



# PCIEERD POLICY BRIEF

"Enabling scientific solutions through strategic research and development"

@dostpcieerd

pcieerd.dost.gov.ph

pcieerd@pcieerd.dost.gov.ph

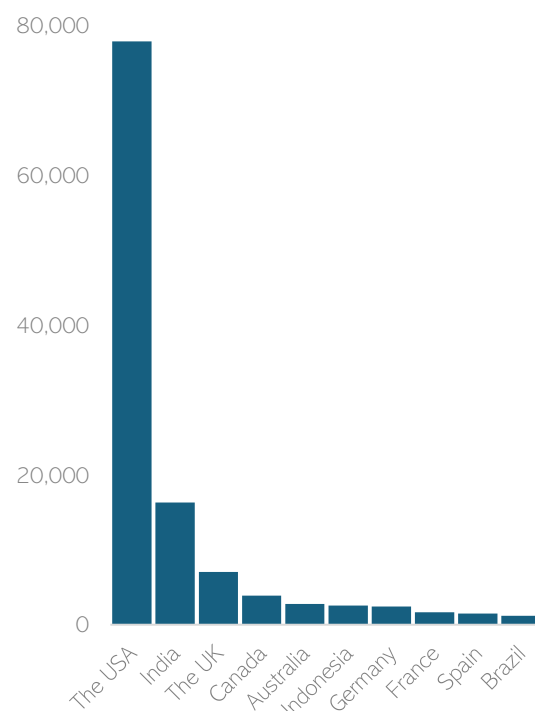
## FOSTERING INNOVATIVE PINOY TECH IDEAS THROUGH STARTUP RESEARCH GRANTS AND SECURING THEIR LONG-TERM VIABILITY

### *Key Policy recommendations:*

- Advocate for interagency coordination between startup funding agencies and other relevant government agencies responsible for documentary requirements of startup programs;
- Capacitate and foster the startup ecosystem in other regions;
- Budding startups should be provided with synergistic networks; and
- Lobby for the amendment of outdated regulatory measures and provide post funding endorsements to startups.

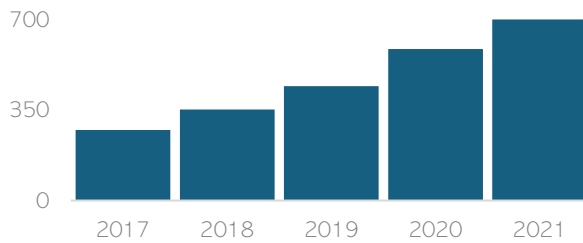
Section 3(g) of the R.A. No. 11337 or the Philippine Startup Act defines a startup as any person or registered entity in the Philippines which aims to develop innovative products, process, or business model. It is a young company that innovates technologies - or applies existing technologies in innovative ways – to provide a new product or service. It is further referred to as “disruptor” not only because it displaces products offered by traditional businesses, but also because it changes the way products or services are supplied, and consequently, the way we live. In the Philippines, an innovative startup is defined as any enterprise that is less than five (5) years old, registered with financial regulatory authorities of any country, provided that majority of its team is operating and residing in the Philippines. It should have the potential to scale, to utilize non-traditional business models, and to address a specific social problem (Teves, et al., May 2023).

Top 10 Countries with the Most Startups



It has been reported that there are over 150 million startups worldwide as of 2023, with the United States having the highest number of around 72,560 startups (Shewale, May 2023).

Number of Startups in the Philippines from 2017-2021 (Statista, 2023)



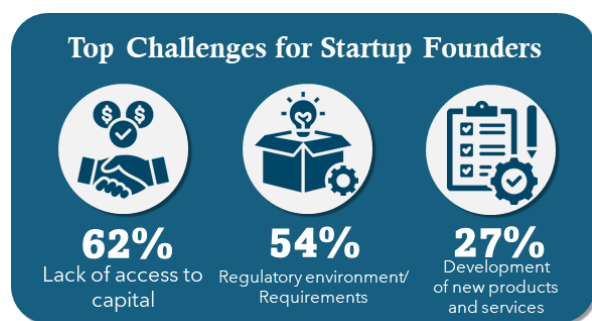
In relation to the Philippines, it has a relatively young but rapidly expanding startup ecosystem with around 700 startups as of 2023, an increase of 156 percent from 273 startups in 2017 (Teves et al., May 2023). This is manifested in the improvement in its position in the Global Country Ratings, placing in the 52<sup>nd</sup> spot globally. Financial technology, life sciences and healthcare, and artificial intelligence remain the most popular industries in startup categories worldwide (DTI Policy Brief: Startups, 2021).

