

Extraordinary Endeavors in Turbulent Times

Asian Innovation, Inclusion, and Impact during COVID-19

March 2021



Letter from the Directors

Dear Reader,

As the directors of this joint project by the Asia Business Council and the Hong Kong University of Science and Technology (HKUST), we are delighted to present the results of our study on the extraordinary endeavors of Asian companies in the turbulent times of COVID-19, as companies embrace innovation, promote inclusion, and drive social and economic impact across the region.

We hope that this series of eight case studies will illustrate the silver linings of the pandemic – in these trying times companies are more than ever realizing the importance of social responsibility, reimagining and reinventing traditional forms of philanthropy, and leveraging technology as a force for good in ways that will likely last well beyond the crisis.

While the articles are written with business leaders and business students in mind, the stories we tell have relevance for a wider audience as they show how Asian corporates took the lead in engaging a broad eco-system, including governments, academic institutions, religious groups, and the public health sector, in addition to start-ups, small and medium enterprises, and even competitor companies within the private sector.

True to the times of COVID-19, the smooth collaboration between our two organizations took place without any face-to-face meetings; all the research and interviews were conducted virtually and across multiple time zones. We are especially grateful to Asia Business Council Chairman Lim Boon Heng and Vice-chairman Daniel Tsai whose companies Temasek and Fubon Group were the first two companies to take part in the study. We would also like to thank the unfailing support of Mark Clifford, Executive Director of the Asia Business Council, and Roger King, Senior Advisor and Founding Director of the Tanoto Center at HKUST, without whom we could not have completed the project.

Amidst the continued risk and uncertainty surrounding the pandemic, we hope that this report will contribute to the ongoing discussions on stakeholder capitalism and the debates on the role of companies in the local and international community, in times of crisis as well as times of relative normalcy. Above all, we hope that you will enjoy reading the articles as much as we enjoyed writing them, and that the report will be a source of positivity and inspiration for audiences around the world.



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Extraordinary Endeavors in Turbulent Times: Asian Innovation, Inclusion, and Impact during COVID-19

A Joint Report by the Asia Business Council and the
Hong Kong University of Science and Technology

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Executive Summary

The year 2020 will be remembered for the turbulence caused when a pandemic swept through the world, fundamentally changing people's way of life, presenting unprecedented challenges to governments worldwide, and forcing businesses to reflect and adapt in order to survive. With this in mind, the Asia Business Council and the Tanoto Center for Asian Family Business and Entrepreneurship Studies at the Hong Kong University of Science and Technology (HKUST) embarked on a six-month research project to analyze how Asia Business Council member companies have responded to the pandemic in strategic, innovative, or impactful ways.

The eight companies that were selected employ over 360,000 people and have assets totaling over \$680 billion. In terms of geographical distribution, the companies are headquartered in Mainland China, Hong Kong, Taiwan, Myanmar, Philippines, Singapore, South Korea, and Vietnam. The key industries the companies are engaged in include education, entertainment, financial services, information technology, investments, real estate, retail, telecommunications, and textile manufacturing.

Several major themes emerged from the study. First, the most important alliance during a global crisis like the pandemic is that of the public sector with the private sector. Governments can tap into the vast resources of businesses, while businesses can seize the opportunity to play a vital role in society. Companies like Ayala Corp., DatVietVAC Group Holdings, Fubon Group, and Yoma Group all demonstrated the efficacy of public-private collaboration in crisis management and can serve as a model for future calamities.

The second theme that emerged is the deepening and reframing of corporate social responsibility (CSR). Apart from supporting their employees, companies rolled out initiatives to support the wider eco-system, from small business partners to underprivileged communities. Indeed, companies like Ayala Corp., Esquel Group, Lenovo, Temasek, and Yoma Group all took social responsibility to a new level through their economic, educational, and environmental initiatives.

The third theme that emerged is the accelerated migration to all things digital. School closures, work-from-home arrangements, and lockdowns of entire cities led businesses to seriously re-evaluate their digital strategies and offerings. Many have leveraged technology as a force for good in the process. It is fair to say that companies like DatVietVAC Group Holdings, Lenovo, Lotte Group, and Yoma Group have been at the forefront of digital transformation in their respective economies.

The following are short summaries of each case study.

Ayala Corp. (Philippines): Recommitting to a Broad Stakeholder Ecosystem During the Pandemic

Ayala Corp is one of the oldest conglomerates in the Philippines with a history of supporting the wider community in difficult times. The company realized many years ago that it could be more effective during crisis situations by engaging a network of companies to coordinate relief efforts. In 2009, it helped establish the Philippine Disaster Recovery Foundation (PDRF), known today as the Philippine Disaster Resilience Foundation, a consortium of some of the largest private-sector corporations and NGOs in the nation.

