



**The future of
possibilities:
Business in the
age of disruption**

PwC M.A.P. 2018 CEO Survey

129 CEOs

122 survey respondents
10 face-to-face interviews*

** Three interviewees also
answered the survey*

68%

are planning to change their
business models in the next three
to five years

45%

are planning to invest in
startups



A message from the M.A.P. President



Ramoncito S. Fernandez
President, Management Association
of the Philippines (M.A.P.)

Managing business disruptions is one of M.A.P.'s top three priority programs this year. The two others are ease of doing business and data privacy.

In line with the M.A.P.'s 2018 theme of "Competing in the Age of Disruption", the M.A.P. encourages collaborative and transformative programs that help organizations face the massive disruptions caused by advancements in technology, innovations in business models, prominence of borderless competition, adaptation to climate change, and dynamism in geopolitics.

To help M.A.P. members and other business leaders manage disruptions, the September 4 M.A.P. International CEO Conference 2018 will tackle the theme "From Programs to Platforms: Business in the Age of Disruption".

Thus, the Management Association of the Philippines (M.A.P.) is pleased to work with Isla Lipana & Co./ PwC Philippines for the fourth of a series of annual CEO Surveys in the Philippines being conducted by the latter which are envisioned to benchmark the changes in how CEOs think, react and innovate.

Many thanks to Isla Lipana & Co./ PwC Philippines for serving as our Knowledge Partner, once again, for the September 4 M.A.P. International CEO Conference 2018.

We would also like to thank all the M.A.P. members and other members of the Philippine business community who participated in the Survey.

For 16 years since 2002, the M.A.P. International CEO Conference has been serving as a premier venue for bringing together business leaders from various fields to share insights and experiences, to establish stronger business and social linkages, and to imbue business leaders with the passion and knowhow to remain highly competitive in a highly globalized environment.

This year's M.A.P. Conference aims to create the space where leaders from various industries and specializations can come together and gather inputs that can jumpstart their internal quest for answers to their burning questions, particularly in sustaining their businesses despite all the disruptions.

A handwritten signature in black ink, appearing to read "Ramon", written in a cursive style.

A message from the PwC Philippines Chairman



Atty. Alexander B. Cabrera
Chairman and Senior Partner,
Isla Lipana & Co./PwC Philippines

A reliable business model is always updated. That seems to be the resounding message. Artificial intelligence, augmented reality, blockchain, drones, Internet of Things, robots, and 3D printing are just some of the technologies that have disrupted and affected businesses across different industries globally, and even in our own business environment.

In our survey, we asked our CEOs how they plan to keep up with the rapid changes and constant disruptions.

Our CEOs understand that they need to move faster to ensure that they're not left behind. Changing their business models, collaborating with technology providers, and working with startups are among our CEOs' plans to address the current and future disruptions.

Our heartfelt thanks go to the 122 CEOs who have shared their insights with us. We also give our special thanks to the ten leaders and founders who have shared their stories on how they are becoming agents of disruption.

I'd like to thank the Management Association of the Philippines for the privilege it has given PwC to serve as the Knowledge Partner for its 16th International CEO Conference. We have been doing the CEO Survey with M.A.P. for four years, and we are truly grateful for the opportunity to be a vehicle of sharing great knowledge.

We hope the data and insights from the 2018 CEO Survey will encourage companies to plan for the future of possibilities as probabilities in the short term. We join our country's CEOs in navigating these waters of disruption as we hold ever steadfast to our purpose of building trust in society and solving important problems.

A stylized, handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

A Philippine CEO Survey

Traditionally, businesses used to compete in terms of capital, assets, infrastructure, brand, and market coverage. In recent years, however, successful businesses resulted from ventures with minimal capital, but with one thing in common – they were disruptive.

In line with the theme of the 16th M.A.P. CEO Conference 2018, “From Programs to Platforms: Business in the Age of Disruption,” the PwC M.A.P. 2018 CEO Survey asked the leaders about the disruptions happening in their industries as well as the preparations that they are doing to minimize the negative impact, and harness the positive rewards of such disruptions.

Fifty-four percent (54%) of our business leaders recognize that disruptive innovations have significant impact on their businesses, and that business models need to be changed to address the changing consumer behavior, new kinds of competition, and shifting regulations.

It is interesting to know that 95% of our leaders understand that they need to work together to introduce new technologies or methodologies to their businesses. Investing in startups, forming joint ventures, and entering into commercial agreements are among our leaders’ strategies.

This year, we are also featuring the stories of leaders from traditional businesses and tech startups to share how they are keeping up with the rapidly changing world.

We trust that this report will encourage our leaders to take a step back to examine their business models, and move forward with new and more relevant solutions for their stakeholders.



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Notable disruptions in the Philippines

1910 The first automatic telephone system was installed in Manila by the Philippine Islands Telephone and Telegraph Corporation (PITTC).

1910

1920 Nielson Airport was inaugurated and was considered the biggest and the best-equipped airport in Asia.

1920

1930 PLDT was incorporated and was given the franchise to establish and operate telephone services in the country.

1930

1950

1953 Alto Broadcasting System (ABS), the forerunner of ABS-CBN, made its first telecast as DZAQ-TV Channel 3.

1960

1969 ABS-CBN made a breakthrough by using the first live satellite transmissions from abroad, enabling Filipinos to witness the live television coverage of the Apollo 11 historic landing.

1981 Bankard, Incorporated was organized by Philippine Commercial International Bank, or PCI Bank, to operate a domestic credit card operation.

1984 Diosdado Banatao (Dado) invented two of the foundation technologies in every PC today: the PC chip set, and the graphics acceleration architecture.

1988 ChinaBank launched TellerPhone, the first telephone banking in the Philippines.

1980

1990 Robinsons Galleria Complex is the country's first ever mixed-use facility that creatively combined a mall, hotels, offices, and condominium residences within one development.

1991 Lead Smelters Inc. (LSI), now Philippine Recyclers Inc., bought out First Metal Specialists Inc. (FMSI) and took over their battery recycling operations.

PILTEL, established by the Philippine Long Distance Company (PLDT), provided the first cellular mobile phone service in the country.

1992 Frank Holz, under the Accenture group, created the first contact center in the Philippines.

1993 With the support of the Department of Science and Technology (DOST) and the Industrial Research Foundation, the Philippine Network Foundation (PHNET) project was born.

1994 Internet in the Philippines first became available on 29 March 1994 with PHNET.

1997 The Inquirer became the first broadsheet in the Philippines to go online when it launched Inquirer.net on 27 October 1997.

1990

2000

2000 DSL, or digital subscriber line, was introduced by PLDT in 2000.

BPI Direct Savings Bank, an Internet bank, launched BPI into 21st century banking.

Chikka was released by Chikka Philippines, Inc. in early 2000 and eventually established its connection with the country's network operators.

2002 Friendster was launched.

2003 Smart became the first mobile operator in Asia and second worldwide to offer a tri-band handset that offered both GPRS and MMS capabilities.

2004 GLOBE GCASH allows any Globe or TM (Touch Mobile) user to send and receive money, buy prepaid load, pay bills, and do other money-related transactions, anytime, anywhere using SMS.

Philippine Airlines launched e-ticketing where passengers could book, pay and get a seat by phone or through Internet.

Smart launched Smart Padala, the world's first international cash remittance service linked to the mobile phone.

2006 Smart became the first telco in the Philippines to offer 3G services to the public.

2008 PhUV (Philippine Utility Vehicle) Incorporated is the umbrella organization of companies and institutions that pioneered the electric vehicle industry in the Philippines.

The first eJeepney was launched on 1 July 2008.

2011 There had been a significant increase of 30% or 21,630,200 additional mobile phone subscribers from last year.

2012 Lazada was launched in March 2012, with a business model of selling inventory to customers from its own warehouses.

Smart was the first to launch the country's fastest fourth generation (4G) mobile broadband commercial service.

BPI was the first Philippine bank to install cash deposit machines.

2013 Grab offers ride-hailing, ride sharing and logistics services through its app.

2014 The Philippines became the world's fastest-growing Internet population.

2015 AF Payments Inc. (a joint venture of Ayala and First Pacific groups) launched a contactless payment solutions to the Filipino public.

BancNet launched an innovative facility that enabled people in remote areas of the country to withdraw cash even if there is no ATM in the area.

2016 Diwata-1 was launched into space onboard an Atlas V rocket on 23 March 2016.

Insular Life launched its Automated Underwriting (AU) System in July 2016.

2018

2017 iGovPhil upgraded to a cloud system called GovCloud in 2017.

The Philippines ranked as the world's no. 1 in terms of time spent on social media.

The Philippine EFT System and Operations Network (PESONet) was launched on 8 November 2017 as part of the BSP's strategic initiatives to modernize the country's retail payment system.

The Ayala Group's Globe Telecom and Ant Financial Services Group rolled out a new cashless option that allows consumers to buy goods and services by scanning QR codes in establishments using their mobile phones.

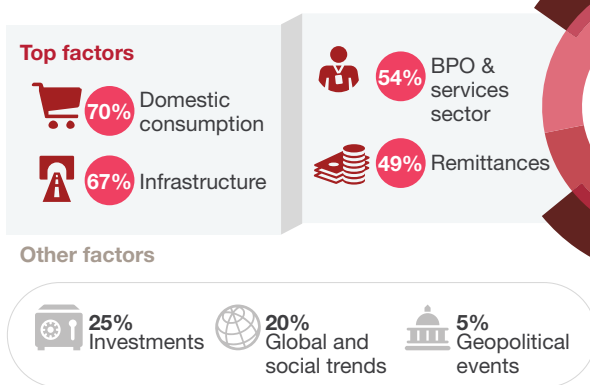
2018 Solar Philippines completed the largest solar-battery micro-grid in Southeast Asia.

2010

CEO Pulse: Growth and disruptions

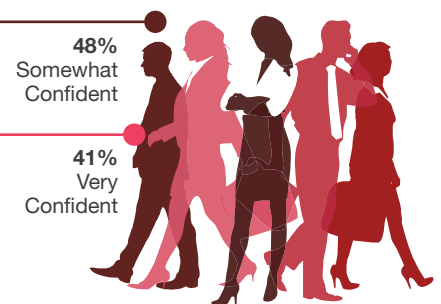
79% of the CEOs say that the Philippines will grow faster than the ASEAN

Q: Do you believe that the Philippine economic growth in 2018 will exceed the average economic growth in ASEAN?



89% are confident

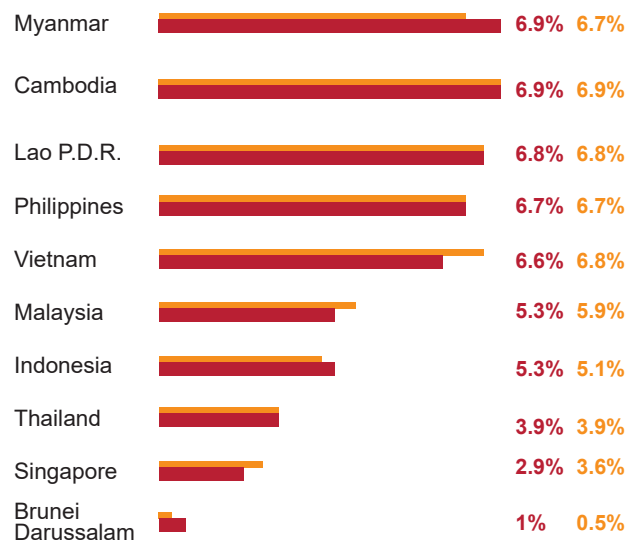
Q: How confident are you that your organization's revenue growth prospects over the next 12 months would be better than that of your industry?



The ASEAN economy remains to be among the fastest-growing economies in the world mainly because of the region's strong labor markets, growing private consumption, infrastructure investments, growing exports, and foreign direct investments.

In the Philippines, the economy had a good start with a 6.8% growth rate in the first quarter of 2018. Such growth was driven by public construction, government spending, and capital formation. Recent reforms such as the closure and rehabilitation of Boracay, however, contributed to the lower growth rate of 6.0% in the second quarter of the year. Despite the decline, 79% of our CEOs believe that the Philippine full-year economic growth in 2018 will be higher than the average growth in ASEAN. Our CEOs understand that the recent policy changes were made to promote long-term and sustainable development. According to our CEOs, domestic consumption, infrastructure, business process outsourcing and the services sector, and remittances from abroad will help drive our country's growth.

Real GDP Growth Rates of ASEAN Countries



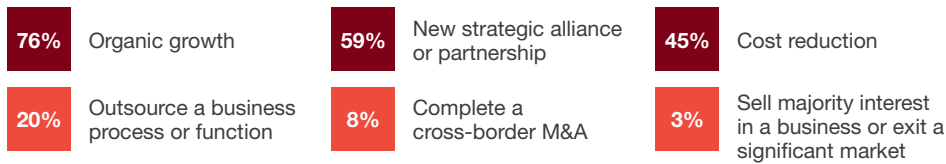
ASEAN GDP Growth rates:
2017 - 5.3% 2018f - 5.2%

* f = Forecast
Source: IMF Statistics

■ 2018f ■ 2017

Majority will focus on organic growth and new partnerships

Q: To drive corporate growth or profitability in the next 12 months, which of these strategies do you plan to execute?