The Philippines startup ecosystem started in early 2000s with the emergence of mentorships and the first private sector incubators (Teves et al., May 2023). As a matter of fact, most of the existing startups that venture on retail, education, fintech, shared service facilities, and digital services were founded in 2016, concluding that the industry is fairly new in the country. This entails the propagation of “serial entrepreneurs” in the industry, wherein most startup founders are also owners of multiple businesses. The startup industry is projected to thrive in the coming years as Filipino entrepreneurs continue to develop and venture into innovative ideas. The global trend is also in favor of the Philippines as most investors

perceive Southeast Asia as a primary market that has immense potential for economic growth. Indeed, the Philippines checks all the boxes in terms of criteria for investment: having (a) available market, (b) available talent, and (c) low barrier for entry (PwC, 2017).

Moreover, Philippines ranked among the top 25 Asian Ecosystems and top 15 Asian Emerging Ecosystems in funding according to the Global Startup Ecosystem Report of 2022 of the Startup Genome (Talavera, 2023). Nine (9) Philippine startups also made it to the Forbes Asia’s 100 to Watch List which spotlights startups that are targeting underserved markets or applying new technologies (Gonzales, 2023).

Nonetheless, the Philippine Startup Survey reveals major challenges encountered by startups. One of these challenges is the capital requirement in establishing an enterprise given that it roughly requires at least one million pesos to kick off the business and guarantee its sustainability. As a result, the majority of startups resort to equity financing, angel investors, or rely on their own capital to finance their growth. Furthermore, some startups find it burdensome to obtain permits and licenses for government grants. Even after completing the requirements, the processing of applications can take so long that by the time a decision is made, the startup’s financial resources have already been exhausted (Teves et al., May 2023).



## Enabling Local Startups Ecosystem:

It was in 2010 when the Philippine government started recognizing the importance of startups and providing support through enabling policies. These enabling policies were followed by the creation of the Roadmap for Digital Startups in 2015 and the Philippine Innovation Act of 2019, which awards grants to enterprises that develop innovative solutions in ten (10) priority areas identified under its 10-year National Innovation Agenda and Strategy Document (Teves et al., May 2023).

The government and other stakeholders i.e., universities, conglomerates, and global companies also sponsor incubators and accelerators. While an accelerator offers mentoring, access to finance, and networks to investors, an incubator assists in turning unique ideas into sustainable businesses through guidance, training, access to markets, and connections to potential investors (Teves, et al., May 2023).

Moreover, the enactment of the Philippine Innovative Startup Act created programs and incentives to support the development of startups. It is aimed at providing benefits and removing constraints in order to encourage the establishment and operation of innovative new enterprises and businesses crucial to their growth and expansion. In 2018, the DOST-PCIEERD, Department of Trade and Industry (DTI), and Department of Information and Communication Technology (DICT) forged an agreement to synergize their assistance to the Philippine startup community, to provide continuous support and respond to the community's needs, and to promote innovation and technopreneurship for the socio-economic development of the country.

However, even prior to the passage of the Philippine Innovative Startup Act, PCIEERD had already implemented the Startup Grant Fund (SGF) Program in 2018, financing a total of fifteen (15) startups. The Council relaunched the said program in 2021 in alignment with the enactment of the Philippine Innovative Startup Act in order to capacitate local innovative entrepreneurs and manifest their proud Pinoy tech ideas through providing support for various technology needs.

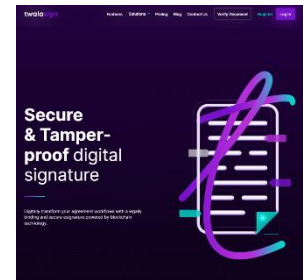
The main goals of this program are (1) to improve the product's marketability through establishing initial market traction, (2) refine the business model, (3) upgrade existing practices that provide revenue through overcoming R&D roadblocks, and (4) strengthen intellectual property which will eventually entice lead users into purchasing their products. The SGF Program's initial call for application proved successful, with funding granted to twenty-one (21) startups. To date, the SGF Program has supported a total of forty-three (43) startups, with cumulative funding of Php. 225.84 million.

