2 De La Pena, 2007

3 Battistella and Liao, 2013

4 UK-South-East Asia Knowledge Partnership, 2015

5 Commission on Higher Education, 2018

6 Commission on Higher Education, 2018

7 Philippine Statistics Authority, 2017

1.6 STRENGTHS AND WEAKNESSES ANALYSIS

FUNDING

STRENGTHS

The general outlook for innovation in the Philippines has seen a growing trend in interest and funding:

- The total private sector investment in the Philippine Startup ecosystem since 2017 is \$37.4 million, with the largest amount of \$15.4 million given to a real estate startup.¹
- The DOST R&D budget has increased more than 40% from 2011 to 2015, opening itself up for more projects and other uses for its funding.²
- Increasing the number of R&D projects and other extension services such as technology business incubators (TBIs) that it can support throughout the country.

WEAKNESSES

The increase in funding opportunities in the Philippines hasn't effectively reached the sectors which need infusion to improve the status of innovation in the country:

- Prohibitive procurement processes hinder the effective utilisation of the increased government R&D budget.^{3, 4}
- Current government auditing practices limit funding agencies' capacity to provide the right kind and amount of funds necessary to support R&D and innovation - 0.1 GERD (% of GDP) compared to 2.2 in Singapore.
- The Philippines also leads the region in the number of businesses closed. For every ten startups and SMEs founded, seven businesses are terminated. Lack of access to capital (a third of closures in 2015) and poor profitability are the leading reasons for closures.^{5, 6}

1 e27, 2017

2 Department of Science and Technology Regional Office V, 2015

3 Furnas, 2017

4 Araneta, 2016

5 Saulon, 2015

6 Velasco, et al, 2017

1.6 STRENGTHS AND WEAKNESSES ANALYSIS

BROADER ENVIRONMENT

STRENGTHS

WEAKNESSES

The ASEAN integration initiative pushed the Philippines to approach innovation systematically:

- Specified in the ASEAN 2025 blueprint is the strategy to enhance innovation, and better research and development and technology commercialisation. Some of the strategies specified are: developing partnerships between academia and the private sector, strengthening the MSME sector, and promoting an environment to nurture innovation.¹
- ASEAN as a whole has become the third-largest economy in Asia with a combined GDP of US\$2.6 trillion. It has been predicted that the community can boost the region’s economies by 7.1% and generate 14 million jobs.²

Innovation in the Philippines taking a backseat, coming out of prolonged period of oppression:

- The attitude towards innovation in the Philippines has been hampered by a prolonged period of limitation during which local innovation has taken a backseat. In the past three decades development has been understood as building infrastructure, an empowered business sector, and more jobs in the market. This creates a disconnect with honing locally developed technologies by mostly importing materials for infrastructure, as well as letting in businesses who take advantage of cheap labour in the country.³

1 ASEAN Secretariat ed., 2015
 2 Lehmacher, 2016
 3 Key Informant Interviews

1.6 STRENGTHS AND WEAKNESSES ANALYSIS

INSTITUTIONAL FRAMEWORK

STRENGTHS

Innovation is a current priority of most, if not all, players in the ecosystem:

- The Filipino Government is embracing an i3 strategy: inclusive, innovation-led, industrial.¹
- PCIEERD has rebranded itself as the innovation council of DOST, highlighting DOST's focus on using innovation to impact lives.²
- DOST has boosted assistance to startups, MSMEs and technology transfer.³

The current government mindset has uniquely positioned the Philippines to develop better relationships with partners and allies:

- The current administration created the Competitiveness and Ease of Doing Business Group (CEODBG) under DTI, as part of its socio-economic agenda.⁴

WEAKNESSES

There is poor alignment of agency priorities as regards the innovation agenda:⁵

- There are two bills tackling the innovation ecosystem in the Senate with disparate provisions involving the composition of a central body governing innovation, the focus of innovation and funding innovation:
- Innovative Start-up Act
- Philippine Innovation Act
- There are multiple plans executed by different departments which identify innovation as a priority but with no unifying plan:
- Philippine Export Development Plan (DTI)
- Philippine Rural Development Plan (DA)
- Philippine Roadmap on Digital Start-ups (DTI)
- Philippine IT Development Roadmap (DICT)
- Ambisyon Natin 2020 (NEDA)