Our CEOs remain optimistic with 89% saying that their organization's revenue growth prospects over the next 12 months would be better than the industry's growth. Possible sources of optimism include the higher disposable income from the recently passed tax reform package 1, expected higher government spending, and the ongoing implementation of the government's *Build, Build, Build* program.

Similar to the responses in the past surveys, forming new strategic alliances, or partnerships is among our CEOs' growth strategies. Our CEOs' strong confidence is evident,

with only 3% saying that they will sell their majority interest or exit a significant market. This year, we are seeing the CEOs' strong focus on improving their products and services with 76% saying that they will focus on organic growth to drive profitability.

Maintaining presence in other markets is critical to our CEOs' success. Consistent with the results of the 2017 survey, Singapore, Indonesia, and Vietnam were identified as the most important countries for their companies' overall growth in the next 12 months. Understandably, Singapore

continues to attract foreign players because of its healthy fiscal position, resulting in a favorable business environment and economic stability. Similarly, Indonesia is seen as an important market because just like the Philippines, it has a strong and growing consumer base with its estimated population of 264m in 2017. Vietnam remains a key market because of its government's focus on trade and investment liberalization, which will continue to drive the country's economic growth.

CEOs look to Singapore, Indonesia, and Vietnam for growth

Q: Which of the following countries do you consider most important for your company's overall growth over the next 12 months?



2017 data

Question: Over the next three years, how likely will your organization compete in a country other than where you are currently? If "Very likely" or "Likely", which countries will your organization likely enter? Otherwise, what are the reasons why you have decided to stay and expand in the Philippines?

Reason for staying in the Philippines



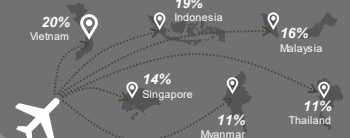
Other reasons: Business is not ready, lack of financial capital, too much risks



Top 5 challenges in going abroad



Preferred countries



45%
will likely compete in other countries

Preparations before going overseas



The essential technologies now

The current disruptions

Artificial intelligence (“AI”)

Software algorithms are capable of performing tasks that normally require human intelligence, such as visual perception, speech recognition, decision making, and language translation. AI is an “umbrella” concept that is made up of numerous subfields such as machine learning, which focuses on the development of programs that can teach themselves to learn, understand, reason, plan, and act (i.e., become more “intelligent”) when exposed to new data in the right quantities. Machine learning, whereby algorithms learn from data without relying on rules-based programming, is fast being supplemented by deep learning, with algorithms being able to process many more layers and dimensions than previously imagined.

The Internet of Things

The Internet of Things (“IoT”) is a fast-expanding network of digitally-connected objects — devices, vehicles and more — embedded with sensors and intelligent computing capabilities. The rapidly evolving industrial IoT (“IIoT”) connects sensors, software, and networks that enable manufacturing and industrial devices to be connected and remotely monitored or controlled. It opens up immense integration possibilities across the supply chain and beyond to customers. Closely linked with the rise of smart cities and grids,

both the IoT and IIoT open the way to a future where a vast array of sensor data and analytics-driven intelligence is available seamlessly in real time.

Blockchain

Blockchain replaces the need for third-party institutions to provide trust for financial, contract, and other activities requiring authentication and verification. Trust is in effect distributed along the blockchain. Blockchain technology has the potential to disrupt a wide variety of transactions beyond the traditional payments system. Because blockchain can record and authenticate every stage of a transaction, it could theoretically be used to secure and verify any type of transaction, making it relevant to a wide range of industries, from uses in bills of lading and custody chains in transportation and logistics to supply chain authentication in manufacturing.

Drones and flying robots

The drone revolution has the potential to go right to the heart of many operational challenges in industries ranging from transportation and logistics, forestry and agriculture, engineering and construction, and extractive industries. According to PwC’s study on the commercial applications of drone technology, the emerging global market for business services using unmanned aerial vehicles (UAVs) is valued at over US\$127bn. Drones have considerable

potential in areas of surveillance, maintenance, logistics, data collection, and so much more.

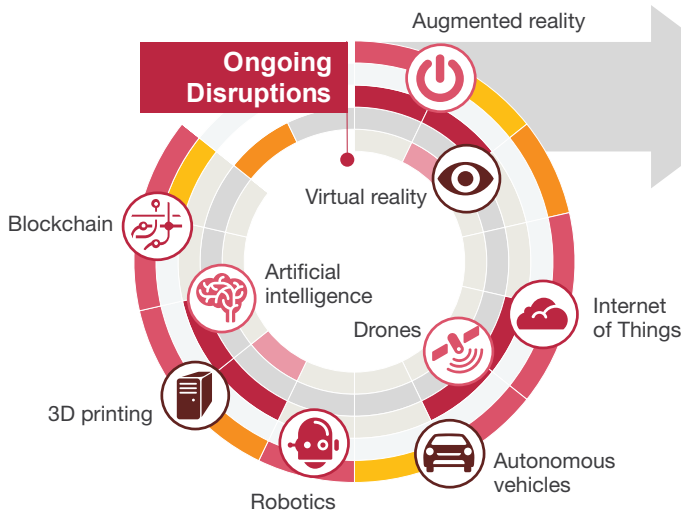
Robotics, augmented reality, and virtual reality

A range of other technological advancements is appearing, rapidly and simultaneously, in fields as disparate as healthcare and industrial manufacturing. Robotics, for example, is set to revolutionize medical practice as well as a wide range of manufacturing, construction, and infrastructure processes. In the oil and gas sector, Royal Dutch Shell has developed a robot to monitor equipment and carry out safety checks at a remote facility in Kazakhstan. Augmented reality (AR) adds information or visuals to the physical world, via graphics and/or audio overlay, to improve the user experience for a task or a product. AR is distinct from Virtual Reality (VR); the latter being designed and used to re-create reality within a confined experience.

3D printing

3D printing uses additive manufacturing techniques to create three-dimensional objects based on digital models by layering or ‘printing’ successive layers of materials. 3D printing enables on-site or with-customer production, opening up a considerable scope for value-chain disruption and bypassing the need to distribute or transport parts and products.





94%

believe that disruptive innovations changed their industry over the past 10 years



The Philippines is experiencing a new industrial revolution with technology as the main driver. In recent years, we have seen how traditional businesses changed their models to adapt to the changing customer behavior, and new technologies. Now, we are seeing pawnshops acting as agents of banks and financial institutions, taxi companies earning revenues from advertising, doctors prescribing medicines through mobile applications, logistics companies using private vehicles to deliver cargo, and many more.

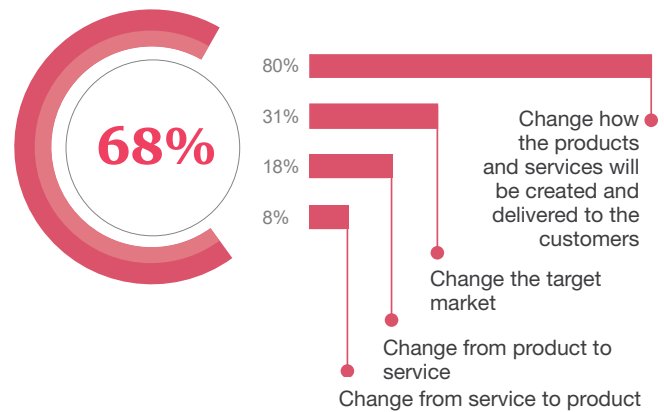
The shift from being cost-focused to customer-centric companies is becoming the trend. In the past, businesses change their processes mainly to improve efficiencies and profit margins. Now, companies are focusing on developing new solutions and improving products to address what the customers want. This is evident in our findings where 72% of the CEOs say that changes in customer behavior will disrupt their industries. Other factors that will drive disruptions in their industries are new kinds of competition, shifting regulations, new methods of distribution, and core technologies of production.

To address the current and anticipated disruptions, 68% of the CEOs say that they expect to change their business models in the next three to five years, with majority saying that they will change how the products and services will be created and delivered to the customers.

With the rapid advances in technology, no industry is immune, and businesses will suffer if they do not adapt. In the logistics industry, there is a trend towards large industrial or retail customers and suppliers becoming players in the logistics market themselves. In retail, we are seeing an increase in direct-to-consumer brand-building as well as in the number of agile online models. IoT is also changing the way manufacturers interact with consumers by developing more direct relationships, and potentially bypassing retailers.

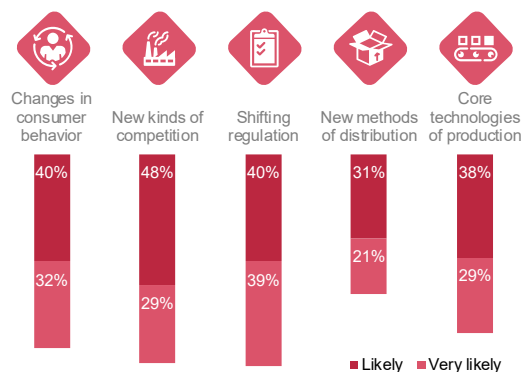
68% of the CEOs will change their business models

Q: Do you expect to change your business model in the next three to five years? If yes, what changes are you planning to make?



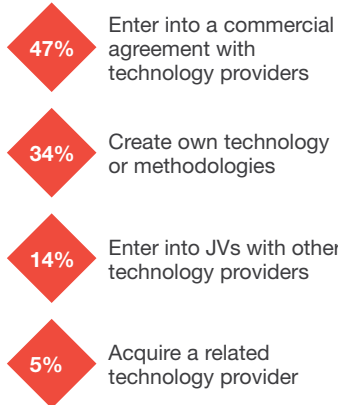
Five factors are driving disruptions across different industries

Q: How likely is it that your industry will be disrupted by one of these five factors?



Nearly half says that they need to enter into an agreement with tech providers

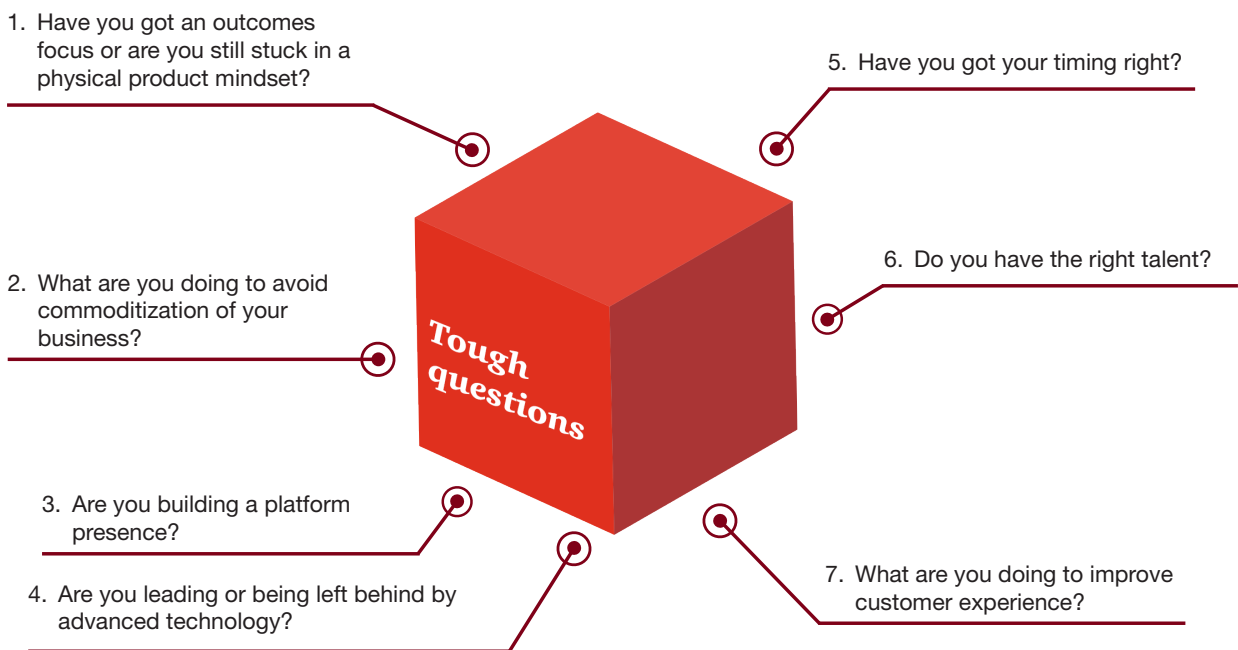
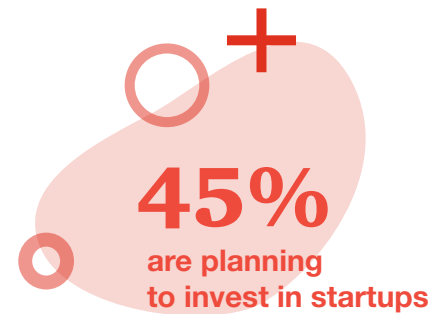
Q: How do you plan to introduce new technology or methodologies to your business?