As the COVID-19 pandemic unfolded, Ayala stepped in to help the broader community through Project Ugnayan, which provided unconditional emergency cash transfers to economically vulnerable families. Ayala also played a major role in Task Force T3, a partnership to enable the testing, tracing, and treatment of COVID-19 patients. Indeed, Ayala's efforts supported the government's response by bringing together the major actors in the private sector and civil society.

DatVietVAC Group Holdings (Vietnam): Leveraging Entertainment as a Force for Good in Face of COVID-19 Challenges

Vietnamese entertainment giant DatVietVAC Group Holdings is an example of how a company can leverage media and content as a force for good during the pandemic. It played no small part in helping the Vietnamese government promote the official BlueZone app, which helped contain the virus. By mobilizing its network of celebrities, DatVietVAC encouraged the public to download the official app, which registers health information, traces close contacts, and provides up-to-date information on the virus.

DatVietVAC also launched online streaming platform VieON and continued to develop dramas and entertainment shows which led to nothing short of a cultural phenomenon in Vietnam. This proved two things: that Vietnam is a prime market for digital media, and that digital media can be used for good. The company is now looking to transform its internal operations, while expanding its digital business with a focus on local content.

Esquel Group (Hong Kong): Launching a Sustainable Mask Amidst a Public Health Crisis

Hong Kong-based textile company Esquel Group reaffirmed its commitment to sustainability and social responsibility by developing a reusable mask even as it was hit hard by the unfolding pandemic and escalating U.S.-China tensions. While initially made for donations, especially in the communities where it had operations, the product soon became a business as well, demonstrating that social responsibility can go hand in hand with opportunity.

The desire to protect the environment is one that runs deep in the family-owned business, and the company has potentially saved 1.3 billion single-use masks from disposal. Esquel's achievements are due to a convergence of innovation, a focus on wellness, and an ethos of carving out new opportunities while serving the community.

Fubon Group (Taiwan): Forming a Mobile Phone-Based Information System to Prevent Community Outbreaks

One of the main reasons Taiwan had so few COVID-19 cases at the start of the pandemic was the development of a mobile phone-based information tracking system called the Intelligent Electronic Fences System (IEFS). Taiwan Mobile, the telecoms arm of the Fubon Group, played a key role in this endeavor, as it joined hands with the government and other carriers.

Each carrier was responsible for monitoring its customers who needed to be quarantined. The government, on the other hand, operated an aggregated platform that monitored all subjects. As Fubon Group seeks to expand its business in Southeast Asia, its experience-sharing of successful examples like the IEFS is expected to facilitate partnerships and contribute to positive social impact.

Lenovo (Mainland China): Championing Educational Technologies to Enable Virtual Learning Experiences Worldwide

Leveraging its resources and expertise, Lenovo, a leading technology company with operational headquarters in Beijing and Morrisville, North Carolina, and financial headquarters in Hong Kong, developed educational solutions that could “go beyond the device” during the pandemic. While its commercial solutions ranged from hybrid classrooms to cybersecurity and virtual reality, Lenovo’s philanthropic efforts included hardware donations in North America and laptop donations to students in Milan and refugees in the Netherlands.

Lenovo’s Chairman and CEO Yuanqing Yang also made a personal donation to a public welfare project in Hubei province called the “Lenovo E-classroom.” Through this project, the company sent tablets and three-month data cards to students from underprivileged backgrounds so that they could have access to virtual learning. Lenovo also addressed systemic problems in education in India by developing a student-teacher matching platform. Lenovo’s business and philanthropic endeavors illustrate how Asian businesses can have truly global impact.

Lotte Group (South Korea): Embracing “Open Innovation” in E-Commerce for the Post-Corona Era

For Lotte Group, the fifth largest conglomerate in South Korea, the response to the crisis was not just about braving the storms of the pandemic but also about accelerating pre-COVID-19 developments. Lotte saw its e-commerce app, Lotte On, as the key to its business transformation. Building on the idea of “open innovation,” or the practice of sourcing ideas and solutions from other organizations, Lotte On has collaborated with a number of start-ups since the app was launched in April 2020.

These start-ups include start-ups invested by Lotte Accelerator, namely online convenience store start-up Nowpick, delivery start-up PLZ, and beauty marketing start-up LYCL. Lotte On also rolled out a new brand in partnership with a fashion A.I. start-up Designovel. Given that South Korea already had one of the most sophisticated technological infrastructures in the world prior to the pandemic, the challenge for Lotte is whether it can adapt, transform, and emerge as a winner in the post-coronavirus era.