1 DTI, 2017

2 PCIEERD, 2017

3 Philippines News Agency, 2018

4 DTI, 2017

5 Key Informant Interviews

1.6 STRENGTHS AND WEAKNESSES ANALYSIS

ECOSYSTEM CONNECTIONS

STRENGTHS

There are budding efforts from multiple government agencies and private institutions to have convergence projects and exercises:^[1]

- DICT is working with DTI, DBM and DOF to establish a national government portal, and with DTI and DOST on the startup ecosystem.
- DTI and DOST are working together to establish incubators such as QBO.
- The Newton Fund has organised collaborations between DA and CHED to encourage innovation in agriculture and between DA and DOST in commercialising agritech.

WEAKNESSES

Academics cite poor university support and entrepreneurial ability as key factors in not pursuing research commercialisation:²

- Research commercialisation does not contribute to recognised success in the academic field.
- Collaboration with industry is largely perceived as detrimental to academic success because of its complex and time-consuming nature.
- Unrealistic expectations of university IP revenue often cause technology transfer negotiations to collapse, which disincentivises further forays into commercialisation.

1 Key Informant Interviews

2 USAID STRIDE, 2014

2.
**CAPACITY BUILDING FOR
INNOVATION IN THE PHILIPPINES**

2.1 UNDERSTANDING THE RANGE AND SPREAD OF THE PHILIPPINES' INNOVATION POLICYMAKERS

Innovation Policymaker – [1] an individual responsible for, or involved in, formulating public policies which aim to support innovation – whether through seeking to improve supply, demand, connection, or direction of policy; [2] an individual who leads the deployment and implementation of major government programmes which are designed to foster an innovative culture or innovation.

L1 ASSISTANT SECRETARY / DIRECTOR	L2 PROGRAM MANAGER / DEPUTY DIRECTOR	L3 PROJECT MANAGER	L4 PROJECT HEAD/ TECHNOLOGY TRANSFER OFFICER
10-25 years of experience in government, responsible with evaluating and approving policies.	5-20 years of experience working in government, responsible for developing programs and proto-policies to be approved by their departments.	3-10 years of experience working in government, responsible for implementing a policy, research agenda, managing Project Heads.	<1-5 years of experience working in government, in charge of 1-4 projects or handles 1-4 sector engagements.

DOST = A

DTI = B

DICT = C

DA = D

NEDA = E

Method of determining number of innovation policymakers:

- 1 Only agencies involved in the Policy Accelerator were considered in the counting due to the absence of an innovation council.
- 2 Specific numbers of employment were taken from key informant interviews and a review of records of those fitting the definition of Innovation Policymaker mentioned above.
- 3 Extrapolation (X+) of the number we obtained assuming similar work structures across government agencies.
- 4 L1-L4 definitions were contextualised to the existing rank/hierarchical position present in government.

2.2 INNOVATION POLICYMAKER MAPS

	L1	L2	L3	L4
A	2	9	9	37
B	7	11	11	40+
C	3	0	3	20+
D	2	4	6	40+
E	1	3	3	19
TOTAL	15	27	32	156+

CAPACITY BUILDING FOR INNOVATION IN THE PHILIPPINES

2.3 INNOVATION POLICYMAKER 'PERSONAS'



Director For Innovation Policy Research

20 years in government.

Creates innovation policy and strategy.

Champions innovation in their agencies.

Director position or higher (Level 2).

Rose from the ranks.

Degree in physical sciences with strong research background.

"I take pride with my work in the government."

"It's easier for me to influence policy in my position now than when I was a researcher."

"I am always in meetings, which I know are very important. But, I also really need to train my team."

"I know my time is limited because I am an appointee so I always try and make sure I make the most of it."

KEY INDIVIDUAL AND COLLECTIVE CHALLENGES

- Balancing obligations as manager with desire and need to develop and upskill team members.
- Retaining senior team members who can help in upskilling.
- Training their team for the job due to lack of training available.
- Advocating for the implementation of controversial policies (e.g. asking a funding agency to seize control of IP from a university that has failed to commercialise it, as mandated by law).
- Rallying support for policies and strategies from other members of the ecosystem (who often have vested interests).