Our CEOs understand that introducing disruptive technologies require proper planning as well as having the right resources. In fact, our CEOs identified financial resources, regulatory factors, and the lack of talent as the constraints that are stopping them from being disruptive. With these challenges, 79% of our CEOs say that they will form strategic partnerships, and 75% say that they will invest in new technologies to harness disruption.

Indeed, the current industrial revolution is changing the way we do business. Because of the innovative and disruptive technologies, collaboration is redefined, and a new form of partnership is emerging – a partnership where technology companies act as enablers of traditional businesses.

Working with startups is also among our CEOs' strategies with 45% saying that they are planning to invest in startups. Partnerships between traditional businesses and startups are becoming a key trend in the Philippines, specifically in the financial services, retail, logistics, and transportation sectors. Working with startups and technology providers may also help the businesses mitigate the growing technological threats.



79% of the CEOs will form strategic partnerships to harness disruption

Q: What strategies are you adopting in your business to harness disruption?



Lack of funds is stopping the CEOs from being disruptive

Q: Which of the following constraints is stopping you from being disruptive?





Edwin R. Bautista

CEO | UnionBank

“Disruption is coming our way. We need to prepare for it.”

The Philippines remains one of the countries with a huge unbanked population, as seen in the 2017 Financial Inclusion Survey conducted by the Bangko Sentral ng Pilipinas (BSP). With financial inclusion as the main goal of the Philippine Government, digital revolution is changing the banking sector primarily with the entry of fintech companies. Edwin Bautista is delivering UnionBank’s strategies to remain at the forefront of technology-based banking in the Philippines.

Edwin shares that the financial services sector now has new players that offer the same services as the traditional banks. “We’re already seeing lots of players that are either providing payment solutions, credit or loans; and savings products. I think that’s the big disruption that we’re facing now – competitors coming from outside the industry who do the same things we do, but are not defined as participants in the industry.

“What’s interesting is here in the Philippines, the banks are not yet feeling them because they’re targeting the unbanked or underbanked sector. We’re not feeling them, but they’re getting traction. The problem is these players will eventually dominate the mass market because their approach utilizes a lot of technology such as data science, robotics, artificial

intelligence, and use of algorithm. While these new players target the mass market, they will eventually move up the food chain – from the mass market to the retail segment, and eventually to the wealthy customers. The traditional banks are forced to move up the food chain, and the banks will start competing and will have a smaller market. Competition will intensify, and the margins will eventually go down.”

Edwin says that they had to make changes to defend their position in the market. “When we saw what was happening in several countries around the world, we said that if we don’t bring down our costs significantly through the application of technology, we will have a pricing problem versus the new players. Second, the mobile world is moving into a different kind of customer experience. Our consumers will start looking for the kind of experience that they’re familiar with in the digital space. We had to learn how to apply data science to our business, and how to use robotics process automation. We also had to open our API (application programming interface) library, and so far, we have over 400 APIs that are available to our customers.

“Artificial intelligence is also important because a large part of what the bank does is credit assessment. In credit, you constantly look for patterns in the behavior

of customers, which are predictors of their ability, capacity, and willingness to pay. Sometimes, it could be the most remote factor that you may not even think of that could predict whether they will pay you or not. It could be a person’s social media footprint, circle of friends, buying behavior, or even the telephone usage behavior. That’s what the fintechs are doing. If we are successful in doing the same things, then we can compete against them.”

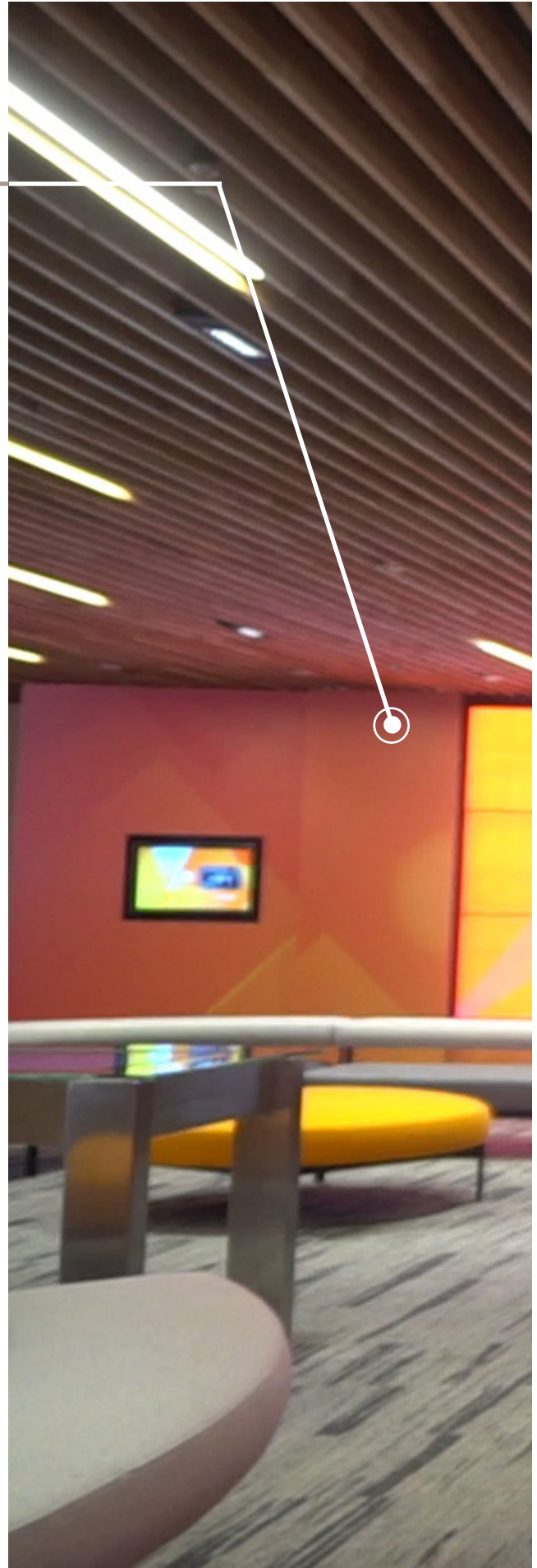
With the growing use of blockchain globally, Edwin shares how they are investing in this technology. “Blockchain is predicted to be the next big thing after the Internet. In our case, we have experimented on several internal blockchain applications. Internal for now because it’s within our control, and that would be the easiest thing to do. Our operations manuals that need real-time updates for instance, are now on blockchain to ensure that we have the most recent guidelines and BSP (Bangko Sentral ng Pilipinas, or the central bank of the Philippines) regulations. Some may say that we could have done that without using blockchain. My response is simple. I want them on blockchain because I want to understand the speed and access issues, and see how easy it is to program.”

“Through UnionBank’s internal experiment, they were able to move to the customer space. At present,

UnionBank is piloting a clearing system for rural banks, with the objective of moving money within the system using blockchain.”

When asked how their organization is working with startups or disruptors, Edwin replies: “We’ve actually partnered with a lot of fintechs. Partnering is quite attractive because what we’re seeing is these newcomers have great ideas and enthusiastic founders. If you talk to most of the successful fintechs, you will find out that most of them are our partners in some way. We’re the preferred banking partner of the fintechs because they feel that we understand what they’re all about. Because we understand them, it allows us to service them more efficiently, and help them navigate the regulatory space.”

For Edwin, preparation is key to remaining relevant and successful. “Disruption is coming our way. We need to prepare for it. That’s why the BSP is doing its best to shake the banking world, and prepare for this eventuality,” he says. Edwin also highlights the government’s role in promoting disruptions. “What could also help is for the government to require the electronic payment of taxes and licenses. This will encourage the people to start adopting a digital lifestyle. Going digital will help create transparency and efficiency.”





Jose C. Parreño, Jr.

COO | The Discovery Leisure Company

“The hotel industry is one of the most disrupted industries. Technology helped widen the options for tourists, and it helps promote convenience.”

Growing from 5.97m tourists in 2016 to 6.62m tourists in 2017, and with target arrivals of 7.50m in 2018, the tourism industry is among the Philippines’ priority industries. In terms of financial impact, the industry grew by 45.8% - from PHP230.1bn visitor receipts in 2016 to PHP335.6b in 2017. Given the expected further growth, the tourism industry is experiencing a digital transformation, with new and foreign players entering the market as well. Discovery World Corporation’s COO Jun Parreño shares their group’s journey to going digital.

“The hotel industry is one of the most disrupted industries in the world. Each generation has a different market segment, and technology nowadays plays a vital role in making disruptions possible. Technology brought in a lot of choices as well as convenience to the guests. If you talk about the hotel industry, it’s really about the convenience and choices. The advent of the Internet and global connectivity led to disruptions that you either embrace or ignore. Examples are online travel agencies, Airbnb, and online travel reputation sites,” Jun says.

Recognizing the new trends that resulted from the technological advances, Jun shares Discovery’s story: “We realized around

four years ago that the way to move forward is to invest in digital marketing solutions. We professionalized, hired experts to handle customer management; we digitized our rewards and booking systems. As a result, we now have two components in marketing – we have the traditional and digital methods. Going digital is the way to move forward.” Since starting their digital marketing initiatives, bookings have grown to contribute 50% of Discovery’s total bookings.

Known for their upscale and exclusive hotels and resorts such as Discovery Shores in Boracay, Club Paradise in Palawan, and Discovery Primea in Makati, Jun says that the trend now is more about sharing the experiences online. “Now, you have to be seen or be read in social media. If you don’t have an online presence, it will be hard to tap the market now, especially the millennials. If you are not on the mobile platforms, you are not part of the customer journey; you are not part of the booking decision. We have to be there so that we’re included in the choices of the customers.”

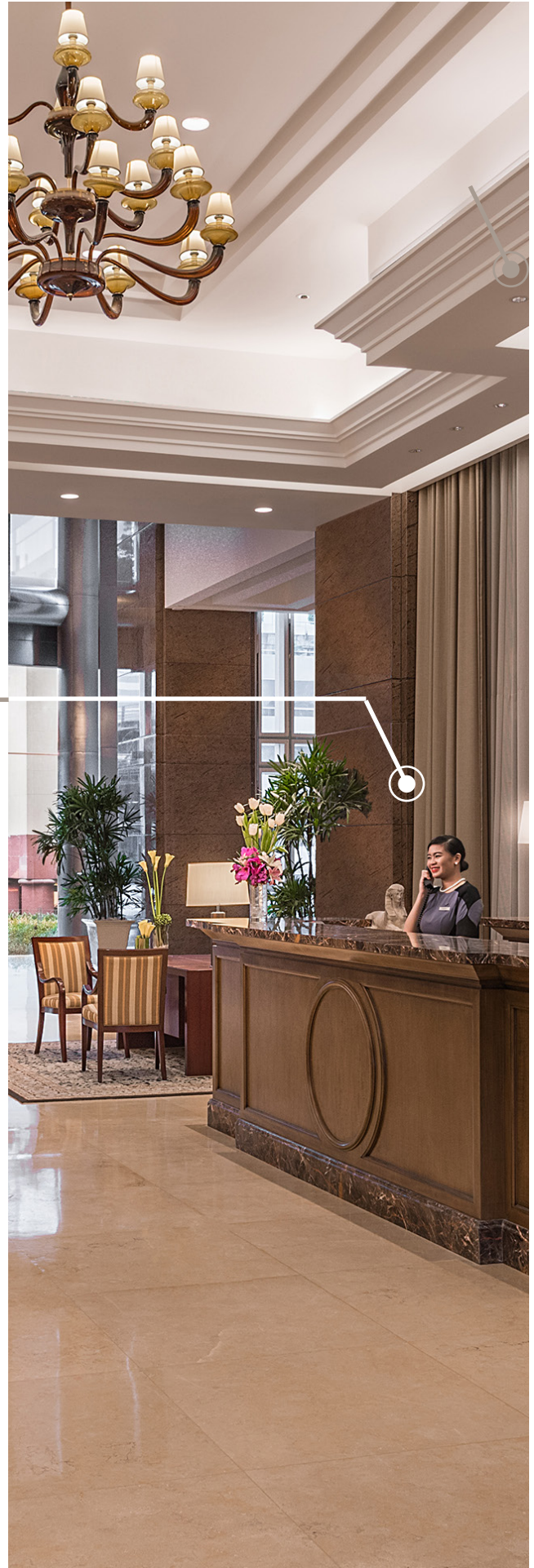
Jun also says that the risks and costs associated with going digital are high. “The new technologies available are quite expensive. Nevertheless, we can’t move forward without using new tools and technologies. Digital tools

such as travel reputation sites may also bring risks. Nowadays, before someone books, they first check the online review sites to see whether the hotel has a five-star rating. The guests read the reviews, and take note of the comments. The risk is high because of what people can post online, but we’ve learned how to manage this.”

