ANALYSIS

Country overview: Philippines
Growth through innovation

December 2014
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Executive summary

1. The Philippines has become one of the fastest growing economies and mobile markets in Asia; its economy has undergone an 11% average annual rise in the last 3 years, and unique mobile subscriber growth has averaged 6% over the same period. However, it is the level of consumer engagement with mobile and technology that has come to differentiate it from other fast growing peers in Asia.

Known as the “texting capital of the world” and the “social media capital of the world” at various times over the last few years, the Philippines has an advanced mobile market when compared to other similar countries. Half of the population subscribes to mobile services, 3G penetration is relatively high at just under 40%, smartphone adoption is rapidly growing, and internet penetration is increasing at the fastest rate of any country in Asia with the vast majority of new users coming online via mobile.

2. The combination of a youthful and literate population that is ‘hyper engaged’ with mobile, a large proportion of English speakers, an improving economy and increasing interest from VC investors, and the presence of operators in the innovation space is creating a perfect environment for the development of innovative mobile services.

A tough and continuously evolving competitive landscape, particularly with the growth of internet players and IP communication, is providing impetus for operators to innovate to maintain relevance and mindshare with consumers, and develop new revenue streams. Innovation hubs are springing up all over the country, attracting growing interest from venture capital and other foreign investment. Further, innovative mobile services are helping provide underdeveloped, underserved and poverty stricken regions with the opportunity to overcome socio-economic challenges. Key areas include access to financial services, education and the ability to pre-empt, respond and assist with recovery from natural disasters (the Philippines is one of the most environmentally vulnerable countries in the world).

In sum, the Philippines is being transformed into a leader in mobile and digital technologies and an innovation hotbed in South East Asia – in many ways presenting a model that other countries can glean insights from in catalysing their own innovation ecosystems.

3. However, efforts need to be made to ensure further investment is put to the best use, and a key area is digital inclusion. The social and economic incentive to expand mobile and innovative mobile solutions into underserved provinces is now a key focus, building on the success that has already been demonstrated in high density urban cities.

Narrowing the digital divide between advanced urban cities and outlying rural regions is of key importance. We believe multi-stakeholder collaboration between industry, investors and policy makers focused on three key factors will have the best chance of influencing this: i) allocating sufficient low-frequency, high propagation spectrum (sub 900MHz) for improved mobile broadband coverage beyond the cities, ii) establishing innovation centres in outlying provinces, and iii) continuing to build on existing operator efforts to understand their local customer groups (manifest in the user-centric design model of service delivery).
National context

The Philippines is a sovereign island country in South East Asia situated in the western Pacific Ocean, consisting of 7,107 islands that are categorized broadly under three main geographical divisions: Luzon, Visayas and Mindanao. The capital city is Manila, while the most populous city is Quezon City; both are part of Metro Manila on the island of Luzon. The Philippines is the 12th most populous nation on Earth (98.4 million), with over half of the population under 25 and an even male-female and rural-urban split. As part of the Spanish Empire for over 300 years, 90% of the population are Christians and, despite the official language for many years being Spanish, the legacy of the American administration during the first half of the 20th century has been that its two official languages today are English and Filipino (derived from Tagalog). Both are used in government, education, print, broadcast media and business, and approximately 80% of the population speaks English.

The return of democracy and government reforms beginning in 1986 were hampered by national debt, government corruption, coup attempts, environmental disasters, a persistent communist insurgency, and a military conflict with Moro separatists. However, successive government administrations have improved political stability and developed a rapidly growing economy. The Philippines is currently the 39th largest economy in the world ($272 billion in 2013) but, following a transition from an agriculture based economy to a services and manufacturing one, the GDP compound annual growth rate of 11% over the last 3 years is one of the highest in South East Asia, and some financial institutions (Goldman Sachs and HSBC for example) are predicting it to enter the top 20 largest economies by 2050.

Despite this rapid economic expansion, the Philippines is ranked 117th on the human development index (HDI) scale with a ‘medium’ index value of 0.66 in 2013. However, this varies hugely between regions, from Benguet with a ‘very high’ value of 0.883 to Sulu with a value of 0.276, highlighting a very broad and uneven distribution of wealth (the top 10% account for 33% of total income). In addition, over 40% of the population live on less than $2 a day, and a quarter live below the national poverty line of PHP 18,935 annually (around $1.16 a day), 75% of whom live in rural areas. Rural areas have also suffered from under-development in other areas of the economy. Whilst access to clean water and sanitation is fairly high, even in rural areas (91% and 69% respectively), access to electricity, financial services and healthcare is well behind urban areas. Many areas, particularly in Mindanao, suffer rotating 12-hour blackouts due to inadequate power supply; 34% of municipalities (mostly in rural areas) do not have a banking office (around 70% of the population is unbanked); and some provinces have almost no access to healthcare services at all. In 2013, total expenditures on the health sector was 4.6% of GDP, below the 5% WHO standard, and across the country there were on average 5 hospital beds per 10,000 people (the global average is 30).
Over the last 30 years, the Economy has transitioned from one based primarily on agriculture, to one based on services, and is now a major outsourcing destination – 53% of the total workforce in 2012 were employed by the service industry (up from 33% in 1982), accounting for 57% of the GDP. Agriculture meanwhile employs 32% of the workforce (down from 52% in 1982), accounting for 12% of GDP. Coupled with a relatively high literacy rate (over 95%) and with a high proportion of youth and English speakers, the Philippines has become a market with a very high economic and business potential, attractive to investors and developers from all over the globe.

Figure 1: Urban vs rural gap, Philippines
Source: World Bank, Philippine Institute for Development Studies

Figure 2: HDI and poverty by province
Source: National Statistical Coordination Board

9 World Bank
The mobile market

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique subscribers (million)</td>
<td>44.0</td>
<td>46.8</td>
<td>49.2</td>
<td>50.9</td>
</tr>
<tr>
<td>Connections (million)</td>
<td>94.4</td>
<td>103.7</td>
<td>109.2</td>
<td>116.6</td>
</tr>
<tr>
<td>Penetration, unique subscribers</td>
<td>46%</td>
<td>48%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Penetration, connections</td>
<td>98%</td>
<td>106%</td>
<td>110%</td>
<td>116%</td>
</tr>
<tr>
<td>Unique subscriber growth (annual)</td>
<td>6%</td>
<td>6%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Connections growth (annual)</td>
<td>9%</td>
<td>10%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>SIMs per subscriber</td>
<td>1.9</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>% prepaid</td>
<td>96%</td>
<td>96%</td>
<td>96%</td>
<td>96%</td>
</tr>
<tr>
<td>% smartphones</td>
<td>5%</td>
<td>9%</td>
<td>17%</td>
<td>28%</td>
</tr>
<tr>
<td>% 3G</td>
<td>23%</td>
<td>30%</td>
<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td>% 4G</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>ARPU, by connection ($)</td>
<td>$3.78</td>
<td>$3.53</td>
<td>$3.43</td>
<td>-</td>
</tr>
<tr>
<td>Recurring revenue ($ million)</td>
<td>$4,108</td>
<td>$4,196</td>
<td>$4,386</td>
<td>-</td>
</tr>
<tr>
<td>Recurring revenue growth</td>
<td>13%</td>
<td>2%</td>
<td>5%</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 1: Philippines, key mobile indicators (connections excluding M2M)