In addition to the SGF Program, PCIEERD also launched the **Women-Helping-Women: Innovating Social Enterprises (WHWise) Program** in 2021 which is focused on assisting Women-led Social Enterprises (SEs) in need of assistance with acquiring technology, R&D technical assistance, and mentoring.

The Policy Group of the Policy Coordination and Monitoring Division (PCMD) of PCIEERD, conducted a study on the implementation of these 2 Startup programs, randomly selecting three (3) grantees, one (1) from each of the major island groups - Luzon, Visayas, and Mindanao. The study employed a qualitative method.

## Case Study: TWALA

The grantee from Luzon was Twala, a blockchain startup specializing in document management and digital signature for drafting, signing, verifying, and storing digital contracts and documents. Its funding was utilized to improve security, enhance user experience, and guarantee the authenticity of all documents signed within the platform. Through the enhanced blockchain-based digital signature solution, Twala is providing companies with remote and hybrid work arrangements with an innovative yet secure way of signing crucial documents. Moreover, Twala is compliant with the domestic and international laws on digital signatures. Twala's R&D activities funded by the Council has helped the latter advance blockchain's practical application in the Philippines and has supported its new blockchain training program for its researchers to determine other practicable applications of the technology.

The Twala logo consists of the word "twala" in a lowercase, bold, sans-serif font, centered within a white circle.

## Case Study: Virtualahan

For Mindanao, one of the grantees of the WHWise program was selected, which is Virtualahan, a startup social enterprise based in Davao City. It promotes equal access to education for persons with disabilities (PWDs) and envisions to break multiple barriers that hinder PWDs from engaging in high-level work in various industries. With the support from the Council's funding, a fully accessible cloud-based learning management system was developed which equips PWDs with in-demand digital skills necessary to work in the digital economy. As a result, 70% of about one thousand (1,000) PWDs scholars who received the grant secured jobs, mainly aligned with the training programs they completed with Virtualahan from 2021 to 2023.

## Case Study: AtoANI

For Visayas, another notable grantee under the WHWise Program was selected which is AtoANI, a startup social enterprise located in the province of Bohol. AtoANI specializes in the production and distribution of organically farmed fresh produce from its own farm and from partner farmers employing a produce-to-demand agriculture model. The grant was primarily used to improve the AtoANI i-CROP prototype and subsequently validate it with partners. AtoANI i-CROP is an online platform that provides data-driven analytical recommendations to farmers on the type and amount of crop to plant depending on soil-crop compatibility data in Bohol and Cebu. The project's overarching goal is to promote sustainable agriculture by eliminating, if not significantly reducing, crop wastage among farmers, and ensuring a ready market for their crops through customers using the platform.



While the SGF and WHWise Programs play a crucial role in addressing compounding concerns of startups by assisting them translate their early-stage technologies into market ready products, persistent challenges hinder startup grantees and potential grantees alike from taking advantage of these grants and other similar government grants and in securing sustainability in their operation after the grant period.



## ISSUES AND CHALLENGES

### **On Government Startup Grant Fund Programs:**

*1. Lengthy application procedures and numerous requirements of startup programs offered by various government agencies, some of which are inapplicable to the nature of startups.*

Funding opportunities such as the DOST PCIEERD startup grants are also offered by other government agencies such as the Department of Trade and Industry (DTI) and Department of Information Communications Technology (DICT). In November 2021, the DTI, together with the National Development Company and QBO Innovation Hub, established the Startup Venture Fund that allocated Php 250 million venture funds for innovative Philippine startups (DTI Policy Brief: Startups, 2021). In the same year, the DICT launched its Startup Grant Fund which provides funding up between Php 500,000 to Php 1 million to early-stage ICT-based startups and gives them access to mentors and coaches.

Nonetheless, typical challenges among startup grantees of government programs include

lengthy application process and numerous documentary requirements which must be fully complied with prior to the release of grant. In fact, five startups under the SGF and WHWise Programs reportedly took longer than six months to secure the requirements from **local government units (LGUs) and other regulatory agencies**. Yet, some requirements from LGUs and other regulatory agencies are not applicable to the nature or setup of some startups. In the case of Virtualahan, which fully operates online, it had to rent a small office space just to secure a permit from the LGU of Davao City.