Disruption in Discovery is not just felt through their new solutions, but in their new brands and hotels as well. While they have maintained their status as a premium hotel operator, Discovery recently entered the segment that caters to the millennials and backpackers. “We’re building a new brand for the Instagram generation. We’re building a new hotel in El Nido that will cater to the millennials. It will be hip, modern, and dynamic,” Jun says. The hotel will be called Kip & Kin, and will sit on a five-hectare property in El Nido, Palawan called Vanilla Beach, which is located ten to 15 minutes away from El Nido town, and with an expansive beachfront that stretches up to more than 240 meters. The mixed-use development will feature a beach club, a hotel with 117 rooms, and 84 hostel beds. The Shoppes at Vanilla Beach, a retail strip that starts at the highway and ends at the beachfront, has 48 cluster units, three highway anchor units, and five beachfront anchor units. From there, guests will have the best view of El Nido’s signature sunsets.

Globally, the hotel industry is welcoming the age of digital disruption. Customer experience is going beyond the traditional ways. Tools currently used by hotel businesses include online check-in solutions, messaging apps, robots, and voice-activated technology. Similarly, the Internet of Things has entered the hotel industry by bringing in smart building solutions to monitor the building and environmental systems. Wearable technology such as smart watches can act as room keys and wireless payment method while providing data such as dining and destination preferences. Virtual reality hotel experience is also offered by certain hotels. Such technology allows the guests to view and experience the hotel using the headset and headphones before their actual stay.

With the Filipino hospitality known internationally, Jun says that we should be more than just friendly people. He further shares: “As a country, the Philippines has a lot of potential because we have the best people. We’re good listeners, we’re very caring, and we’re very known for our hospitality. However, going forward, the hospitality sector should embrace the culture of change and trailblazing. We need to use technology specifically to help local tourism brands to grow, and be able to compete against the foreign players.”





Bansan C. Choa

Chairman of the Board | I-Remit, Inc.

“We used to have problems because of long lines. With technology, however, sending money is now easier.”

The remittance industry is being shaken up by new technologies that bring more convenience to the millions of Overseas Filipino Workers (OFWs) sending money back to their loved ones in the Philippines. According to the BSP, OFW remittances grew from US\$26.9bn in 2016 to US\$28.1bn in 2017. With OFW remittances as one of the continuing major drivers of the Philippine economy, Bansan Choa shares how technology is disrupting the remittance industry.

“Disruption comes in four different ways — internal, external, positive, and negative. Positive disruption normally comes from the technological side. Advancements in technology make it easier to send money without face-to-face interactions.” He, however, warns that the full potential of technological advances is not captured due to several factors. “Negative disruption happens because despite the industry having better technology, skilled Filipinos choose to work abroad due to higher wages. Hence, companies are suffering from internal problems because they lack the capacity and talent to take advantage of the new technologies.” He further adds that there is external disruption happening in the industry. “Government agencies around the world intervene with the use of these new technologies. It is

therefore imperative that companies come up with changes in their business models, and be innovative to maintain their market share while complying with the regulations,” Bansan notes.

Asked about the impact of fintechs on his business, Bansan answers: “Fintech has a great impact on our business. The most important thing for remittance is customer service. Before, we used to have problems with very long waiting lines. With the new technology, however, sending money became easier because customers can now transfer funds through online platforms.”

Bansan shares that there are several fintechs with new and creative ideas related to tackling current customer-related problems. “Some of them have been successful, but a lot of them are startups. Our company prefers partnering with someone who has better experience as well as the proprietary technology or knowledge that not everyone knows. That’s what we plan to do — invest in a particular fintech, and help each other for the benefit of the entire industry. We are one of those companies with a mass market or a large client base. Because of this, we have been approached by a lot of fintechs who lack the client base. We continuously try to look for partners who can help us on the technology side. In the same manner, we

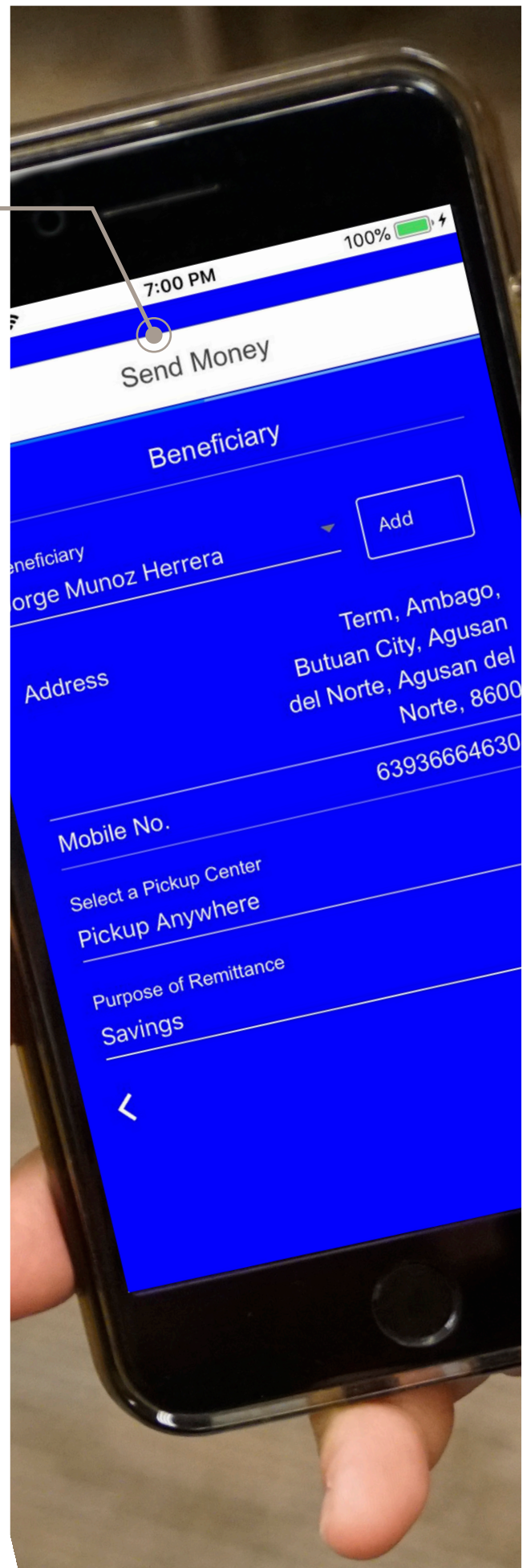
are trying to change some of our business models. We avoid focusing only on particular products limited to money remittance. Instead, we are trying to look for other types or sources of revenues.”

I-Remit is not only looking to collaborate with fintechs, but they themselves are at the forefront of applying digital currencies into their operations. Bansan shares: “Our company applied for a virtual currency license back in 2017. Currently, only four companies have been approved by the BSP. Why do we want to use virtual currency? It is potentially one of the modes to do transactions faster with less customer intervention. What happens at present is customers walk into our stores, and wait for their turn for as long as two hours. With virtual currency, however, the delivery of financial services such as remittance will be revolutionized because of faster and more cost-efficient transactions. Once we get our license, our customers will be happier.”

Bansan admits that there are other external factors that may prevent companies from being effective. “Even if you have good technology, but if our Internet speed is so slow, your technology may be put to waste. We need to have better Internet services in our country to maximize the use of technology,”

Bansan says. He also highlights the important role that the government plays in ensuring the success of new technologies. He believes that the government should continue working harder to make sure that we are in line with the other Asian countries in terms of infrastructure that supports the growth of technology.

With new ventures come new risks. Investing or forming partnerships with fintechs is a serious matter for I-Remit. “In choosing where to invest in or who to partner with, you need to analyze the costs and risks on an individual basis. It’s not about the amount of money, but it’s really about the risk that you’re absorbing. What we look for in a fintech is the additional value that they can bring to our company. In particular, we look at the technology or platform that they can contribute. We’re not just looking at the amount of investment, but we’re more focused on how we can meet the customers’ needs by working together,” Bansan says. Through its presence in over 25 countries, I-Remit will continue developing its products and solutions as part of its commitment of delivering trusted remittance services to Filipinos.





Emma Imperial

President and CEO | Imperial Homes Corporation

“I’m opening my technology to all real estate developers to promote inclusive growth across the Philippines.”

The Philippines’ housing backlog was at 6.7m in 2015, and the expected new housing demand from 2016 to 2030 is 5.6m. To help provide affordable homes to Filipinos, Emma Imperial established Imperial Homes Corporation with the vision of becoming the leader in building innovative homes. Having built over 20,000 homes since 1983, Emma transformed her traditional homes to innovative homes that use solar solutions as well as low-energy materials that may last a lifetime.

When asked how she started to integrate solar energy into her communities, Emma answers: “We’ve completed over 20,000 homes. I love innovating and starting new things. Around six years ago, I started putting small solar panels on my low-cost houses. We initially tried doing that for around 200 to 300 houses. I was then introduced to the Enfinity Group of Belgium. I presented to them, and I told them that the Philippines needs 6m homes, and you don’t need a big solar farm to power communities. You can actually place the panels on the roof, and that approach has been working with my small houses. We weren’t experts then, but the solar panels were already powering our homes. In fact, during a typhoon, only our houses had power.” Emma showed the viability of developing solar-powered communities to Enfinity, and the two companies partnered to form Enfinity Imperial Solar Solutions in the Philippines. Through the partnership, both

groups were able to contribute their expertise – Imperial Homes contributed the land for their first project, while Enfinity installed the solar panels on all the houses.

Realizing her vision, Imperial Homes built Via Verde in Sto. Tomas, Batangas, in 2014, and is considered the Philippines’ first solar-powered mass housing community. Imperial Homes also built the country’s first solar-powered condominium development – Solana Verde. Solana Verde’s units will be equipped with 24-hour solar solutions that will give the unit owners significant savings in power costs. Despite receiving several awards such as the 2017 ASEAN Business Award for Green Technology, 2016 ADEC Innovations Green Company of the Year, IFC Green Building Champion, and the Financial Times/IFC Transformational Business Award, Emma admits that it was not an easy journey. “There was a missing link. The low-income market cannot afford a solar package of PHP300,000. I had to work with the banks and financial institutions to approve the financing of solar packages, and include them in the housing loans. It took me two and a half years to have this approved,” Emma shares. Through Emma’s efforts, homebuyers may now tap selected banks as well as the Pag-IBIG Fund to provide financing for their solar-powered houses.

Aside from savings from electricity, Imperial Homes’ solar-powered communities also helped improve

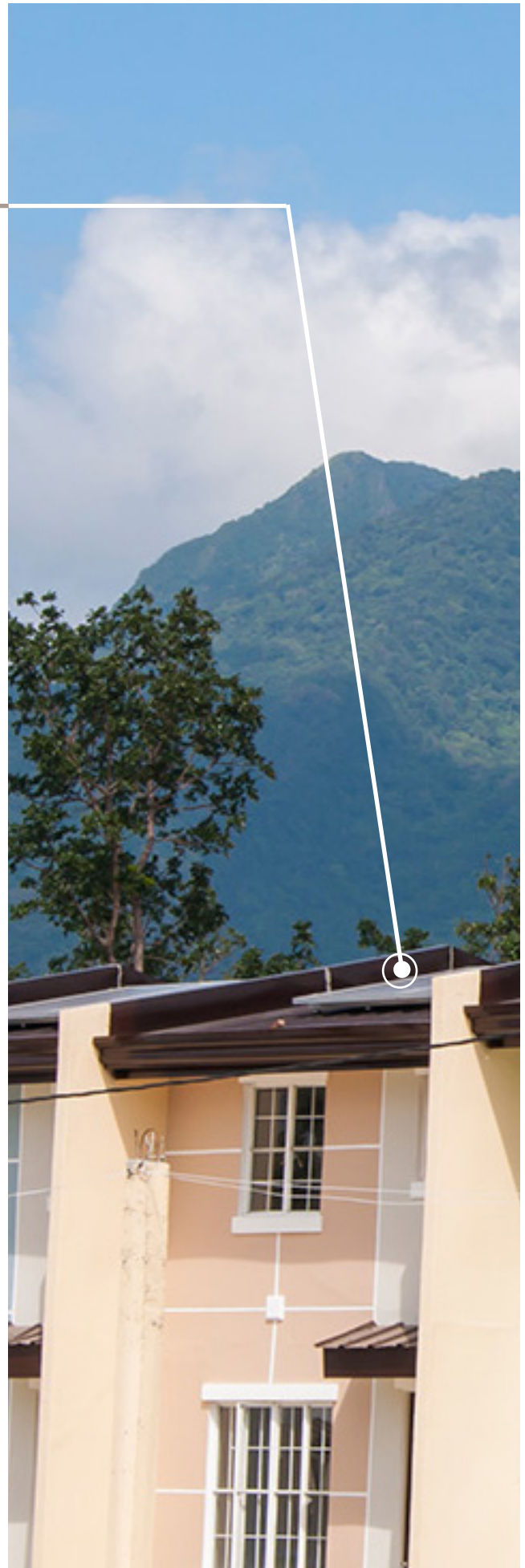
lives. Via Verde’s houses, for instance, consume around 40% less energy, allowing the homeowners to start their own home-based businesses such as *sari-sari* (neighborhood convenience) stores. “I’ve never realized that this kind of community can create inclusive growth. The housewives started their own home businesses. One started an ice candy business, allowing them to earn around PHP3,000 a month. That’s very fulfilling for me,” Emma says.”