LEARNING ASPIRATIONS

- More technical knowledge on innovation policy and innovation strategy, especially best practices in other countries.
- Leadership and management skills, particularly HR.
- Advocacy communication skills.
- Research skills for team members.



Project Manager

INNOVATION ADVANCEMENT GROUP, DEPT. OF AGRICULTURE

5-10 years in service

Implements innovation projects and policies.

Connects with multiple stakeholders, especially tech adopters.

Team Lead (Level 3).

Degree in animal science, with his masters in public administration.

“I’ve seen it happen: young people will work for government if they are motivated by an inspiring manager.”

“It’s not part of my job, but when I got this post I made the career development of my team a priority.”

“Despite corruption issues and general mistrust of civil servants, there really are some people who are in government because they want to help make a difference.”

KEY INDIVIDUAL AND COLLECTIVE CHALLENGES

- Managing all projects under his belt.
- Balancing multiple stakeholder interests vis-à-vis current agency priorities.
- Managing expectations of the director.
- Prioritising projects to fund, and ensuring as little redundancy as possible with other agencies or groups.
- Growing a good team, knowing that most positions are job-order and team members leave in 1-2 years.

LEARNING ASPIRATIONS

- More technical knowledge on innovation in specific areas e.g. IT or agritech.
- Formal project management training especially evaluation and assessment.
- Pitching to stakeholders.
- Leadership skills especially value-formation and motivation.



Techtransfer Officer

FOOD AND NUTRITION RESEARCH INSTITUTE

Less than 5 years in service. Facilitates commercialisation of tech funded by her agency. Spent time in private sector. Degree in chemistry with training in tech management. Newly appointed in newly created division with no team yet (Level 4).

“I have no support from my senior managers. They think my promotion has undermined their authority because I am now tasked with doing what was their job before.”

“I have been performing the tasks of a whole division all by myself.”

“I prefer someone with a technical background to join my team than a business graduate. It’s easier to train someone in business than in science.”

KEY INDIVIDUAL AND COLLECTIVE CHALLENGES

- Currently has no team and given the responsibility to build a team for the division.
- Overwhelmed with daily operations of office and administrative tasks unrelated to specific projects.
- Balancing need to train to prepare self and need to be in office to deliver services.
- Reviewing and determining which projects are ready for commercialisation.
- Building relationships between academia and industry.

LEARNING ASPIRATIONS

- Technical skills in technology transfer.
- Marketing and negotiation skills.
- Technical skills in specific area (e.g. health regulation, nuclear policy).

**3.
ASSESSMENTS OF CURRENT AVAILABLE
RANGE OF SUPPORT AND TRAINING FOR INNOVATION
POLICYMAKERS IN THE PHILIPPINES**

ASSESSMENTS OF CURRENT AVAILABLE RANGE OF SUPPORT AND TRAINING FOR INNOVATION POLICYMAKERS IN THE PHILIPPINES

3.1 EVALUATION OF CURRENT PROGRAMMES

Across the entire innovation ecosystem, government employees are required to pass the civil service examination. Additionally, aspiring employees need to compete for the limited redeployment positions (permanent/regular status) before they can acquire paid training by the government, otherwise all training and modules have to be set and funded by them.

Scholarships are made available and funded either by the sending agency or the providing agency but often restricted to employees with a salary grade of 25 or higher, unless in special instances determined by agency leads. The participants are tied to the agencies for at least as long as the training takes.

Current programmes available:

PROGRAMME	SKILLS DEVELOPED	FUNDED/PROVIDED BY	ASSESSMENT
Public Management Development programme (Senior Executives Class/Middle Managers Class).	Competencies related to public service such as personal efficacy and leadership, strategic public management and governance and development.	Provided by Development Academy of the Philippines. Funded by sending agencies.	While it does not address a specific weakness in section 4, it does allow upskilling of professionals working in the government in terms of management, so it remains a relevant programme.
USAID Science, Technology, Research and Innovation for Development (STRIDE) programme.	Competencies in commercialisation specifically for tech transfer offices including business model development, pitching, negotiation and portfolio management.	Provided by USAID STRIDE. Funded by the DOST.	The programme in the US focused on tech commercialisation which is a critical area of concern in the innovation system. However, according to alumni, the lack of follow-on support in the PH made the improvements difficult to sustain.