Furthermore, grantees of government programs are required to attend all seminars under their respective acceleration/incubation programs without prior consultation if they have already participated in similar seminars, nor is there prior determination whether these seminars are applicable to the nature of startups. There is also no post assessment of the effectiveness of the seminars conducted.

### **On Sustainability of Startups:**

*1. Feeble startup ecosystems in Visayas and Mindanao.*

As earlier mentioned, 26 out of the 37 startups funded under the PCIEERD start up programs were from Luzon, while only 11 startups came from Visayas and Mindanao. This is mainly attributable to inability of startups from Visayas and Mindanao to compete with other startups coming from Luzon on the basis of merit.

*2. Delay in processing Intellectual Property applications by the Intellectual Property Office.*

The issue of slow processing of intellectual property applications has been persistently



brought out during interviews with a few startup grantees under the SGF and WHWise programs. During the interview with AtoANI in October 2023, it mentioned that it filed a patent application for its AtoANI-ICROP platform on 01 June 2022, but the said application is still pending to date. The same experience was highlighted by Virtualahan during its interview in September 2023 for the copyright application of its learning management system filed in January 2023.

### *3. Outdated regulatory measures and accreditation procedures of relevant government agencies.*

Securing proper accreditation from the government encourages public trust as it is presumed that the startup has complied with the legal requirements and regulations that protect public interests. Further, it fosters accountability for the performance and conduct of the startup, among others. While not all startups require accreditation, those that voluntarily opted to secure it are having difficulty because of outdated regulatory measures.

In the case of Twala, it faced challenges in obtaining accreditation from the Department of Trade and Industry (DTI) as a digital signature platform using blockchain technology, despite the principle of technology neutrality under *R.A. No. 8792 or the Electronic Commerce Act of 2000* and other issuances of DOST and DTI. Similarly, Virtualahan, encountered difficulties in obtaining accreditation from the Technical Education and Skills Development Authority (TESDA). TESDA's requirement for actual office space for the conduct of training and seminars posed a hurdle, notwithstanding the full digital nature of Virtualahan's business operations.



## POLICY RECOMMENDATIONS

### **On Government Startup Grand Fund Programs:**

*1. Advocate for interagency coordination among startup funding agencies and other pertinent bodies responsible for providing documentary requirements for startup programs through department administrative orders, memorandum circular, and/or ordinances.*

It is acknowledged that all documentary requirements for startup programs are reasonably necessary to ensure proper disbursement and use of public funds. Nevertheless, funding agencies, together with other relevant government agencies, may periodically assess the applicability and relevance of these requirements while taking into consideration the varying nature and capabilities of startups in the Philippines. For instance, a prior capability assessment may be conducted to determine which seminars under the TBI Program are to be attended by startup grantees.

Moreover, the DOST, DTI, and DICT should engage in interagency and policy coordination with LGUs, and other relevant government agencies to expedite the application process and issuance of documentary requirements. It is crucial to ensure proper and timely compliance with the *Ease of Doing Business Law and Efficient Government Service Delivery Act of 2016*. This law enjoins government agencies to promptly process applications and transactions. Streamlining the requirements and procedures makes the programs more accessible to startups, encouraging their participation and ultimately fostering increased competition and more

innovative ideas among applicants. Further, startups will save time and resources which can then be allocated to their operational expenditures.

### **On Sustainability of Startups:**

#### *1. Capacitate and foster the startup ecosystem in other regions.*

There is a need to strengthen the startup ecosystem in other regions to improve their performance in the regional startup ecosystem rankings and to have more startups coming from these regions securing funding from investors and the government. Moreover, accelerators and incubators should serve as champions in bringing together all the different stakeholders in their respective regions and jointly implementing programs and activities aimed at boosting their startup ecosystem. As of date, there are thirty-two (32) incubators operating under the TBI Program of PCIEERD in collaboration with higher education institutions, each supporting 10-15 startups per year through technical, business development, and marketing assistance, as well as intellectual property management and legal counselling services.