While Emma has established a working business model for her solar-powered communities, she says that they faced other challenges in scaling the business. “All developers in the country are having problems with construction. First, the workers are going to the highly urbanized cities. We didn’t have enough manpower. To address this, I partnered with Connovate of Denmark.” Through the partnership, Emma secured the exclusive production licensing agreement from Connovate Denmark allowing Imperial Homes to use a high-performance concrete building technology that offers less carbon footprint. Connovate’s sandwich elements and panels are high-performance, low-energy building elements that allow faster and easier handling and construction. The panels can also last a lifetime because of the materials’ good quality. Connovate Philippines’ automated factory is in Silang, Cavite, and can produce materials good for two houses in

a day. “Building a house using Connovate reduces the emission of carbon dioxide by around four tons,” Emma proudly shares. Imperial Lifetime Homes is her company’s second-generation solar-powered community.

20,000 homes are not enough for Emma. Backed by her solar panels and Connovate technology, Emma has high hopes for the Philippines. “We have completed 1,000 solar-powered units, but we can do more. Our plan is big. We want to have 5,000 more solar-powered houses in the next few years. Through our use of Connovate technology and solar panels, the 5,000 houses that we’ll build will result in savings of around US\$9.2m. That’s the savings in terms of the lower fuel usage. Those 5,000 houses will also reduce the emission of carbon dioxide by around 7,000 tons.”

For Emma, their technology is not just for their own business, but should benefit the entire country. “Our vision is to be the solar capital of the world. We want to share our technology with other real estate developers. We want the developers to work together to reduce the use of fossil fuel.” Inspired by her vision of building innovative affordable homes, Emma is now visiting the different areas of the Philippines to educate both the developers and buyers about the benefits of going green and solar.





Grace Agustin

CEO | Healthblocks, Inc.

“We’re bridging the gap between the patient and the providers and being able to give the power to the patient to control their records.”

The Philippine healthcare sector is experiencing growth with over 1,800 private and public hospitals, and an estimated health spending of US\$24.9bn by 2020. In 2018, the Department of Health as well as the Department of Science and Technology announced the roadmap on using technology to help the Philippine healthcare industry. Understanding that billions of dollars are lost annually due to health fraud and inefficiencies, Grace Agustin, together with her co-founders, James Mendoza, Alvin Tang, and Jon Trinidad, established HealthBlocks, Inc. with the vision of providing reliable data, secure data privacy, and seamless data interchange through their ecosystem of solutions.

“We’ve been working in the healthcare space for several years, and we’ve encountered a number of problems. One of the biggest problems that we face in the Philippines is the disconnected data silos. Personally, when I was confined in 2017 because of Dengue, I had high fever, yet the doctor was still asking questions when I wasn’t that conscious. The information he needed should have been readily available. We’ve also seen cases where patients were prescribed medicines without the doctors knowing that the patients are allergic to the content. These scenarios could have been prevented if everyone had access to the right information. Connecting all the data by getting the right information at the right time motivated us to start HealthBlocks,” Grace shares.

According to Grace, the healthcare sector still relies on manual processes. “The most traditional practice is just using pen and paper. The secretaries of doctors maintain index cards where they record the patients’ information and data. One hospital used to maintain a room full of files. When it flooded, the hospital lost all the patients’ records. The more modern practitioners on the other hand, maintain their systems and files. However, those data are still within their own databases, and they don’t have enough security solutions in place.”

With HealthBlocks’ goal of being the standard health information exchange for developing countries, the company started offering HealthPortal, HealthPortal PRO, HealthNetwork, and HealthWallet. HealthPortal is the next generation electronic health record system, which facilitates smarter clinic and patient care by enabling a secure and remunerative collaboration within and between clinics. HealthPortal PRO was built for mid-sized to large healthcare providers such as hospital chains, and it elevates the existing hospital information system with its all-in-one management capabilities. HealthNetwork is a blockchain-based health information exchange that is cost-effective, fast, and secure. HealthWallet is their cross-platform mobile application specifically created to empower users to maximize their healthcare benefits, and empower the organizations to provide the best care. Through the HealthWallet, patients can view and download their lab tests, imaging

results, and prescriptions while allowing them to search and locate the health facilities within their areas.

“We enable faster communication, and we’re bridging the gap between the patient and the healthcare providers. We’re empowering the patients to control and access their healthcare records. Our solutions enable having a faster turnaround time. We want to promote the continuity of providing healthcare services. For us, a patient’s record doesn’t end when he/she leaves the clinic or hospital,” Grace says.

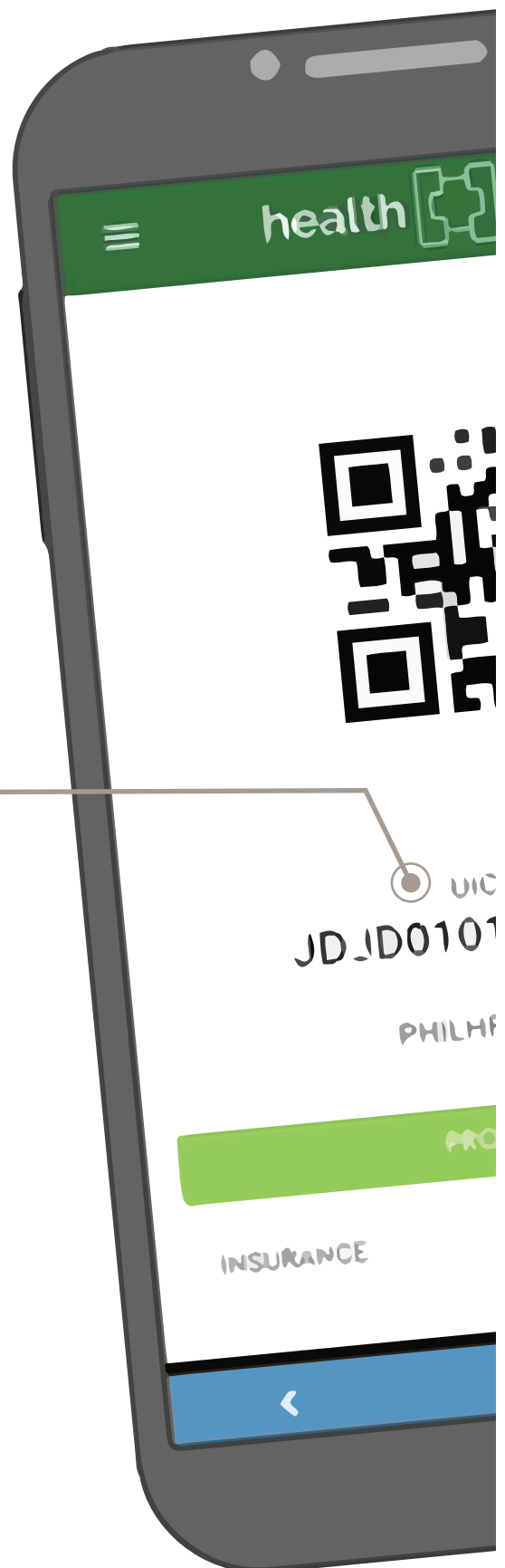
Grace shares how HealthBlocks has helped a hospital: “We’ve created an antimicrobial surveillance system for a local hospital. One of the problems in the global healthcare space is antimicrobial resistance. There’s a growing number of bacteria that become immune to the antibiotics that we have in the market. Improper use of antibiotics as well as over prescription of antibiotics result in lower resistance. In the hospital we’ve helped, their process before involved a nurse going around the departments, wards, and rooms, asking the doctors what they’ve prescribed as well as the infections. After compiling the records every month, the hospital analyzes the data at the end of the year. They only get the information a year after compiling all the data. When we implemented the system, they were able to see and generate the reports immediately after entering the information. The doctors were able to see the trends, and we were able to

help control the access to medicines especially the antibiotics.”

Despite the growing presence of health technology startups, Grace says that they remain different. “Currently, we’re using blockchain while exploring other and new technologies. We’ve been working in the health sector for quite some time, and we’ve not only focused on technology. We spent time talking to doctors, patients, and policy makers to understand how technology can play an important role in healthcare.”

As a millennial working in a very traditional industry, Grace shares her experience: “Personally, when I approach hospital directors and owners, their usual response is I’m young. Sometimes it’s difficult to get your message across if they see you as too young. It’s also difficult to explain technical matters like blockchain to older doctors. There’s a big gap between the decision makers and the technology providers.”

While HealthBlocks has been working with the key hospitals, health maintenance organizations, and government units in the Philippines, Grace says that they still have a lot in store for HealthBlocks. “Right now, we’re focusing on hospitals and private practice doctors. We’re constantly improving our applications. We don’t want to stop at blockchain. We’re working closely with the academe to explore and use cutting-edge technologies. We want to help improve lives through our technology.”





Magellan Fetalino

Founder and CEO | Acudeen Technologies, Inc.

“We focused more on scaling the financing companies’ infrastructure using our technology. By using technology, it’s scaling all aspects of the business all at once.”

As a business owner, Magellan Fetalino experienced the struggles of meeting obligations because of lengthy payment terms of customers. With the vision of helping small and medium enterprises (SMEs), Magellan started Acudeen in 2016 to help SMEs liquidate their receivables through an online platform.

“One key problem as a small business owner then was the constraint in terms of cash flow. There were instances when we needed to borrow money just to pay our employees and suppliers on time. Most of our clients were big companies, and these companies would normally impose payment terms ranging from 60 to 120 days. As a small business, it was quite difficult. With that experience, I thought that with the right solution and capability for receivables, a lot of SMEs would be able to sustain their businesses, and even grow.”

In spite of having manageable interest rates in the country, Magellan says that most companies still have trouble obtaining loans. “If you’re not one of the big players, it’s quite difficult to get a bank loan. In our current system, you can get a loan in two ways. First is by way of proving your credit rating. If the bank has been transacting with a company for years, they are more comfortable with providing cheap financing. If you’re a new company,

the bank would normally provide a collateral-based financing. If you’re a new business, most probably, you don’t have the collateral for the loan. As a result, most of the options of the traditional small businesses would include borrowing from friends or family, and obtaining loans through informal lending. The problem with borrowing from friends and family is there’s always a risk of losing those relationships. Informal lending on the other hand, does not provide cheap financing.”

As an alternative to costly loans, Acudeen’s platform helps SMEs sell their receivables for cash. The process starts when the sellers upload their invoices to the platform. Acudeen’s system then verifies the invoices, and upon completing the review, the sellers will be allowed to sell the invoices in the marketplace. The buyers on the other hand will be allowed to choose from the qualified invoices on the platform. Upon selecting the invoices, the buyers receive the notification, and the buyers will be able to check the timeline for when their invoices will be paid by the payors or the corporations that have payables. Funds from the invoice buyers and investors are then transferred to the Acudeen trust account, and will be disbursed to the different sellers once their invoices are bought. At present, Acudeen’s funders include banks, financial institutions, and individual investors.