ASSESSMENTS OF CURRENT AVAILABLE RANGE OF SUPPORT AND TRAINING FOR INNOVATION POLICYMAKERS IN THE PHILIPPINES

3.1 EVALUATION OF CURRENT PROGRAMMES

Current programmes available:

PROGRAMME	SKILLS DEVELOPED	FUNDED/PROVIDED BY	ASSESSMENT
Newton Agham Leaders in Innovation Fellowship (LIF) programme.	Competencies in commercialisation including business model development, pitching and negotiation.	Provided by Royal Academy of Engineering and the Asian Institute of Management. Funded by the DOST and Newton Agham.	The landing programme was able to cement the benefits of the boot camp in the UK and has resulted in a new generation of researcher-entrepreneurs.
IPOPHL Patent Examiners' Training.	Patent writing and examination.	Provided by IPOPHL. Funded by forwarding agency.	This was a required training for all TTOs. While it was necessary at the time because there were not many patent writers, the graduates do not exercise their skills in their current positions as TTOs.
Masters of Public Administration programme.	Advance the knowledge of mid-career public administrators in public management. Elective programmes offering policy writing.	Provided by University of the Philippines National College of Public Administration and Governance. Funded by the various agencies that send their employees there.	This programme is provided for those who have earned a five year tenure in government. There has been criticism about the decline of this programme citing a poor faculty. However, policy writing and evaluation are only electives on this course and can be omitted by candidates.

3.2 KEY AREAS OF DEMAND AND HOW THEY ARE BEING MET

• SOCIAL IMPACT EVALUATION OF INNOVATION:

There is great demand across the innovation ecosystem to ensure that innovations benefiting from public funds reach Filipinos, most especially the poor. The perceived or actual social impact of a proposed or actual innovation project is already becoming a required metric in public investment proposals. However, people who evaluate these proposals do not have training in assessing the social impact of innovations. Currently, there is no available training for this in the Philippines targeted at the public sector.

• EVIDENCE-BASED POLICYMAKING:

There is demand for more training in the technical aspects of innovation so that policymakers can understand currently available data being presented, and translate these into policies. There are broad programmes for training in policy and strategy but there is no training for innovation policy or innovation strategy specifically, which is currently available for innovation policymakers.

• TECHNOLOGY COMMERCIALISATION:

This is the most notorious bottleneck of the PH innovation ecosystem; much of the blame is directed towards university TTOs for failing to steer publicly-funded technologies developed in their universities beyond the walls of the campus. Training for TTOs is provided by many different agencies. However, the training focuses on legal and technical issues. There is little emphasis on management of the technology and of the process of commercialisation. We recommend a training for university TTOs that is cohesive, case-based, and interactive, focusing on IP management.

4.
**ASSESSMENT OF LIKELY AREAS OF FOCUS
FOR A GLOBAL INNOVATION POLICY ACCELERATOR
TEAM FROM THE PHILIPPINES**

What are the important innovation policy topics and themes that teams might engage with through the Global Innovation Policy Accelerator?

The general areas of focus that might prove useful for a policy intervention or development are: developing policymaking strategies, enabling collaborative work, and improving technology transfer practices. The following are specific examples of themes that are arranged by Capability, Process, or Content Areas:

1.

Capability Theme:

- Evidence-based policymaking for Level 1 and Level 2 innovation policymakers (IPMs)
- Policy analysis and evaluation for Level 3 and 4 IPMs

2.

Process Issues:

- Collaboration between ministries and agencies who are engaged in research and innovation
- Improving governance of innovation system: lending structure to the innovation ecosystem

3.

Content Areas:

- Technology Transfer
 - Capacity development for university TTOs to create and implement policies to encourage researchers to pursue research commercialisation
- Funding
 - Training for 'traditional investors' in investing in digital startups and R&D
 - Investment training programme for high-net-worth individuals to become angel investors
 - Investment training programme in public initiatives

**5.
DIAGNOSIS AND
RECOMMENDATIONS**

Addressing innovation policy issues in the Philippines requires a multi-dimensional approach to be effective. Currently, available programmes do not address the support system, and without addressing the support system, any effort to improve might turn out to be ineffective. Following are some recommendations with the description of the specific support system it aims to address.