Moreover, startup grant fund programs of the government should be heavily promoted by; (a) having a more extensive presence in various social media platforms; (b) forging partnerships with stakeholders, including but not limited to, government agencies, non-governmental agencies, and private companies that share the same objective; (c) and engaging with communities in the grassroots level to stimulate their interest in startups and eventually cultivate the growth of the startup ecosystem throughout the Philippines driving innovative ideas aimed at utilizing science and technology to solve societal

challenges. This upholds **Sec. 16 of the Philippine Innovative Startup Act** which states that aside from promotional programs, educational programs regarding startups will also be a mandate of government agencies.

#### *2. Expand the coverage of the Science and Technology Superhighway Program and amend relevant provisions of the Intellectual Property Code through an amendatory legislation to express a more specified period for review of intellectual property applications.*

The Intellectual Property Office of the Philippines (IPOP HL) is intending to implement the **Joint Examination Trace Procedure (JET)** which will fast track the processing of trademark applications by designating senior examiners in determining the registrability of a mark on absolute grounds as provided under *Sec. 123 of the Intellectual Property Code*. Thus, a trademark application will be published within 30 days to accommodate any opposition and will be deemed registered on the 31<sup>st</sup> day if there is no opposition. The DOST or any other Host Agencies may suggest to the IPOP HL the extension of this procedure to other types of intellectual property applications. Moreover, IPOP HL, DTI, and DOST executed a tripartite Memorandum of Agreement in 2020 regarding a project called the “Science and Technology Superhighway” that will expedite the processing of IP applications, particularly industrial designs, utility models, inventions, and trademarks, through IPOP HL’s express lanes. Hence, DOST, DTI, and IPOP HL may expand the coverage of this agreement or execute another agreement that will cover other intellectual property applications such as patent and copyright. Once adopted, these policy recommendations will form part of the Philippine Startup Development Program.

In addition, the Host Agencies may propose that a specified period for the substantive examination of intellectual property applications be reflected in the *Intellectual Property Code* to set proper expectations on the applicants as to when their applications will be completed. As observed, the *Intellectual Property Code* only provides for the period for filing of opposition to an application, but it is silent on other parts of the application process. Moreover, such amendment is in compliance with the *Ease of Doing Business Law and Efficient Government Service Delivery Act of 2016* ordering 3-7-20 day turnaround time for simple, complex, and highly technical transactions.

*3. DOST, DTI, and DICT to execute a joint administrative order to help startups lobby for the amendment of outdated regulatory measures and provide post funding endorsement by linking startup grantees with other government agencies.*

Funding agencies of the programs must ensure that startups grantees are properly endorsed to other government agencies, as a testament to their credibility and competence, which will aid them in securing accreditation and even foster partnerships with government agencies and private institutions alike.

Further, implementing agencies of the Philippine Innovative Startup Act must support startups in lobbying for the amendment of outdated regulatory measures to ensure that they are in harmony with recent technological advancements. For instance, it may support a blockchain startup in its collaboration with the Philippine Accreditation Board of the DTI in revising the governing rules on digital signature. The Philippine Startup Week is a potential avenue where issues related to regulatory measures,

accreditation, and collaborations/partnerships may be brought up as this event engages startups, government agencies, and other stakeholders.

### **Other Policy Recommendation**

*1. Budding startups should also be provided with synergistic networks to aid them in building and protecting their brand.*

Access to various service providers, producers, and manufacturers enhances the efficiency of prototype or product development. This underscores the need for relevant agencies to ensure the protection of intellectual property. Host agencies such as DOST, DICT, and DTI should guarantee that the startups are provided the IP assistance and training programs in specific areas of the IP system.

The rapid expansion of the Philippines startup community is heavily attributable to various governmental mechanisms providing support in terms of finance, capacity building, market access, and regulatory and legal assistance, among others. This corresponds with the strategy of the Philippine government of promoting technology and innovation to accelerate its socio-economic growth.

Nonetheless, to accommodate this growth, continuous promotional efforts and capacity building activities must be undertaken to encourage innovators in other regions to establish startups. Moreover, there must be periodic review and/or amendment of government rules and regulations relative to startup operation and accreditation which may be accomplished by way of effective intergovernmental coordination.