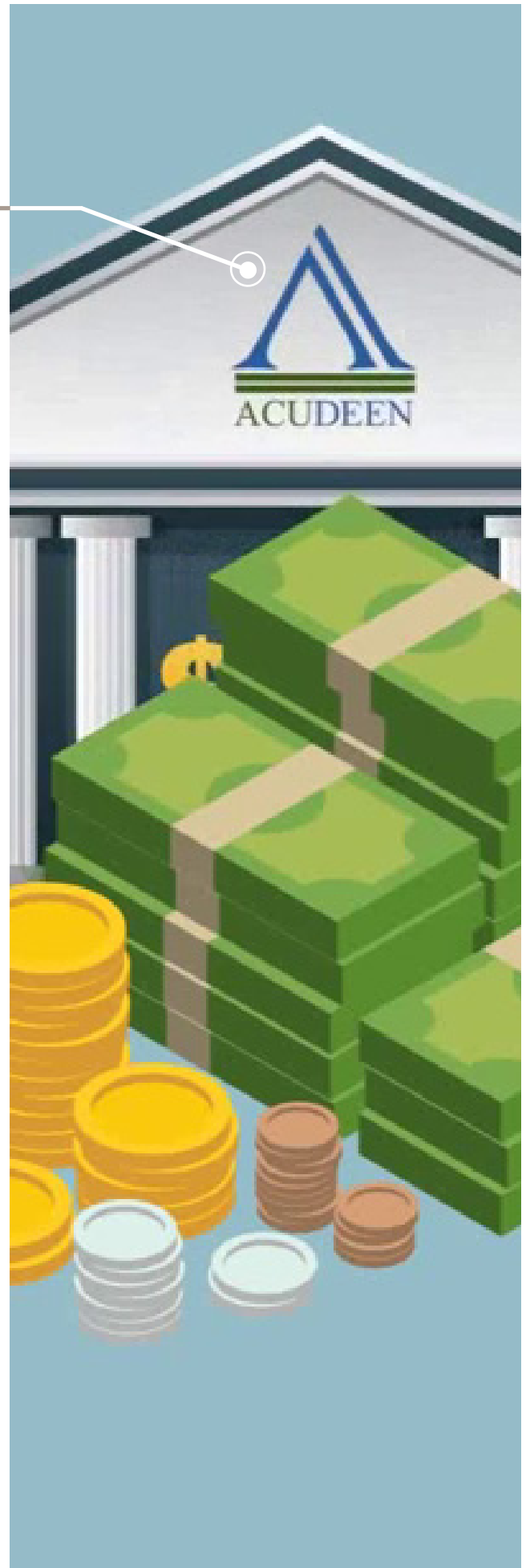
Since launching in 2017, Acudeen’s transaction volume has doubled in just a few months. Magellan further shares: “Our volume in 2017 was around US\$3m, and we were serving 200 SMEs. This year, in just six months, our volume reached US\$6m, and we’ve provided financing to 400 SMEs. Our bank partners were saying that we’re now even bigger than some rural banks. The banks were saying that our performance was impressive, and that we need to work together to make it more beneficial for the ecosystem.”

Despite the presence of several fintech companies in the Philippines, Magellan says that they operate in a different manner: “Fintech is a broad category. You have remittance, you have the typical lending, and consumer lending. Our focus is mainly on businesses and the use of receivables as an alternative form of financing SMEs. Why the SMEs? We wanted to help the SMEs because for the longest time, these people have been underserved. However, if you look at their GDP (gross domestic product) contribution, it’s one of the largest. Our main differentiation when it comes to our competitors is we have positioned Acudeen more as a tech company than a financing company. As a tech company, instead of focusing on making sure that we have the infrastructure for credit, we focused more on scaling the

financing companies' infrastructure using our technology. That was always our mindset. By having this mindset, we were able to scale to a level wherein we develop our products faster, we expand our market faster, and we tap more SMEs in a more aggressive manner. By using technology, it's scaling all aspects of the business all at once."

While they have grown their volume significantly, Magellan admits that they still face challenges. "There will always be growing pains. The more you scale, the more customers you serve. I've realized that when you serve more customers, the more you have to be customer-centric. In the past, we used to outsource our customer service angle. I then realized that we need to strengthen this aspect. We pulled back, built our customer service process internally so we can impose our culture."

Magellan's philosophy is they can't eliminate the banks. "We should all be working together. For us to continue to remain relevant in this ecosystem, our focus is to continue developing products and services that are both customer-focused and partner-focused. By making the relationships with all the players stronger, we can be sure that our vision of having a financially inclusive environment for everyone will become a reality," he says.





Benigno Marasigan

President | Weather Solutions

“Our vision is to help industries such as agriculture, retail, aviation, transportation, and other sectors that can benefit from the use of weather data.”

With an average of 20 tropical cyclones every year, the Philippines is among the most exposed countries to tropical storms. Having a good understanding of the weather’s direct impact on business value chains, the Aboitiz Group launched Weather Solutions, Inc., a weather social enterprise, to provide a platform-based suite of services to help its customers reduce risk and develop business solutions using weather data.

Jojo Marasigan shares the vision behind Weather Solutions: “The Aboitiz Group is actually the biggest in the Philippines in terms of corporate social responsibility programs (CSR). As a group, we spend about PHP1bn a year in CSR projects. One of the biggest CSR projects we did was Weather Philippines Foundation. Aboitiz, being CSR-centric, wanted to do something to help Filipinos prepare for disasters. Weather Philippines rolled out 800 weather stations across the country, and it has been growing since 2012. After six years, there was a need to expand the scope of the foundation, and that was when Weather Solutions was created. The mandate of Weather Solutions is to monetize the data in the infrastructure of Weather Philippines. We’re here to serve different industries that are in need of data and weather information.”

Given its business-to-business model, Jojo says that the Philippines is just starting to use weather data for business. “Unlike European and other mature Asian countries, we’re a little behind when it comes to using weather for business. In countries like Japan for instance, they use weather data to forecast retail products. If you have big data for weather, information on precipitation and temperature, and if you also have big data on consumer spending, you can have a recommendation engine that will say that a particular store in a particular location should sell this amount of a certain product for the next few weeks.”

The Aboitiz Group looks at Weather Solutions as a data company rather than a weather company. “It’s a data company because we have historical, real-time, and forecast data in our hands. Different industries look at these data sets, and our objective is to store data, and make them available through different channels. Our vision is to help industries such as agriculture, retail, aviation, transportation, and other sectors that can benefit from the use of weather data.”

Through Weather Solutions’ platform, data is gathered every ten minutes, and the information is shared through their website and mobile application. “If you have

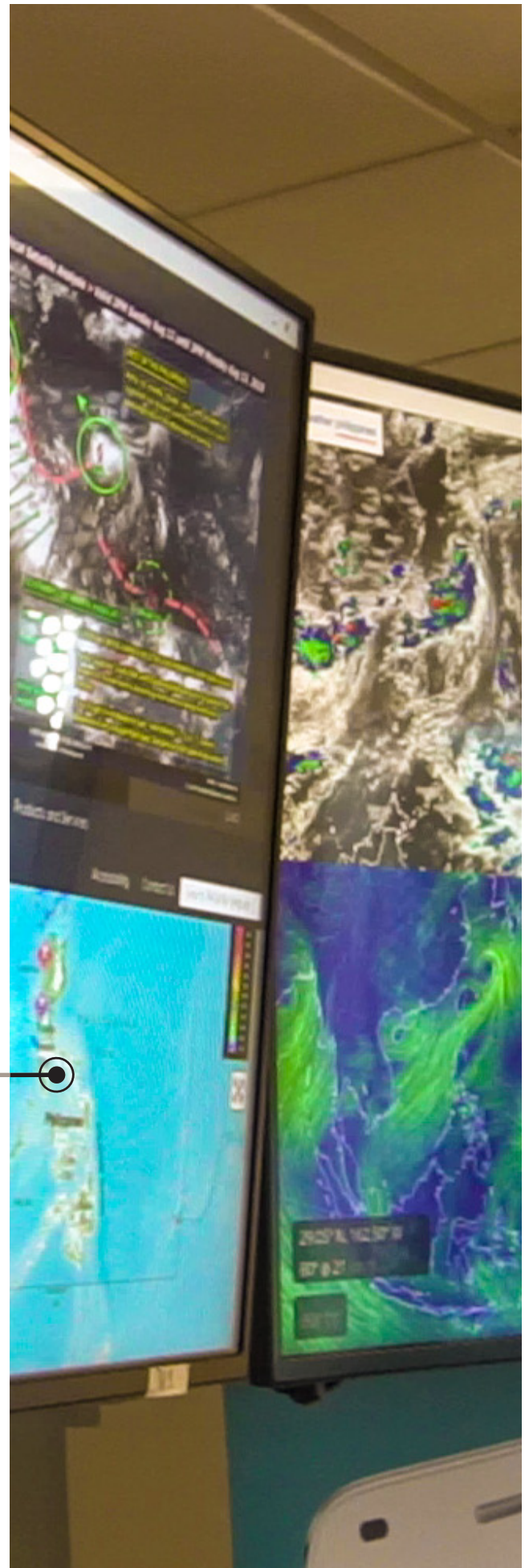
weather information that’s updated every ten minutes, and if you are in a specific industry that’s affected by weather, you can utilize that data. In other countries, if they know that it will rain in the afternoon, some retail shops will offer promos or lower prices for certain items before the rain. A coffee shop may offer free bagel or free coffee just because it will rain in the afternoon. A pizza delivery store may ask you to order now because they know that they can’t deliver later. In the Philippines, the types of clients that we get are enterprises that deal with a complex range of issues.”

While introducing the use of weather data has been challenging at first, Weather Solutions has signed partnerships with key industry players to utilize their data. Manila Electric Co. (Meralco), for instance, signed a subscription agreement to gain access to weather data in critical service areas. Meralco said that the weather data would help them in forecasting electricity demand of each of the identified areas. Similarly, the Philippine Red Cross partnered with Weather Solutions to overcome challenges in disaster risk and response by using weather data. “One of our interesting projects is the one with the Call Center Association of the Philippines. They use our typhoon tracks to monitor the centers that will be affected by the typhoons.

Because we give them the typhoon tracks three days before the typhoon hits, the call centers reroute their calls to other locations. In terms of business continuity, it's important for them," says Jojo.

Asked how they are different from other weather platforms, Jojo answers: "Because we have 800 stations, I think our play here is localized weather. We can say that it's raining more in Quezon City than in Makati. When you have localized weather, you can use the data for disaster preparedness."

What's next for Weather Solutions?
"We want to launch an app that will allow the users to report the weather conditions in their areas. The users can report if the areas are flooded, if it's really hot in certain locations, etc. At some point, those information will form part of the data that we collect to actually report the real conditions in different areas. More than that, if the APIs (application programming interfaces) are already available, we'll be able to partner with other companies such as Airbnb, various TNCs (transportation network companies), and other platforms. We had a lot of challenges, but our role here is to make a relevant product using weather data so the other verticals could consume it the way we presented it," answers Jojo.





Israel Keys

CEO | Bloom Solutions

“Something that we do differently from a lot of remittance businesses is that we’re actually promising the exact Peso value that the beneficiaries will get in the Philippines.”

Knowing that a huge portion of the Philippine households is unbanked, Israel Keys started Bloom Solutions with the objective of promoting financial inclusion, and lowering the costs of money transfers through cryptocurrency.

“More broadly, the problems that we are looking at within Bloom are around financial inclusion and providing greater access. If you look across the Philippines, 69% of the country remain unbanked. That means they don’t have access to the traditional financial services such as savings, lending, and borrowing. More specifically, one of the first problems that we’ve tackled at Bloom was the cost of transferring money. If you look at the cost of transferring money into the Philippines, it can cost as much as 20%. In particular, the people who are underbanked or are in the low-income bracket are the ones who are charged the most. We found that those who actually send the least amount of money pay the most in terms of remittance fees.”

Despite the presence of over 500 banks in the Philippines, Israel shares that most of the traditional financial institutions don’t address these problems. “We don’t actually see a lot of banks tackling the problem of being underbanked. For a lot of traditional businesses, it’s very costly to serve the

underbanked. As such, most banks tend to serve higher-value customers with the traditional banking products and services.”

To help lower money transfer costs, Bloom developed a product that fits in the middle of an existing remittance channel. “Ours is a business-to-business product. That is, we’re servicing money transfer operators overseas, and helping them facilitate the transfer of funds into the Philippines, and into Southeast Asia. We fit in the middle part of the transfer. Most individuals who use our product don’t actually realize that they’re using us,” says Israel. Bloom Solutions’ typical workflow involves a customer approaching one of Bloom’s partners or agents overseas. The customer will then hand over the local currency to the remittance store. Once it’s handed over, the customer is given a conversion rate, and will be asked how the beneficiary would like to receive the funds. When the requirements are completed, the beneficiary receives the funds in the Philippines within ten minutes. “In between a transaction, what we do is we use bitcoin or cryptocurrencies as a way to transfer the funds quickly and efficiently overseas. Instead of using a banking system where we would rely on the SWIFT money transfer system, which has been around since the 1970s, we’re using cryptocurrencies to transfer

the funds. About 60% of the funds that we facilitate go directly to the bank accounts. The other 40% are available at cash pick-up locations such as pawnshops,” Israel shares.

Asked how they are different from the other remittance businesses, Israel answers: “Something that we do differently from a lot of remittance businesses is that we’re actually promising the exact Peso value that the beneficiaries will get in the Philippines. If you’ve ever transferred money overseas, you often don’t know when it’s going to arrive, and you don’t know exactly how much you’re getting because of the foreign exchange risk. We’re actually doing it differently. We’re promising how much the recipient will get. We find that migrant workers want to control the spending of their beneficiaries. By using our facility through our partners, they get the exact amount, and they’re not exposed to foreign exchange risk. Because of our technology, people can save up to 50% of money transfer costs.”

Because cryptocurrency is still new to most people, Israel shares the challenges that they are facing: “One of the challenges, but also opportunities, that we face as a fintech startup is around regulation. A lot of what we do is unregulated in the sense that regulations and laws within the country haven’t really

caught up to where the technology is. Now, part of our work involves working with the regulators, understanding what they're trying to do, and also educating them about the technology that we're providing to the general public."