Source: GSMA Intelligence

Figure 3: Mobile network operator launch timeline

Source: GSMA Intelligence

Note: Aside from Smart and Globe, other mobile operators in the Philippines are Express Telecom, Now Telecom and Wi-Tribe (owned by Liberty Telecom), accounting for less than 1% of connections
A high level of mobile engagement

Mobile users in the Philippines are rapid adopters of new technology and have been quick to embrace and engage in new services. On a host of metrics, the Philippines is well ahead of expectations given its status as a lower middle income country. At the top level, 50% subscribe to mobile services, with 3G penetration within that nearly 40%. Smartphone adoption meanwhile is around 25%, although some of these will be 2G users, implying high demand for mobile internet services from both low and higher end consumers (see Figure 4).

Known in recent years as the “texting capital of the world”, the Philippines is the most prolific texting market in the world, with over 520 SMS messages sent per connection per month over the Smart network in Q2 2014, compared to 371 per connection per month for XL Indonesia, and 64 per connection per month for China Mobile. It is estimated that around 10% of global SMS volume is generated in the Philippines, and messaging accounts for 37% of operator recurring revenue (high by regional and global standards), highlighting the “texting culture” that has grown in the country.

The Philippines also has the fastest growing internet population in the world, with penetration rising from 6% in 2008 to 37% in 2013. However, given the relatively low fixed internet penetration due to limited infrastructure and high costs (only 2.6% of the population has a fixed broadband subscription), mobile is the primary device for accessing the internet, with mobile Internet adoption reaching 62% of total subscribers in Q3 2014. This is the 3rd highest in South East Asia (behind Thailand and Malaysia), and higher than all the benchmark countries used for this report (see Appendix) except for Nigeria. At the same time, the growth in smartphones and improved network connectivity has helped drive higher speed mobile broadband (3G and 4G) penetration which, at 37%, is higher than all other benchmarked countries (see Figure 5).

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12 GSMA Intelligence
14 GSMA Intelligence
15 World Bank
16 ITU
The mobile operators have been key in the growth of the mobile internet, and are actively trying to get more of their customers engaged in the mobile internet and data services. For example, Smart recently announced a promotion providing free mobile internet access to its entire subscriber base via data-enabled feature phones and smartphones\(^{17}\), and Globe launched a new suite of Lifestyle Bundles, allowing postpaid subscribers to customize their data usage based on their lifestyles and interests\(^{18}\). Additionally, zero-rated services are gaining traction as operators strive to increase the uptake of data services: Smart launched the Wikipedia Zero offer providing unlimited access to m.wikipedia.org, zero.wikipedia.org, Wikipedia apps (available on iOS and Android devices), and other Wikimedia sites on their mobile devices, free of data charges\(^{19}\), and Globe announced the return of its Free Facebook offer, providing its entire customer base with access to Facebook at zero data charges and no data allowance restrictions\(^{20}\).

The increase in mobile internet usage has opened up other channels of mobile communication. SMS volume is in decline, with Smart reporting a 20% drop in SMS volume between Q2 2013 and Q2 2014, and both Smart and Globe reported a 3-5 percentage point drop in messaging contribution to service revenue in the last year\(^{21}\). But this is not a reduction in user engagement. It is a transition from one form of communication to another, and this has led to the Philippines becoming known as the “social networking capital of the world”. According to a Wave7 study, social media penetration of the active internet user base was just under 90% in 2013, one of the highest percentages in the world (compared to just under 70% in the US)\(^{22}\). Additionally, users in the Philippines spend more time on social media than in any other country in the Asia Pacific region, spending 4 hours a day on average on social media versus just under 3 hours a day in Indonesia and 1 1/2 hours a day in China (see Figure 6). Social networking has become a way for Filipinos to connect and communicate with friends and family, and given that around 11 million Filipinos live overseas, it provides an alternative method of communication to traditional overseas call and text.


\(^{21}\) GSMA Intelligence

\(^{22}\) http://wave.umww.com/index.html
Social media has also seen some innovative uses in the Philippines in the last year, such as using Twitter to crowdsource and coordinate disaster response efforts following typhoons or an earthquake, and using Facebook and Instagram to stage a protest in response to a proposed hike in train fares. Additionally, IP communication apps are gaining traction: WeChat, Line and KakaoTalk have all launched aggressive advertising campaigns in order to compete with the incumbent players Facebook, Viber and WhatsApp, and the operators are also getting involved, launching promotions offering free access to popular chat apps or even offering their own services (Chikka is an example – see Operators are very active in innovation).

A key driver in the continued push of mobile internet and the digital service layer is smartphone growth. The Philippines is one of the fastest growing smartphone markets in South East Asia, with annual smartphone connections growth of 75% over the last four years – again above the average for South East Asia and the benchmarked countries (see Figure 7).

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Smartphone sales are expected to overtake feature phone sales in the Philippines in early 2015 and, having taken a few years to filter down into the installed base, smartphone connections will overtake feature phone connections in 2016 (see Figure 8). Additionally, the Philippines will have the highest smartphone adoption of the benchmarked countries by 2016 with 54%, overtaking Indonesia on 53%.

A major driver behind this rapid growth has been the emergence of affordable, local smartphone brands such as Cherry Mobile and MyPhone, which are providing low-cost smartphones at feature phone prices. In a survey of mobile phone preferences among Filipino consumers carried out by Jana, Cherry Mobile and MyPhone were both in the top 5 owned brands, with 17% and 4% respectively (see Figure 9). Cherry Mobile in particular has seen success in targeting and reaching consumers with low-cost...
smartphones such as the $45 Cherry Mobile Snap, and claim to have 60% share of the low-end mobile market in the Philippines. Both brands release a number of phones almost every month - along with regular flagship smartphone releases, and both have phones in three price segments - budget, mid-range, and high-end. The presence of these two brands in those categories, coupled with a strong traditional marketing push in the country, makes Filipinos identify them as viable alternatives to bigger, global smartphone manufacturers. In the same Jana survey, 85% of respondents reported that they would be happy to buy a Filipino phone brand.