## References:

1. Section 3, R.A. No. 11337 or the Philippine Innovative Startup Act of 2018
2. Teves, G., Muralla-Palustre, H., Saulo, C., Pajutan, J., Fetalino III, M., Vandenberg, P. (May 2023). The Philippines' Ecosystem for Technology Startups. Asian Development Bank. Retrieved 15 November 2023 from: <https://www.adb.org/sites/default/files/publication/884641/philippines-ecosystem-technology-startups.pdf>
3. Shewale, R. (September 2023). 100+ Startup Statistics in 2023: Current State, Funding, and More. Demandsage. Retrieved 12 October 2023 from: [https://www.demandsage.com/startup-statistics/#:~:text=Startup%20Statistics%20Top%20Picks%20\(2023\)&text=There%20are%20over%20150%20million,of%20market%20demand%20for%20products.](https://www.demandsage.com/startup-statistics/#:~:text=Startup%20Statistics%20Top%20Picks%20(2023)&text=There%20are%20over%20150%20million,of%20market%20demand%20for%20products.)
4. Department of Trade and Industry. (2021). Startups. DTI. Retrieved 12 October 2023 from: [https://innovate.dti.gov.ph/wp-content/uploads/2020/07/Startups\\_draft.pdf](https://innovate.dti.gov.ph/wp-content/uploads/2020/07/Startups_draft.pdf)
5. PricewaterhouseCoopers (PWC). (2017). Off to a Great Start: The Philippine Startup Ecosystem. Retrieved 15 November 2023 from: <https://www.pwc.com/ph/en/ceo-survey/2017/pwc-qbo-2017-philippine-startup-survey.pdf>
6. Talavera, C. (April 2023). Philippine shaping up as ideal site for startups. Philstar Business. Retrived 12 October 2023 from: <https://www.philstar.com/business/2023/04/02/2256143/philippine-shaping-ideal-site-startups#:~:text=Based%20on%20the%20Global%20Startup,Asian%20Emerging%20Ecosystems%20in%20Funding.>
7. Gonzales, I. (August 2023). 9 Philippine startups among Forbes Asia's 100 to Watch. Philstar. Retrieved 12 October 2023 from: <https://www.philstar.com/headlines/2023/08/30/2292394/9-philippine-startups-among-forbes-asias-100-watch#:~:text=The%20Nine%20Philippine%20companies%20are,sari%20store%20owners%3B%20Peddlr%2C%20which>
8. R.A. No. 8792 or the "Electronic Commerce Act of 2000."
9. Joint Administrative Order No. 2, Series of 2001, of the DOST and DTI entitled, "Providing Implementing Rules and Regulations on Electronic Authentication and Electronic Signatures."
10. R.A. No. 11032 or the "Ease of Doing Business Law and Efficient Government Service Delivery Act of 2016."
11. Sec. 123 of R.A. No. 8293 or the "Intellectual Property Code of the Philippines."

**Acknowledgements:** Mr. Jeffrey Reyes (TWALA), Ms. Maria Wilvenna Anora (AtoANI), Ms. Rose Villamor (Virtualahan), Ms. Russell Pili, (Chief SRS-RITTD), Engr. Edward Paul Apigo, Ms. Liezl Sueno of RITTD-PCIEERD.

Highlights of PCIEERD's stance on policy issues related to industry, energy and emerging technology sectors through the coordination of the Policy Unit and the PCIEERD Technical Working Group for Policy Review and Development

For more information, please contact:  
Policy Coordination and Monitoring Division (PCMD)

Philippine Council for Industry, Energy, and Emerging  
Technology Research and Development (DOST-PCIEERD)  
4th and 5th Level Science Heritage Bldg., Science Community Complex,  
Gen. Santos Avenue, Bicutan, Taguig City 1631, Philippines  
Telephone: 8837-2071 to 82 loc. 2100, 2120 & 2121 Fax: 8837-6154

Dr. Enrico C. Paringit  
Executive Director

Ms. Grace F. Estillore  
Chief SRS, PCMD

Technical Writers:  
Ulysses Palmones, Samuel John Cahimat

### CONNECT WITH US!



@pinoyscience



pcieerd@pcieerd.dost.gov.ph



DOSTPCIEERDInnovationCouncil



pcieerd.dost.gov.ph

@dostpcieerd