Having been successful in providing business-to-business crypto solutions, Israel says that they believe that the retail market is now ready for them. "I certainly hope that as a company, we can remain on the edge. We're rolling out a set of new products this year. We're partnering with Czarina Money Exchange, and Palawan Pawnshop to enable them to deliver cryptocurrencies to the general public. When we started the business two years ago, we thought it was too premature to tell people about crypto. However, if you look across Southeast Asia, if you look at the Philippines, people are wanting to buy crypto, but they don't know where to go. There's a lot of fraud, and scams now in the market. What we're rolling out now in partnership with existing financial institutions are products that will enable the traditional foreign exchange store or your local pawnshop with the ability to buy and sell crypto over the counter." With Bloom's technology, even the unbanked and underbanked across the Philippines will be able to buy and sell crypto within their communities through channels they can trust.





John Michael Bernil

CEO | Exora Technologies

“We launched Exora to make the electricity transactions as efficient as possible so we can make electricity affordable for every Filipino.”

Because the Philippines is one of the countries with the highest power rates in Southeast Asia, Michael Bernil started Exora in 2017 to help address this problem.

“When we started Exora, we wanted to change how the energy industry does their transactions. One of the problems that our country faces is we have the second most expensive generation costs in Asia. The only country that has higher generation costs is Japan. When we studied our energy sector, we realized that maybe, if we can sell the unutilized capacity of power generators, maybe the costs of electricity will go down. After working with the industry for a year, we then realized that even the sold capacity or sold electricity are not as efficient as we want it to be. With these in mind, we launched Exora to make the electricity transactions as efficient as possible so we can make electricity affordable to every Filipino.”

With several retail electricity suppliers and generators across the Philippines, the mismatch between supply and demand creates the inefficiencies leading to higher costs. Michael further shares: “Right now, there’s a lot of retail electricity suppliers that serve as third-party suppliers to power generators and consumers. Some of these retail electricity suppliers charge commissions, and only the big power

generators have the capacity to sell electricity through such suppliers. The smaller power generators, on the other hand, cannot sell through them if they don’t have the right relationships. As a result, a lot of small power generators don’t have access to the customers that they badly need. That was how the industry was working before we came in.”

Through Exora’s platform, both the suppliers and customers benefit because of the transparent bidding process. Their online platform connects the power generators directly to the consumers. Businesses that consume at least PHP2m worth of monthly electricity bills can use Exora’s platform, and will be required to upload their electricity bills for the last 12 months and provide the terms for their contracts. Once the information is complete, Exora processes the data, and the customer is then allowed to start the bidding process. All the electricity suppliers will receive the customer’s information, and the suppliers will bid based on such information for two weeks. “The suppliers are actually outbidding each other because they can see the percentile that they’re in. If you have the cheapest price, you will be on the top percentile,” says Michael. After two weeks of bidding, the customer will choose the supplier that fits the criteria. Exora will

then process the documentation and contract signing, and the customer will be working with that supplier for a year or two. “All the interactions are done online. We make all the contracts standardized to make it faster, allowing us to complete a transaction in three weeks,” says Michael.

While Exora has just been in business for over a year, Michael shares that they’re already working with a number of power suppliers in the Philippines. “We’re actually partnered with a good number of power suppliers, as well as a good number of customers. Most of the businesses we work with are the ones who consume the significant amount of electricity. These customers also have difficulties in finding their own suppliers because either their load profile is difficult to handle or they don’t have sufficient industry knowledge. Now, with our system, the best contract is made available to the customers through our algorithm and bidding process,” Michael says.

With just a few players in the electricity sector, Michael highlights how they are disrupting the industry: “We democratize the access to electricity. As we are all aware, we just have a few electricity players who handle most of the consumers in the country. As such, these players have the power to

manage the supply and costs. Exora democratizes electricity because through our system, the consumers will have the chance to connect directly to the power generators. In the same manner, the power generators who are tapped through our system will have the capacity to maximize their electricity production. Both the consumers and suppliers will have their preferred terms because of our transparent comfortal system.”

Having won several awards in just a short period of time, Michael says that they still have a long way to go. “We’re investing a lot in our research and development to remain disruptive. We have a partnership with Ateneo de Manila University so that the engineers, data scientists, and all those who work in the energy sector will have the capacity to produce new technology for the country. What we’re currently developing is the aggregation system that bundles contestable customers to negotiate as a group with a good load factor.” With the proven benefits of Exora’s platform, Michael believes that other countries may also benefit from their system. “Exora will work in countries with deregulated markets. To grow outside the Philippines, we’ll be looking at Japan, Singapore, Thailand, and China,” Michael concludes.





Eddie Ybanez

Founder and CEO | Micab

“We want to empower both the businesses and consumers, and help improve services through our technology.”

As a commuter in Cebu City, Eddie Ybanez had trouble hailing cabs, and this problem inspired him to launch Micab in 2012.

“We started as a taxi-hailing application because of my personal experience – hailing a taxi was very difficult. This is the reason why we created Micab. We wanted to connect the passengers to taxi drivers, and make it more convenient for everyone.”

Eddie admits that hailing a taxi is not a new problem, and that traditional businesses are also looking for ways to address the same concerns. “The traditional businesses in the transportation sector are not yet technologically advanced. They are trying to solve the problems manually. An example is their dispatch system that involves doing the traditional calls. Now, however, the trend is to partner with technology companies to enable them to serve their customers better. That’s what’s happening with Micab now. The traditional taxi operators are partnering with us to provide services using our taxi-hailing technology.”

Through Micab’s mobile application, available on both Android and iOS, passengers register by providing their valid personal information. Upon registration, the passengers see the booking screen that displays their current location as well as the field for their target destination.

Once they provide these details, the estimated taxi fare is shown, and the system will then look for available cabs. Cabs that are within 200 meters to one kilometer from the passenger will receive the notification. Once the driver accepts the request, the system will assign that driver to the passenger. Upon establishing the connection, the passenger can chat with the driver and monitor his location.

When asked how they are disrupting the transportation sector, Eddie replies, “We cannot call it disruption. We’re basically enabling the traditional transportation industry by providing them with a working system. If you compare the traditional way of operating a cab with Micab’s way, it’s really very different. Before, when the passenger enters the cab, only the driver and the passenger know what’s happening inside. With Micab, we now have a monitoring and rating system. Through the data that we gather, the taxi companies now have a better way of implementing their strategies. Such strategies may include rewarding or penalizing their drivers, and making changes in their processes based on the data.”

Eddie shares how they are different from the other transport network companies (TNCs). “Our major difference is we’re partnering with public utility vehicles. Currently, we’re in the taxi space, and we don’t

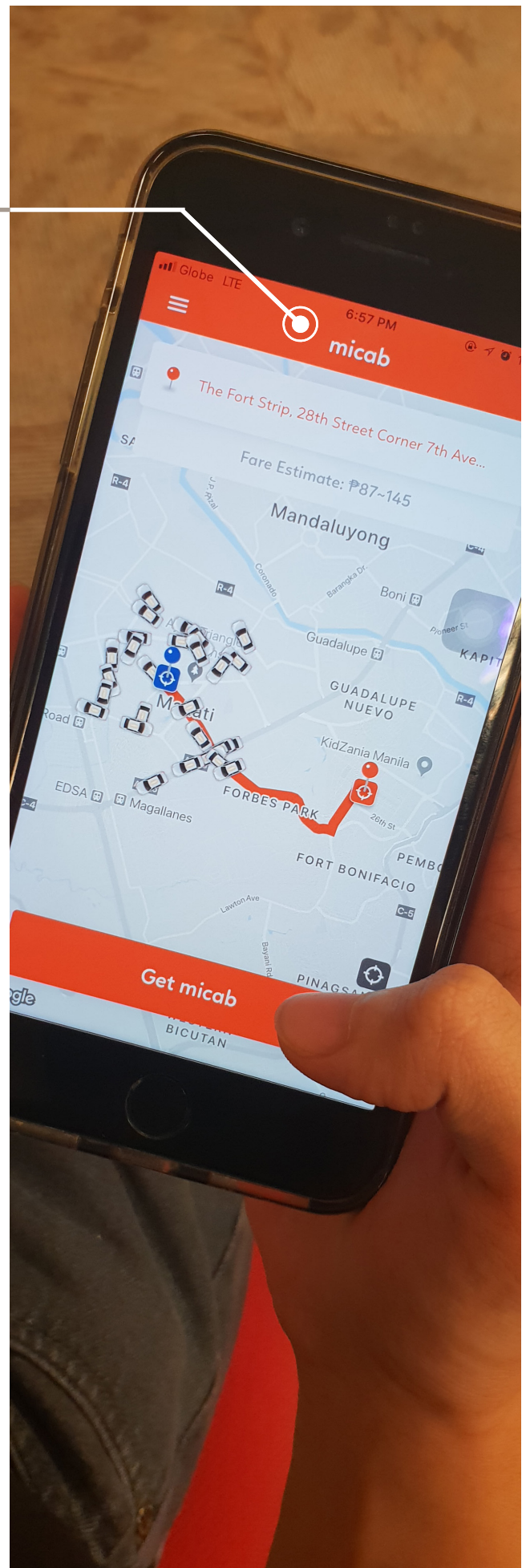
have private vehicles. In terms of the business model, we are very different because we don’t have booking fees and surge pricing. Ours is a subscription model. It’s actually the taxi operators who are paying for that service. We also generate revenues from advertising, and we share those with the taxi drivers and operators.”

Starting in Cebu, Eddie has grown Micab by establishing its presence in Metro Manila, Baguio, Bacolod, and Iloilo. Despite their achievements, Eddie says that they still face a number of challenges. “The major challenge that we’re facing right now is the mismatch between supply and demand. We haven’t formally launched in Metro Manila, but the demand is so high, and our initial supply cannot meet it. We currently get 40,000 bookings per day in Metro Manila, and we only have around 3,000 cabs. What we’re doing now is we’re beefing up our customer service to properly explain the current situation to the users. We’re also scaling up our fleet onboarding by enabling 500 cabs per week to help us accommodate more passengers. Hopefully, we can meet the total demand in two to three months.”

Partnering with Micab has helped the taxi operators as well as their drivers. “There was a time when the cabs had fewer passengers because most passengers preferred the other TNCs who made booking easier than the traditional taxi

operators. With fewer passengers, the operators employed fewer drivers, and with fewer drivers, the operators had lower revenues. With our technology, the taxi operators gained more passengers, and the taxi drivers started going back to the operators to work.”

With an estimated 15,000 taxi drivers by the end of 2018, Eddie is also looking to expand beyond transportation. “We realized that what we’ve created is not just a taxi-hailing application, but an on-demand platform. We’re actually connecting the consumers to the service providers. In this case, we’re connecting the passengers to the taxi drivers. This technology can actually be used in other industries. In healthcare, we can connect the patients to the doctors, and in logistics, we can connect the consumers to couriers. Our plan for Micab is big. In transportation, we will not only connect passengers to cabs, but to the jeepneys and public buses as well. In partnership with one of the biggest healthcare companies in the Philippines, we’re now developing an on-demand healthcare platform. Similarly, we’ve partnered with a big logistics company to create an application that will connect consumers to couriers and shipping companies, while integrating the warehousing and inventory management system. Our goal is simple. We want to empower both businesses and consumers, and help improve services through our technology.”



CEO agenda

The Philippines ranked eighth on the list of the most vulnerable to malware attacks, according to the 22nd Microsoft Asia Pacific Security Intelligence Report that was published in 2017. According to the report, the Philippines had a malware encounter rate of 19.2% as of March 2017, and has an above-average exposure to drive-by download sites.

Over the years, the Philippines has been threatened by cyberattacks such as the ILOVEYOU virus that stole user passwords and destroyed files in 2000. In March 2016, the Commission on Elections was attacked by Anonymous Philippines. The attack, known as Comeleak, was considered the biggest leak of private data in the Philippines, and left over 50m registered voters at risk. In 2016, the Philippines became part of the Bangladesh bank heist where hackers stole US\$81m from Bangladesh Bank, and transferred the funds to different countries that included the Philippines. In 2017, 28 out of the 200,000 companies infected by the WannaCry virus were in the Philippines. Such virus infected around 30% of the servers.

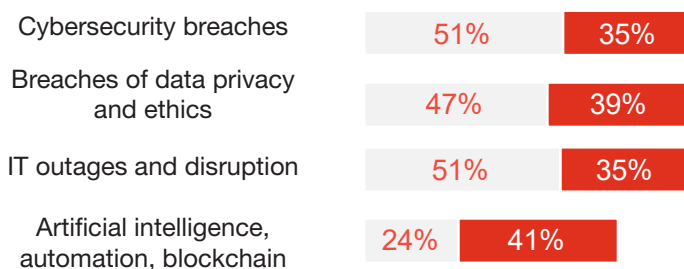
With these major attacks, it's clear why cybersecurity topped our CEOs' concerns. Other major technological concerns are breaches of data privacy and ethics, and IT outages and disruption.