Figure 9: Mobile brand market share, Philippines
Source: Jana

24 http://www.slideshare.net/bryanoculam/market-development-plan-cherry-mobile-31293848
A highly competitive market

There are currently two main operators in the Philippines – Smart (owned by PLDT) and Globe Telecom. Following a string of acquisitions – Talk ‘N Text in 2004 (merged into the base in 2009) and Sun Cellular in 2011), Smart is the largest operator with 61% of connections in Q3 2014, and Globe Telecom is the second major player with 39%. The three other operators – Express Telecom, Now Telecom and Wi-Tribe (owned by Liberty Telecom) – account for less than 1% of connections between them. Both Smart and Globe launched 3G services in 2006 and 4G in 2012, with 3G connections accounting for 37% in Q2 2014 (due to the relatively recent launch of 4G, 4G penetration is only just over 1%).

![Philippines mobile network operator landscape evolution](source: GSMA Intelligence)

Competition in the Philippine mobile market is very tough, unusual for what is essentially a duopoly, with the two main operators battling over subscribers and revenue, primarily trying to differentiate themselves by value and price. Mobile users are very price sensitive, favouring low-cost prepaid bundles over contract plans, and over 95% of connections in the Philippines are prepaid. Multiple SIM ownership is common in the Philippines, and users regularly swap SIMs (or even own dual-SIM handsets) in order to take advantage of the best deals and promotions regularly refreshed by the operators. This intense competition has contributed to a decline in ARPU and an increase in churn over the last decade – ARPU is amongst the lowest in the world ($3.33 in Q2 2014), and churn is amongst the highest at 23% in 2013 (see Figure 11).
High competition between the operators keeps ARPU low and limits revenue potential from existing revenue streams, encouraging the operators to be innovative in terms of tariffs and services, and drives them to seek new products and value added services in order to differentiate themselves from the competition. A key area is flexibility, and both operators focus on customisable tariffs to cater for the majority prepaid base. Globe’s GoSAKTO offer for example allows customers to create their own bundles depending on their budget, lifestyle and needs, selecting the type and number of call minutes and texts they need and adjust the data allowance as required. Customers can also select how long they would like the bundle to last (a day, week or month)\(^{25}\). Meanwhile, Smart’s Flexibundles allow customers to mix, match and change bundles every month, giving them the freedom to choose all the features they want\(^{26}\). Additionally, both operators regularly launch promotions in an attempt to attract new customers, ranging from data bundle deals, cheap international call offers and device sales.

Both Smart and Globe have launched 4G services, and are planning extensive investments to further expand data capacity: In March 2014, Smart announced plans to extend its 4G LTE network to all major cities by the end of 2014, thus reaching 50% of the population, as well as $714 million of planned capital expenditure for 2014 to expand 3G coverage from 71% of the population to 100%\(^{27}\). Globe meanwhile is seeking to further improve network capacity in order to future-proof its service, and capital investment of up to $200m has been earmarked for 2014 for data-related investments including deployment of LTE technology and strengthening its broadband infrastructure\(^{28}\), which is becoming more important given high-end customers’ growing mobile data needs.

\(^{26}\) http://www1.smart.com.ph/flexibundles/
\(^{28}\) http://www.philstar.com/business/2014/07/02/1341322/globe-allots-400m-lte-sites
The critical issue for both operators however is rural coverage. The majority of spectrum assigned to operators in the Asia Pacific region since 2010 has been in higher frequency ‘capacity’ bands (above 1 GHz), which are not ideal for providing 4G coverage into rural areas. These higher frequencies are typically used in priority by mobile operators to cover urban and suburban areas where data traffic is dense, and substantial network capacity is required. However, based on their propagation characteristics, lower frequencies (below 1 GHz) provide extended coverage at lower cost, as fewer base stations are required to achieve greater geographic coverage, making these ‘coverage’ bands ideal for use in rural areas.

In the Philippines, only 26% of available spectrum is in this lower frequency range, none of which is used for 4G, highlighting a need for more spectrum to be allocated in coverage bands to trigger wider adoption of mobile broadband services (see Table 2). The 700 MHz Digital Dividend (DD) band is key for expanding mobile broadband into the outlying islands and rural provinces in the Philippines, carrying substantial socioeconomic benefits while enabling operators to reduce capital and network costs, thereby accelerating rollout and lowering prices for end users. However, the Philippine regulator has not yet announced any timetable or plan to release the DD band to mobile, leaving the future of the band unclear.

<table>
<thead>
<tr>
<th>% connections</th>
<th>LTE frequency</th>
<th>Spectrum allocation</th>
<th>Digital Dividend (DD) comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Q3 2014)</td>
<td>(MHz)</td>
<td>&lt;1GHz</td>
<td>&gt;1GHz</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------</td>
<td>---------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Philippines</td>
<td>38% 1.5%</td>
<td>1800/2100</td>
<td>26%</td>
</tr>
<tr>
<td>China</td>
<td>39% 3.5%</td>
<td>1900/2300/2500/2600</td>
<td>11%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>32% 0.3%</td>
<td>2300</td>
<td>20%</td>
</tr>
<tr>
<td>Thailand</td>
<td>72% 1.1%</td>
<td>2100</td>
<td>25%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>24% NA</td>
<td>LTE not launched</td>
<td>25%</td>
</tr>
</tbody>
</table>

Table 2: Spectrum allocations and Digital Dividend band status for selected markets

Source: GSMA Intelligence
Outlook

Despite the high level of user engagement in mobile in the Philippines, challenges remain for the operators. While there is still plenty of room for subscriber growth, intense competition is contributing to declining ARPU, and the emergence of internet players and IP communication services is shifting user behaviour away from core voice and text services, squeezing revenue opportunities from existing business models. This is providing greater impetus for operators to innovate in order to grow revenue and maintain relevance in the marketplace. Tariffs focussing on growing mobile internet usage are becoming more popular, driving data revenue to make up for a potential decline in voice and messaging, and operators are increasingly looking to develop other revenue opportunities through VAS and other innovative services.
Innovation

The Philippines presents some of the most significant digital opportunities in South East Asia, acting as a trial platform for expansion to other markets. The country is regularly cited as a major innovation hub, with evidence growing of it being an opportune time to invest in the Philippine mobile ecosystem. We think there are three main reasons why innovation is enjoying such success in the Philippines:

• **Demographics:** The highly engaged, highly literate and youthful population is ideally suited to investment and innovation, and the demand for new content and services is growing all the time

• **Economic stability and credibility:** Credit ratings agencies have reflected this in their outlooks, with the country now attracting more and more foreign investment and venture capital

• **Mobile operators active in innovation:** Direct initiatives or partnering with entrepreneurs and start-up companies

Demographics lend the country well to innovation

With half its population under 25 and annual GDP growth exceeding 10% per annum between 2010 and 2013, the Philippines is one of the youngest and fastest-growing economies in Asia. A high literacy rate, large proportion of English speakers, high mobile engagement, rapidly growing internet penetration and a relatively advanced mobile ecosystem makes the Philippines ideally suited for innovative digital products and services. In parallel, the still uneven wealth distribution, high poverty in rural areas, large unbanked population and high incidence of natural disasters has provided natural impetus for product and service development. Multi-sector collaboration brought about by a nationwide need to overcome the country’s socioeconomic challenges through mobile services has driven innovation in areas such as mobile money, education and disaster response, but opportunities remain to continue these initiatives in the near future.