1. EFFECTIVE PRACTICES FOR INFORMATION SHARING BETWEEN DEPARTMENTS

Behind the convoluted roadmaps each department is making, research is being done by the individual departments in silos. Effective information sharing can be the first step in trying to resolve redundant undertakings and avoid wasting time on discredited ventures.

2. EVIDENCE-BASED POLICYMAKING FOR MINISTRIES AND UNDER-MINISTRIES

Policy-making for most departments has been a top-down process. This becomes difficult when the head of a department does not have the correct information, then champions a policy that might impede progress. Departments should look for solutions that are evidence-based, that are beneficial for the department and the country.

3. EFFECTIVE COLLABORATION AMONG MINISTRIES ENGAGED IN RESEARCH AND INNOVATION

Departments have become isolated in developing solutions, in that they only consider the individual capabilities of the departments and disregard the potential of the others. Benefits such as increased transparency, flexibility of employees, and more innovative ideas can be gained from effective departmental collaboration. By doing so it allows other departments to view and evaluate policies each of them implement.

4. DEVELOPMENT OF A BEST PRACTICE/ OPERATIONAL FLOW MANUAL, WHICH INCLUDES AND EVALUATES INNOVATION AS A METRIC FOR SUCCESS, FOR EACH DEPARTMENT

There is little evidence that people believe that innovation is in their mandate. Moreover, even when they try to innovate, they are not sure they are doing it correctly. There should be a proper policy set in place for departments to champion innovation as well as to share their success stories with other departments.

5. ASSESSING AND ENABLING THE INNOVATION ECOSYSTEM TO DRIVE SOCIAL IMPACT

Reports of positive success metrics of GDP might not be meaningful to the majority of Filipinos, leaving most with a feeling of dissatisfaction even during a boom in economic performance. To be able to sell innovation as a concept to the government as well as the country, the effects of innovation should first have a social impact that is tangible to the poorest Filipinos. These processes must be properly assessed to help develop models for best practice for innovation in government.

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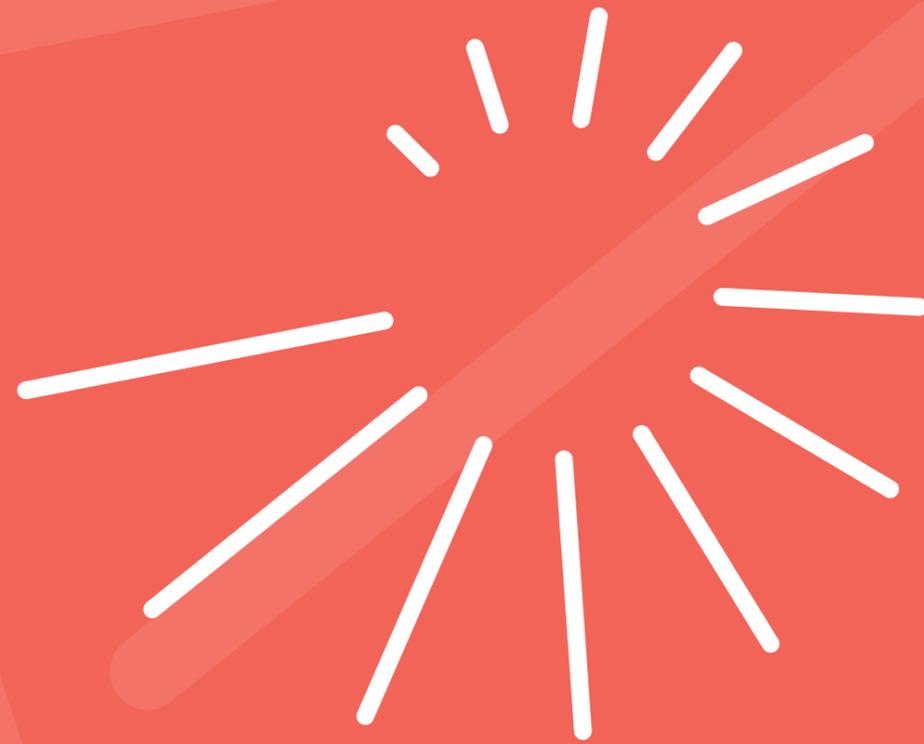
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