In our survey, all the 122 CEOs say that they will introduce new technology, with 92 saying that they will invest in new technologies. While it's good that our CEOs are embracing new technologies, there is a risk that they will dive into technology innovation before thinking about the possible security issues and risks, including responsible use of personal data. With the annual volume of global data to be created and copied expected to reach over 100 zettabytes by 2025, strengthening cybersecurity will be critical. In today's world, the old habit of moving to technology innovation before thinking through the issues and risks can have unprecedented consequences for businesses.

Emerging technologies and the accompanying threats must be at the core of every organization's strategy. It should be driven from the top, and a critical part of the CEO's agenda.

Cybersecurity breaches top the CEOs' concerns

Q: How concerned are you with the following technological threats to your organization's growth prospects?



- Extremely concerned
- Somewhat concerned

So what should the CEOs do next?



Understand the risk exposure in your converged environment. Care should be taken to consider assets from all domains, map interdependencies, and determine the criticality of assets from the perspective of each stakeholder.



The C-suite must own management of digital risk. CEOs must lead and not simply delegate data protection and privacy issues to others who are not fully responsible for driving the business and setting the risk appetite.



Prioritize data-use governance. Businesses should balance data use with strong protection and detection controls.



Engage the board. Boards as a whole—not merely individual directors—should continuously arm themselves with better knowledge about the C-suite's plans to address emerging risks to data protection and privacy.



Develop an integrated approach to security. Understand who the stakeholders are across the enterprise, make them aware of the risk and assign responsibility and ownership.



Apply appropriate risk-based mitigation strategies. Working with assets that cannot be controlled with tried and true IT-centric methodologies often creates unique challenges. These challenges should be addressed through a combination of risk management approaches tailored to meet the needs of the organization.



Incorporate cybersecurity early into future business planning and develop activities. Leaders can empower their organization to proactively manage risk (and reduce future costs) by allowing their security professionals to appropriately guide decisions before embarking on costly mistakes.



Continuously monitor and address the risks of change. Design an internal centralized process for monitoring the future integration of the organization's technology or operations against the continually evolving threat landscape, and holistically update security practices across all domains to manage risks that may result from these changes.



Consider the risks of regulation abroad in a strategic context. Business leaders should align their organizations to where they need to be for future success, not merely for compliance but rather for strategic risk management.



Champion responsible innovation. Organizations should support and participate in the development of emerging standards, as well as nascent efforts to build ties between privacy and technology professionals, which could help put privacy principles into practice and provide consumers with smarter devices designed with cybersecurity and privacy in mind.

Other data

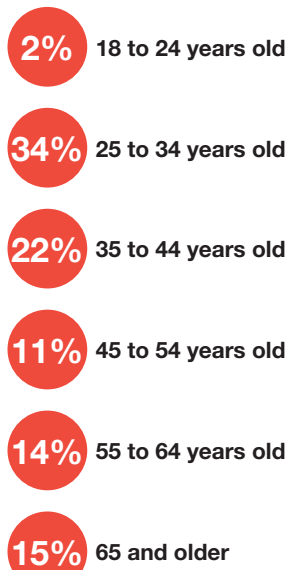
Profile of the 122 CEO respondents

Gender of respondents

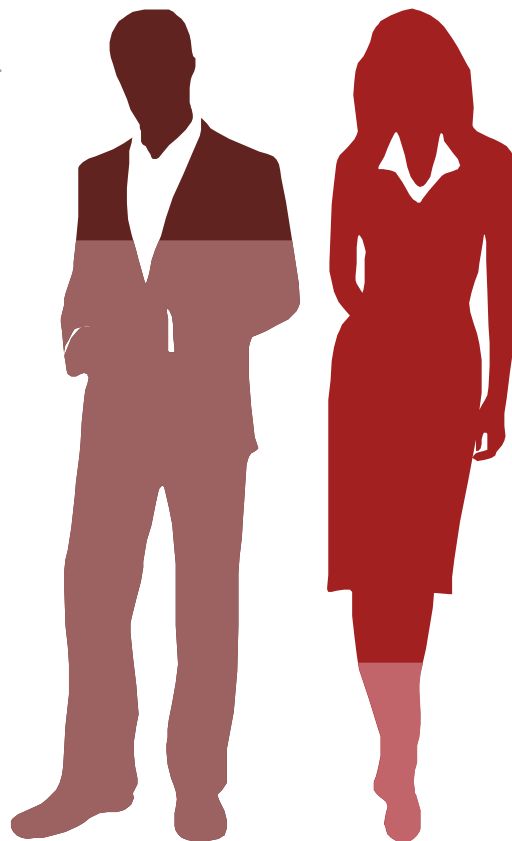
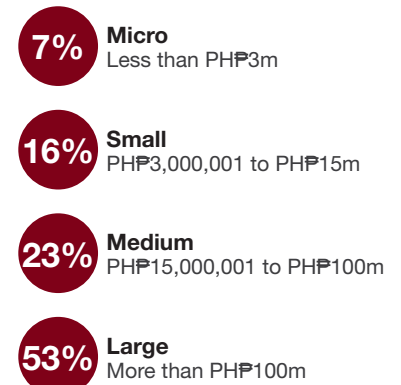
70%
Male

28%
Female

Age profile

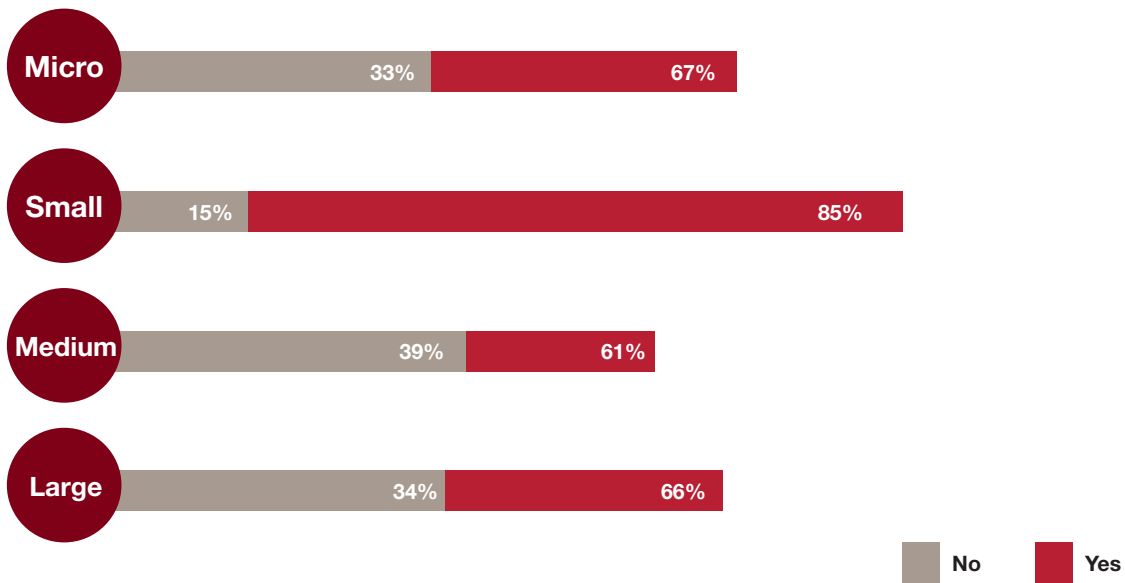


Size of business (in terms of assets)

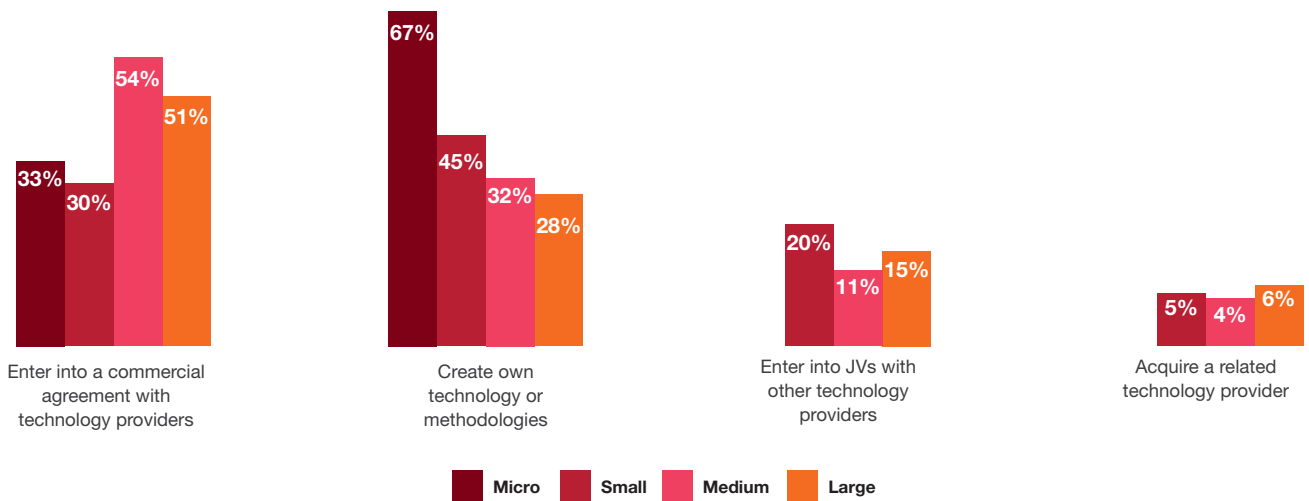


2%
Do not want to disclose

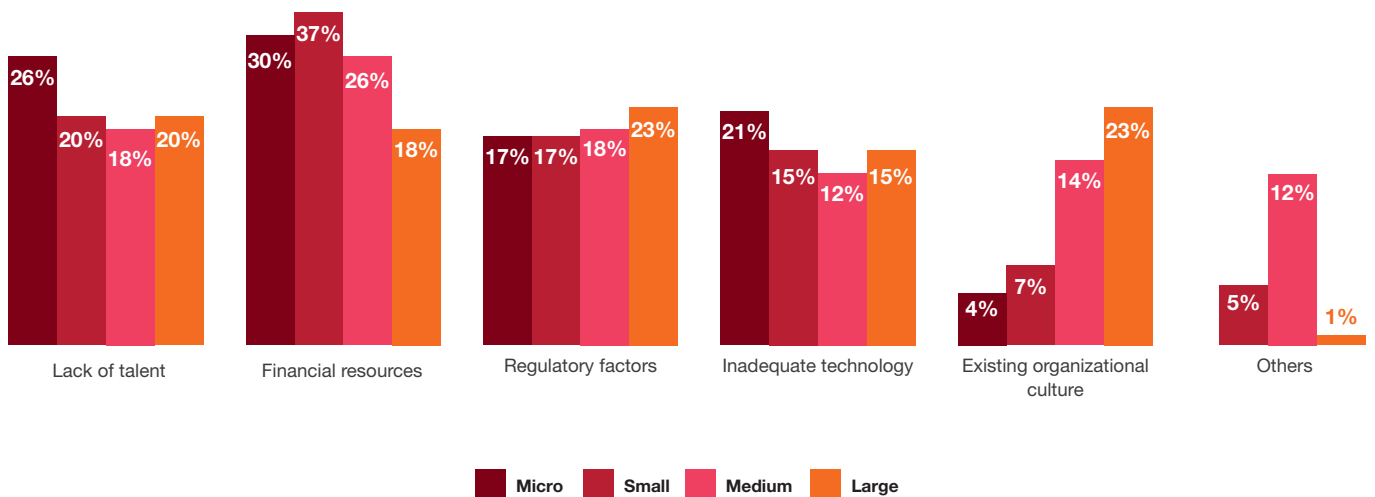
Q: Do you expect to change your business model in the next three to five years?



Q: How do you plan to introduce new technology or methodologies to your business?



Q: Which of the following constraints is stopping you from being disruptive?



Research methodology and contacts

The survey was conducted by PwC, in collaboration with the Management Association of the Philippines. 122 CEOs answered the survey, and the respondents of the survey were primarily members of the M.A.P. The survey methodology used was a mix of online and printed questionnaires.

We also conducted face-to-face in-depth interviews with ten business leaders to support the findings of the survey. Their interviews are featured in this report, and more extensive extracts can be found on our website at www.pwc.com/ph/ceosurvey.

The interviews and the survey responses were also spread across a range of industries.

The results were tabulated and analyzed by PwC.

Notes:

- Not all figures add up to 100% due to rounding of percentages.
- The base for figures is 122 unless otherwise stated.

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Management Association of the Philippines

With promoting management excellence for nation-building as its main objective, the M.A.P. is a 68-year-old management organization whose 1,000 members represent a cross-section of CEOs, COOs, and other top management practitioners from the largest local and multinational companies operating in the Philippines. M.A.P. also counts some top management educators and government officials as its members.

Please view the M.A.P. video via www.youtube.com/TheMAPph or visit www.map.org.ph/ for more information on M.A.P.

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