Foreign direct investment and VC interest is increasing rapidly

Over recent years, the Philippine economy has stabilised and grown to such an extent that it is becoming much more attractive to foreign investment. In the last 18 months, all ‘big three’ credit rating agencies – Moody’s, Standards & Poors (S&P) and Fitch – have upgraded the Philippines to an investment grade rating, with S&P particularly optimistic (see Figure 12).
Figure 12: ‘Big three’ credit rating history for the Philippines
Source: GSMA Intelligence, company websites

This has given confidence to domestic and foreign investors. Despite a decline between 2008 and 2010 (largely due to the global recession), foreign direct investment (FDI) has been on the rise for the last decade, and has grown particularly rapidly since 2010, reaching $3.9 billion in 2013, the highest level the country has ever seen.

This has also resulted in the Philippines becoming more attractive to businesses, venture capital and private equity. In the last four years, the Philippines has climbed 26 places in the World Bank’s ‘Ease of doing business’ ranking (up to 108th), and 23 places in the IESE Business School’s ‘Venture capital and private equity attractiveness’ ranking (up to 42nd) (see Figure 13). This improvement is due to many factors, but is mainly as a result of improved economic stability and growth potential, investors and entrepreneurs seeing other start-ups launch in the Philippines and wanting to emulate their success, and also following policy and regulatory changes made by the government to specifically address issues around how much bureaucracy and red tape private businesses encounter. This makes the Philippines the most attractive country to VCs and private equity out of all the benchmarked countries, and as a result, more and more VCs, angel investors, incubators and accelerators are engaging with and investing in local Philippine innovations and start-ups.

**Figure 13:** Philippines moving up the ‘attractiveness’ rankings  
*Source: IESE Business School, World Bank*
Why do you think the Philippines is such a hotbed of innovation at the moment, and how do you think this will continue over the next few years?

Minette Navarrete (MN): “There is a new momentum behind innovation in the Philippines. In the past, investors have been focusing elsewhere: heavy industry, traditional brick & mortar businesses, manufacturing and mining. Domestic technology start-ups have therefore lacked funding, limiting their scaleability, and this has meant that even successful exits have been on the small side, constrained by a lack of scale, and with little competition amongst potential acquirers. However, the last few years have seen a change. Consumption capacity has improved as a result of steady GDP growth, and the telco industry has evolved with increasing mobile and broadband penetration, a rise in availability of affordable devices, and an increase in usage. The perfect storm of demographics, economics and a stable communications infrastructure has created a better market for digital start-ups, and better prospects for entrepreneurs. Other markets are now seen as greater risks, unlocking funds for higher risk local start-ups. Additionally, current investors are looking to diversify their portfolios, and a significant exit is being sought in the next year or so to validate the ecosystem and investor interest.”

Paul Pajo (PP): “The Philippines is in a unique situation nowadays. We’re one of the fastest growing economies in Asia and are now rated as an investment grade market following recent upgrades by the top 3 credit ratings agencies. This has placed us, in terms of investment attractiveness, on par with some European countries, and investors are switching from asking themselves why they should invest in the Philippines, to why they shouldn’t. We’ve built a BPO (business process outsourcing) business that is world class, and we have a highly literate, highly intelligent, highly trainable labour force consisting of many engineers, a high proportion of whom speak American English, which provides a good foundation for start-up services. Maybe being the only former colony of the United States allows us to look at Silicon Valley as something that is possible in our local context. A lot of observers (Philippine Startup Report, e27, techinasia etc.) have noted the emergent startup ecosystem that wasn’t there 2 years ago, and events like Geeks On A Beach and Geeks On A Plane point to increased dealflow and investment in the country, now that the right building blocks are in place. Looking forward, greater start-up activity will lead to increasing investment, positively affecting the economy as a whole. Smart has 4 startups that will be looking for exits, and these exits will encourage more entrepreneurial and start-up activity, attracting further funds and investment to the Philippines.”

Can you tell us a bit about the key areas for innovative services you have come across?

MN: “As an emerging market, we see innovation playing a significant role in addressing social issues using digital technologies, particularly in the areas of education, health, social enterprise and financial inclusion. Poverty is a barrier to education enrolment, and
at present, learning materials are expensive or of poor quality. We have seen some start-ups targeting early stage schooling, and one example is Joomajam\(^{30}\), an interactive app that lets bands and singers help in learning through the composition of new children's songs. Additionally, we have start-ups that are targeting the large payments gap in the Philippines. We have around 100 million people, but fewer than 10 million credit cards and a large unbanked population. We also have a non-existent credit-rating system, meaning individuals are unable to access many financial services. But we have a large mobile phone market with the potential to offer financial services, not just to the geeky or the rich, but to everyone. An example service is Lenddo\(^{31}\), a start-up that allows individuals to use their online social connections and microfinance techniques to build their creditworthiness and access local financial services. Finally, there are also opportunities for platforms to improve customer experience within the largely fragmented retail sector. We have seen start-ups like ZAP\(^{32}\) and mClinica\(^{33}\) providing operating and information management services for brick-and-mortar retailers and for drugstores and pharmaceutical firms respectively, providing digital platforms and analytics capabilities at an aggregated level rather than for standalone businesses.”

**PP:** “A major focus area for start-ups and apps at the moment is remittance. The Philippines has a very widespread diaspora, with over 10 million Filipinos living overseas, and an increasing number of apps and services are aimed at money loading and transfer. Using SMS as the delivery platform and Bitcoin as the financial basis in a hybrid model, we are able to reach the widest possible audience with a simple and cost-effective service. A good example for this remittance model is the rebittance.org movement, of which the Philippine start-up rebit.ph\(^{34}\) is part. Other innovative initiatives include Shoephoric\(^{35}\), an online social networking and crowdsourcing site where users can organize and share their shoe collection with friends and family around the world, and can contribute funds using their mobile phone credits, credit cards or online payments to help other users expand their collection. And another example is Coins.ph, a free mobile Bitcoin wallet which began as a Philippine start-up, and which has recently launched as the second legal Bitcoin exchange service in Thailand\(^{36}\). Of course, Smart has been a pioneer in mobile money and remittance. Our financial subsidiary Smart eMoney, Inc. (SMI) has been on the forefront of these initiatives, and we expect many exciting things to come following the recent strategic partnership with Rocket Internet through the investment of PLDT”

**Why are these kinds of opportunities important for the Philippines?**

**MN:** “Social impact is one of the biggest opportunities for mobile. A large proportion of the world’s population is in emerging markets, with consistent issues around health, employment, education and lack of resources. This means, however, that the opportunities for using digital technologies to address these issues is also consistent across these markets. Our aim therefore is to find solutions that are scalable and sustainable, and develop them into initiatives that can be rolled out beyond the Philippines. A combination of a sizable, youthful, technically literate, adaptable and largely English speaking domestic market, coupled with rising incomes, consumption, and rapid broadband and smartphone penetration growth makes the Philippines a great launchpad for start-ups to expand to international markets. Kickstart Ventures capitalises on this, as well as its relationship with Globe Telecom, the SingTel group, and Ayala Corporation to attract talent, stimulate commercial deals, and create innovation opportunities that have the potential to scale. The
Philippines shares many similarities with other emerging markets, and we think our unique blend of assets, capabilities and relationships can help start-ups to innovate faster, scale bigger, and succeed at a regional and global level.”

**PP:** “I believe that the Philippines (and South East Asia as a whole) will be a great source of emerging market ideas and products in the near future. Surprisingly, our economy is actually technology based, but we need to more of these technology plays and opportunities to leverage our strengths, and to maximize the impending ASEAN Economic Integration in 2015. By making the most of the opportunities the GSMA and OneAPI can offer, moving from a bilateral model serving a few countries to a federated, multilateral, global service, greatly increasing scale and usage, we can create a lot of innovative services moving forward. For start-ups, partnering with an operator is the fastest way to achieve scale, the simplest route to revenue generation (through integration with operator billing), and the shortest path to an exit. The perfect storm of a rapidly growing economy, increasing investment, an active start-up ecosystem and operator collaboration is providing more and more opportunities for entrepreneurs, developers, and innovation in the Philippines”.

30 http://joomajam.com/
31 https://www.lenddo.com/
32 https://www.zap.com.ph
33 http://mclinica.com/
34 https://rebit.ph/
35 http://shoephoric.com/
36 http://e27.co/philippines-coins-ph-launches-thailands-second-bitcoin-exchange-20140826/
Operators are very active in innovation

Technology innovation has long emanated from Silicon Valley, with desktop computing the focus in the 1980s and 90s before mobile in the 2000s. While this is still broadly the case today, other regions have emerged as key players, for example Europe (with notable innovation hubs in London and Berlin) and, more recently, Asia. According to the CB Insights database, which tracks venture capital, private equity, and angel investments across the globe, investment into Asian companies has increased rapidly over the last five years, with 1,672 deals made in the last 12 months (compared to 229 in the same time frame five years ago), accounting for 18% of global funding, up from 7% (see Figure 14). In the last year, 72% of these deals have been in the internet and mobile sectors, highlighting the growing power of Asia in the technology innovation marketplace. The most active countries in Asia in the last few years have been India (primarily Bangalore and Mumbai), China (Beijing), Singapore, South Korea (Seoul) and Japan (Tokyo), but other more emerging markets are beginning to make waves too.

Part of the reason investment into ICT in emerging markets has been historically weak is because domestic capital has been placed abroad (the US being the main beneficiary), creating a net outflow in many countries. It is also a result of investors chasing later stage, lower risk returns that have become plentiful in established centres but are much harder to find (and justify the risk) in emerging ones.

Figure 14: Investment deals and funding share in Asia Pacific, 12 month periods (all sectors)
Source: GSMA Intelligence, CB Insights
The Philippines, however, is a growing success story. While still a relatively small player compared to the other innovation epicentres mentioned above, investors are increasingly looking into Philippine start-ups, with 31 deals made in the last two years (compared to just five in the three years prior) accounting for $258 million in funding. 60% of these have been in the internet and mobile sectors (other sectors being clean energy, food, industry outsourcing and financial services). Additionally, there are at least 14 active innovation centres in the country (see Appendix), two of which are run by the operators, aiming to realise the potential of Philippine start-ups and entrepreneurs.

This advancement can be traced to the barriers to scalable and sustainable commercial services. First, the accelerators and incubators are targeting funding in the seed and pre-seed stage, roughly $10,000-100,000. This is important because it is this range that has largely remained a no man’s land for international VCs (and even donors) in other emerging markets given the higher risk profile of early stage entrepreneurs. Second, the services offered to start-ups go well beyond financial investment, including office space, free or subsidised advertising, integration into existing payment or other platforms of the mobile operators, mentorship and access to decision makers within prospective partners (again, operators being the key audience). These factors are creating an enabling environment that is widely acknowledged by investors and entrepreneurs as crucial in sustaining enterprises after initial funding rounds expire, more so than macro-economic conditions (see Financing Innovation).

Perhaps of greatest note, in opposition to other markets, it is the mobile operators that have been at the forefront of innovation, rather than internet players. Smart (with Ideaspace Foundation) and Globe (with Kickstart Ventures) have flagship innovation hubs that have a combined portfolio of 32 investee firms as of October 2014. The range is disparate – from payment solutions to mobile health to transportation – but is indicative of the wider push to galvanise entrepreneurship through a partnership model. Indeed, both hubs are linked with non-profit partners as well as technology majors (Amazon and Microsoft are examples) to facilitate integration into the cloud.

Beyond hubs, the Philippine operators are also driving innovation with the services they themselves offer, reflecting the requirement to innovate in order to maintain relevance given changing competitive environments. Innovative tariff restructuring to short term flexi models has been mentioned previously in this report (see A highly competitive market), and other areas of focus include initiatives to increase data usage or defend against the growing phenomenon of IP communication. Globe, for example, was the first partner operator for Facebook’s Internet.org campaign, making the Philippines the first market in the world to provide free access to Facebook and other basic services, resulting in a doubling of the number of people using the internet and data. Smart, meanwhile, acquired Chikka in 2009, an IP messaging app with 45 million claimed registered users following recent expansion to 14 other countries (including the US and UK). While relatively small on a global scale, this service is interesting not only as it pre-dates recent growth in this space from global services such as WhatsApp and Viber (it was launched originally in early 2000), but for its integration with operator platforms, simultaneously supporting communication between online users via IP messaging and offline mobile subscribers via SMS. It operates over IP in a similar fashion to larger peers, but provides a defensive position for operators as well as a customer sticking point, as it can be integrated with core services and other VAS (such as in content).

Mobile Money

As of June 2014, 34% of municipalities in the Philippines did not have a bank branch, and according to the latest data from the World Bank, over 70% of the population is unbanked. At the same time, many of these people have a mobile phone, indicating a clear opportunity for the adoption of mobile money services in the country. There is a good regulatory environment created by Bangko Sentral ng Pilipinas (BSP), which developed a balanced mobile money framework that provides an open and level playing field, allowing both bank and non-bank financial institutions – including mobile operators – to offer mobile money services. Initially, the different business models were subject to distinct regulations, but this was changed through Circular 649 in 2009, which regulates both bank-based and non-bank-based e-money models, and creates a new license for e-money issuers (EMIs).

A flexible approach by the BSP has contributed to growing adoption of mobile money services, and as of mid-2011, Globe and Smart had opened nearly 10 million e-money wallets, and 2011 saw users conduct a total of 158 million e-money transactions with a total value of PHP 535 billion (approximately $13 billion). With the growth of Smart Money and GCash, and the issuance of e-money regulations in 2009, a number of other providers have entered the e-money market, and as of May 2012, 21 banks and 3 non-banks were providing e-money services.

The Philippines is the third largest market in the world for remittance inflow (see Figure 15) and, recognising that inward overseas remittances account for approximately 10% of GDP owing to a large number of Filipinos residing outside the Philippines, EMIs have been quick to establish partnerships with remittance providers in countries with large Filipino expatriate populations – GCash for example has agreements with remittance partners in 37 countries, while Smart Money has agreements in 19 countries.

Figure 15: The Philippines has the third highest migrant remittance inflow in the world
Source: World Bank

38 Bangko Sentral ng Pilipinas
In addition to providing services for overseas workers, mobile money has also been used very effectively in the Philippines to transfer funding to those affected by disasters (see [Disaster response](#)).

Amongst other innovative solutions, The Land Bank of the Philippines, in partnership with Smart e-Money, has launched the LANDBANK Mobile Loan Saver program, which is the Philippines’ first paperless and fully electronic salary loan for government and private sector employees. Under the program, qualified state workers aged 18 to 64 with LANDBANK ATM payroll accounts may apply for loans by simply sending a text message. So far, over 270 government offices comprising of national government agencies, local government units, government corporations and some private companies have signed up, with a total of around 120,000 individuals.

Despite the Philippines being the first country to launch mobile money services over 10 years ago, there is still a lot of growth potential. While there is no one reason for the relatively slow uptake in the past, and neither is there a single quick-fix solution to boost mobile money adoption, it is important to tailor mobile money products to suit specific customer requirements. It is equally important to facilitate easier account opening procedures, especially since mobile money agents in the Philippines do not have the authority to open accounts themselves, as opposed to successful mobile money markets like Kenya, where Safaricom has authorised its agents to register new customers, and provides meaningful incentives for them to do so. This may be a good way to make mobile money more competitive at the point of sale. Operators may come out with innovative solutions such as remote administration, tiers of agent authority and wallet limits to address this challenge, and help the increase in mobile money service adoption in the near future.

**Education**

The Philippines has a relatively high literacy rate of over 95%, and primary school enrolment rates are at around 90%. However, the secondary education enrolment rate is much lower, at around 60% (see Figure 16) – dropping even further in areas with greater poverty where the cost of education is a barrier. The Department of Education (DoE) is trying to address this problem through its K to 12 (Kindergarten to class 12) basic education program, where the government offers free public school secondary education. However, retaining these enrolled students all the way through to class 12, reducing the number of drop-outs and out of school youths (OSYs), is a significant challenge – according to the National Statistics Office, as of the 2012/13 school year, there were over 4.2 million OSYs in the Philippines.

With a program named ‘Abot Alam’, the government is specifically targeting OSYs and enrolling them into Alternative Learning System and Alternative Delivery Mode programs, offering skill or vocation based training.
Given the high mobile penetration and level of user engagement in the Philippines, mobile is well placed to act as an enabler for initiatives to help boost education. The GSMA teamed up with the two main mobile operators, Smart and Globe, as well as two government agencies, the DoE and the Technical Education and Skills Development Authority (TESDA), to introduce mobile education initiatives to increase the reach of the Abot Alam program across the K-12 spectrum. These initiatives will host education and training content, along with student records and other core functionality, through an industry-wide, collaborative mobile platform, made available to students, teachers and parents across all mobile operators. As a part of this, the mobile operators have launched innovative applications aiming to reduce the number of OSYs by offering them new ways to engage in education: Smart launched an online portal that allows young people to find tailored training programmes, and also developed an app that helps teachers track the progress of students who are taking IVR (interactive voice response) courses, while Globe launched an IVR based app that provides English lessons in pronunciation, conversation and comprehension.39

From a global perspective, this is the first commercial collaboration with multi-stakeholder partnerships for mEducation to support OSYs, where the government bodies have been instrumental in providing strategic oversight and localised support, the operators have been key in developing functional and technical requirements and supervising the mEducation content platform build, and other parties such as app developers, device manufacturers and various ministries have provide excellent support to the program. For more information see How Mobile is Extending Education in the Philippines.

Disaster response

The Philippines is a very environmentally vulnerable country. According to the 2014 WorldRiskIndex (WRI) from the UN, individuals in the Philippines have a 28% chance of becoming a victim of a disaster resulting from an extreme natural event, which is the second highest probability behind Vanuatu (see Figure 17).

The index takes into account both external and internal factors, combining the exposure of countries to natural hazards and the social, economic and ecological conditions within these countries. The WRI of the Philippines is high due to a combination of high exposure to disasters, high susceptibility due to widespread poverty, poor housing and sanitation in outlying provinces, in addition to limited coping and adaptive capabilities. However, changes to coping capacity or national resilience could impact the WRI rating in future years, highlighting the need for a focus, including by mobile operators, on improving resilience and disaster readiness in the country to reduce future risk.

The biggest environmental threats to the Philippines are hydrological disasters, especially tropical cyclones and floods. For example, Typhoon Haiyan (dubbed Yolanda locally), one of the strongest tropical cyclones ever recorded, hit the Philippines on November 9 2013, affecting 16 million people and resulted in over 6,000 deaths. Some cities such as Tacloban and Guiuan were 80% flattened by the typhoon and the resulting storm surge.

The role of mobile operators in both preparedness and response to such disasters is key, as they have the capacity to reach the majority of the population through their networks and services. In addition to restoring communication services – one of the most important factors in delivering relief to the affected people – the mobile operators also work in collaboration with the

Figure 17: Probability of an individual becoming the victim of a natural disaster  
Source: UN World Risk Report 2014  

government and other humanitarian organisations to provide coordinated, impactful solutions to recovery. Preparedness is critical to disaster response, and the operators can leverage their unique position in the disaster response chain by partnering with other disaster management organisations to ensure the country is best prepared for any eventuality, whilst using innovative solutions that could cater to more than one disaster at a time.\(^{41}\)

The operators in the Philippines have shown innovative approaches at dealing with disasters, best illustrated by the responses to Typhoon Haiyan. Both operators set-up Libreng Tawag centres – Filipino for Free Call – and cell-phone charging stations for those with no access to communications. In addition to providing free text messages (anticipating an influx of calls that could congest the network), Smart set up ultra-portable instant networks in affected areas to restore communication\(^ {42}\), and Globe Telecom partnered with Radio Mindanao Network, one of the largest radio networks in the country, to serve as the relief distribution partner, handling and distributing various relief goods to affected areas.

Additionally, both Smart and Globe used mobile money services (BayadLoad and GCash respectively) as donation facilities so that the concerned citizens could send money to support relief organizations. Both operators worked closely with various domestic and international non-government organisations (NGOs) in relief activities, highlighting the importance of collaboration in disaster response, and the GSMA helped coordinate interactions between all parties and aggregated all requests to MNOs around service status, mobile money agent vitality, instant network solutions, or short codes.

An innovation model for others to follow

It is clear then that operators are very active in the innovation space in the Philippines, developing initiatives themselves or seeking start-ups and investment partners. This is fairly unusual, as mobile operators generally need to defend themselves from disruptive products and services rather than seeking to develop these services themselves. In addition, the collaborative efforts of all stakeholders in the Philippine mobile value chain are aiding the advancement of the industry, and this is another reason why the Philippines is enjoying such success in the innovation space. The perfect storm of appetite and demand for services, willingness from operators to innovate, and engagement and investment from abroad, is creating a platform for innovation from which other countries can glean insights for catalysing their own innovation ecosystems.

Having said that, there is still more to be done, particularly in the areas of digital inclusion. The mobile industry is, relatively speaking, pretty advanced in the Philippines as discussed throughout this report, but efforts need to be made to ensure further investment is not just concentrated in the cities. Mobile has the capability and potential to change lives in areas of crippling poverty, and the need for using innovative mobile solution to overcome socioeconomic problems is equal to, if not greater than, pushing advanced services in urban areas.


Narrowing the digital divide between advanced urban cities and outlying rural regions is of key importance, and we believe multi-stakeholder collaboration between industry, investors and policy makers focused on three key factors will have the best chance of influencing this:

- Allocating sufficient low-frequency, high propagation spectrum (sub 900MHz) for improved mobile broadband coverage beyond the cities
- Establishing innovation centres in outlying provinces
- Continuing to build on existing operator efforts to understand their local customer groups (manifested in the user-centric design model of service delivery)
Appendix

Benchmarking the Philippines: methodology

For the purpose of this report we have chosen a selection of 8 other benchmark countries to compare to the Philippines (from a total of 236 countries world-wide). The selection of countries has been made on the following four criteria:

1. **Wealth** — GDP per capita (2013)
2. **Economic growth** — GDP growth rate (2010–13)
3. **Mobile market maturity** — subscriber penetration (Q4 2013)
4. **Human development** — Human Development Index - (HDI, 2013)

Taking the Philippines as the base, we have selected countries which fall under a variance range chosen for each of the four criteria. Table 3 shows the range of variances chosen to arrive at a group of countries which represent major regions across the globe, and this group is shown in Table 4.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Variance</th>
<th>Lower value</th>
<th>Philippines</th>
<th>Higher value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita ($)</td>
<td>+35%</td>
<td>$1,797</td>
<td>$2,765</td>
<td>$3,733</td>
</tr>
<tr>
<td>GDP growth rate (%)</td>
<td>+4pp</td>
<td>6.9%</td>
<td>10.9%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Subscriber penetration (%)</td>
<td>+15pp</td>
<td>34.6%</td>
<td>49.6%</td>
<td>64.6%</td>
</tr>
<tr>
<td>HDI (1 is the highest)</td>
<td>+/-0.2</td>
<td>0.46</td>
<td>0.66</td>
<td>0.86</td>
</tr>
</tbody>
</table>

Table 3: Benchmarking criteria

Source: GSMA Intelligence
GDP per capita - ($1797- $3733)
24 countries (including Philippines):
  APAC-11, CIS-3, LATAM-4, SSA-4, MENA-2

GDP Growth rate - (6.9%- 14.9%)
11 countries (including Philippines):
  APAC- 4, CIS- 2, LATAM- 2, SSA- 2, MENA- 1

Subscriber Penetration (34.6% - 64.6%)
9 countries (including Philippines):
  APAC - 4, LATAM - 2, MENA - 1, SSA - 2

HDI Value (0.46- 0.86)
9 countries (including Philippines):
  APAC - 4, LATAM - 2, MENA - 1, SSA - 2

9 countries - Philippines, Egypt, Ghana, Nigeria, Guatemala, Nicaragua, Indonesia, Sri Lanka, Vietnam

<table>
<thead>
<tr>
<th>Country</th>
<th>Region</th>
<th>GDP per capita</th>
<th>GDP CAGR 10-13</th>
<th>Subs pen</th>
<th>HDI</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>Asia</td>
<td>$2,765</td>
<td>10.9%</td>
<td>49.6%</td>
<td>0.66</td>
<td>98.4</td>
</tr>
<tr>
<td>Egypt</td>
<td>Africa</td>
<td>$3,314</td>
<td>7.5%</td>
<td>53.4%</td>
<td>0.68</td>
<td>82.1</td>
</tr>
<tr>
<td>Ghana</td>
<td>Africa</td>
<td>$1,850</td>
<td>14.2%</td>
<td>49.5%</td>
<td>0.57</td>
<td>25.9</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Africa</td>
<td>$3,006</td>
<td>12.6%</td>
<td>41.6%</td>
<td>0.50</td>
<td>173.6</td>
</tr>
<tr>
<td>Guatemala</td>
<td>Americas</td>
<td>$3,478</td>
<td>9.2%</td>
<td>56.8%</td>
<td>0.63</td>
<td>15.5</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>Americas</td>
<td>$1,851</td>
<td>8.0%</td>
<td>55.1%</td>
<td>0.61</td>
<td>6.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Asia</td>
<td>$3,475</td>
<td>7.0%</td>
<td>39.4%</td>
<td>0.68</td>
<td>249.9</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Asia</td>
<td>$3,280</td>
<td>10.7%</td>
<td>47.7%</td>
<td>0.75</td>
<td>20.5</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Asia</td>
<td>$1,911</td>
<td>13.9%</td>
<td>55.6%</td>
<td>0.64</td>
<td>89.7</td>
</tr>
</tbody>
</table>

Table 4: Data used for benchmarking
Source: GSMA Intelligence, World Bank

Note that while we have benchmarked the Philippines against these peers for the purposes of aligning markets at similar stages of development, we also provide regional comparisons at relevant points in the report to group markets influenced by similar regulatory climates and spectrum plans.
### Philippine innovation hubs

<table>
<thead>
<tr>
<th>Innovation hub</th>
<th>Program details</th>
<th>Stakeholders involved</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cebu Business Incubator for IT (CebuInIT)</strong>&lt;br&gt;<a href="http://upcebu.edu.ph/public-service/technology-business-incubation/">http://upcebu.edu.ph/public-service/technology-business-incubation/</a></td>
<td>Provides an enabling environment for entrepreneurs in technology-based businesses, consisting of both office space and services.&lt;br&gt;Also initiates and executes collaborative projects to develop technological innovations.</td>
<td>A joint venture by the University of the Philippines Cebu (UP Cebu) and the Department of Science and Technology - Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD).</td>
</tr>
<tr>
<td><strong>Kickstart Ventures</strong>&lt;br&gt;<a href="http://www.kickstart.ph/">http://www.kickstart.ph/</a></td>
<td>Provides funding and a six-month incubation period to select start-ups.</td>
<td>A wholly-owned subsidiary of Globe Telecom</td>
</tr>
<tr>
<td><strong>Ideaspace Foundation</strong>&lt;br&gt;<a href="http://ideospacefoundation.org/">http://ideospacefoundation.org/</a></td>
<td>Selects start-ups to incubate for six months. Each receive mentoring and $12,000 of funding from the program.</td>
<td>Smart Communications</td>
</tr>
<tr>
<td><strong>Launchgarage</strong>&lt;br&gt;<a href="http://www.launchgarage.com/">http://www.launchgarage.com/</a></td>
<td>It offers a five-month incubation period to select start-ups it calls “garageheads.”&lt;br&gt;Under the program, each start-up gets funding of $30,000 to launch its minimum viable product (MVP) into the market.</td>
<td>Globe Telecom and web engineering firm Proudcloud</td>
</tr>
<tr>
<td><strong>DOST-UP (UP Enterprise Center for Technopreneurship)</strong>&lt;br&gt;[<a href="http://www.enterprise">http://www.enterprise</a> upd.edu.ph/](<a href="http://www.enterprise">http://www.enterprise</a> upd.edu.ph/)</td>
<td>It provides a six-month incubation period together with working space in the Diliman campus. It also helps start-ups connect with other local tech leaders, including incubator Ideaspace, Plug and Play Tech Center, and Narra Venture Capital.&lt;br&gt;Aspiring entrepreneurs interested in developing products and services for the pharmaceutical, health services, and information and communications technology markets can apply.</td>
<td>The government-owned University of the Philippines</td>
</tr>
<tr>
<td><strong>DOST-PEZA Open Technology Business Incubator (OpenTBI)</strong>&lt;br&gt;<a href="http://www.opentbi.org/">http://www.opentbi.org/</a></td>
<td>Growth of IT- and ICT-based start-up companies that incorporate open technologies in the Philippines.&lt;br&gt;It provides legal, marketing, and technological assistance to start-ups who have passed its screening process. 20 leasable office spaces are available to groups during its incubation period.</td>
<td>Department of Science and Technology, and the Philippine Economic Zone Authority</td>
</tr>
<tr>
<td><strong>Action Stack</strong>&lt;br&gt;<a href="http://actionstack.org/story/">http://actionstack.org/story/</a></td>
<td>Offers practical and hands-on workshops and short courses on a range of topics related to technology and innovation: web and mobile app development, digital marketing, and lean start-up management.</td>
<td>Entrepreneurs</td>
</tr>
<tr>
<td><strong>TIDE</strong></td>
<td>It is the first program in Cebu that provides a flexible and affordable co-working space, classes to build technology and business skills, space for events, introductions to investors, and access to mentors and global networks. Most importantly, TIDE has resident entrepreneurs who are experienced in building companies, and who will actively provide help.</td>
<td><strong>engageSPARK (a member of Opportunity Labs) Symph</strong></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Narrative capitalist firm</strong></td>
<td>Technology and mentoring assistance, among other services, from IBM</td>
<td><strong>Investors</strong></td>
</tr>
<tr>
<td><strong>IBM innovation centre</strong></td>
<td>Working on approaches to pressing social concerns such as sustainable livelihoods, food security, climate change, water and sanitation, and special education, among others. Helps in connecting start-ups with the people in their network of field experts, professors, trainees, innovators, and practitioners.</td>
<td><strong>IBM</strong></td>
</tr>
<tr>
<td><strong>Inclusive innovation hub</strong></td>
<td>Innovative solutions to tackle illiteracy. Provides access to diverse reading and writing experiences, as well as peer-to-peer and adult mentor relationships.</td>
<td><strong>UNIID SEA</strong> Ateneo De Manila University, Cloudband Solutions, National Research Council of the Philippines (NRCP)</td>
</tr>
<tr>
<td><strong>Litworld innovation hub</strong></td>
<td>Helps transform the agriculture-based Cagayan Valley into a food processing haven. A one-stop-shop food research and development centre, it aims to improve the region’s local food products, and to reach a sizeable share of the local and national markets.</td>
<td><strong>NGO</strong></td>
</tr>
<tr>
<td><strong>The Food Innovation Center (FIC)</strong></td>
<td>Network of hubs developed and led by young people</td>
<td><strong>The Department of Science and Technology (DOST)</strong></td>
</tr>
</tbody>
</table>

**Table 5: Philippine innovation hubs**

*Source: GSMA Intelligence*
About GSMA Intelligence

GSMA Intelligence is the definitive source of mobile operator data, analysis and forecasts, delivering the most accurate and complete set of industry metrics available.

Relied on by a customer base of over 800 of the world’s leading mobile operators, device vendors, equipment manufacturers and financial and consultancy firms, the data set is the most scrutinised in the industry.

With over 25 million individual data points (updated daily), the service provides coverage of the performance of all 1,400+ operators and 1,200+ MVNOs across 4,400+ networks, 65 groups and 237 countries worldwide.

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