Temasek (Singapore): Tapping Investment Expertise and Diverse Networks to Help Fight the Virus

Among its many initiatives in response to the COVID-19 pandemic, Temasek's investments in medical initiatives best demonstrate its agility, resourcefulness, and innovation. Widely seen as one of the most sophisticated government-owned investors in the world, the Singapore-based company has been applauded for tapping its diverse networks and expertise to find solutions for global shortages of medical supplies such as swabs, testing equipment, and masks.

Collaboration with small and medium enterprises (SMEs) was a recurring theme in Temasek's initiatives during the pandemic. Not only did this help ramp up local manufacturing capabilities; it also allowed SMEs to thrive in a harsh business environment. Temasek's response to the COVID-19 pandemic has no doubt prompted a rethink of the traditional boundaries of philanthropy and social responsibility.

Yoma Group (Myanmar): Accelerating Financial Inclusion in a Time of Social Distancing

For Myanmar-based conglomerate Yoma Group, the COVID-19 pandemic was a defining moment in its service to the country. Although its acquisition of mobile financial services operator Wave Money was planned before the pandemic, it was the trying times of 2020 that truly underscored the importance of mobile money in promoting financial inclusion in Myanmar.

The widespread use of Wave Money was significant in Myanmar because most of the population has no access to banking services. From sending money to family members to distributing government aid, Wave Money was a true game changer, especially since its coverage reaches 91 percent of the country and 90 percent of rural areas. Partnering with the Myanmar government, Wave Money promoted transparency and helped to minimize corruption for relief aid, in fitting with Yoma's mission to "build a better Myanmar for its people".

Editorial Insights: How Family Business Traits Helped Companies Adapt and Thrive During the COVID-19 Pandemic

Many of the companies that appear in this report are family businesses or possessed qualities typical of family businesses. Collectively, profiled companies showed remarkable adaptability, resilience, and the desire to give back to society – traits that typically mark Asian family businesses.

Adaptability

The companies we studied showed the ability to quickly adapt to fast-changing situations. Whether it was the Lotte Group digitizing its business, the Yoma Group embracing mobile money, DatVietVAC growing its media and technology arms, or the Esquel Group entering the mask making business as a cotton house, these companies were forced to part from tradition and rethink their business models. All of them underwent an epidemic-driven transformation that forced them to adapt to new circumstances.

It is important to note that these businesses were able to adapt quickly for several reasons. First, many of them had previously invested in research and development. This meant that they could embrace new technologies, innovate quickly, and come up with plans to refocus their businesses, giving them a distinct advantage during the pandemic.

Second, these businesses tend to have cohesive family business structures, as well as flexible management and governance models which smoothen out the decision-making process. This means that in critical times, they can execute ideas and adapt quickly as the situation demands.

In our study, even non-family businesses exhibited these qualities. Multi-national technology company Lenovo was able to redirect its investments into its virtual learning and e-education businesses, and global investment firm Temasek was able to redirect its resources toward manufacturing medical supplies.

Resilience

Resilience is another trait that is common among longstanding family businesses. The typical age of these businesses means that they have gone through numerous trials, tribulations, and crises. Their very survival over the times has made them more resilient. Ayala Corp, for example, started in the 1830s and is a prime example of a business that has survived by innovating and adapting.

It is interesting to note that these businesses also exude the confidence and flexibility to roll out short-term plans that can be easily converted to long-term gains, thereby turning a crisis into an opportunity. DatVietVAC is a case in point. In light of the pandemic, it plans to grow its media business by acquiring companies that complement its existing platforms, consolidating its role as a cultural trend setter.

Yet another reason why family businesses can withstand risk and volatility is because they tend to be more conservative. Most family businesses in Asia regulate their business sizes as a self-defence mechanism to withstand external shocks. In good times, they would be less likely to over-borrow and often make sure there is enough cash and assets on hand.

Dire times are seen as a good time to complete any mergers and acquisitions or roll out strategies that might have been in the pipeline. This was certainly the case for the Lotte Group. Its Lotte On app was two years in the making but its launch was accelerated because the pandemic caused such a surge in online shopping in South Korea.

Giving back to society

Finally, of all the character traits of Asian family businesses, philanthropy is perhaps the most common. In fact, philanthropy could be classified as a defining characteristic of family businesses during times of crises. In our study, all the companies, without exception, made generous contributions to the societies in which they operated.

There is a long tradition of giving in Asia, which is deeply rooted in Confucianism and Buddhism. Asian family businesses highly value these values and see philanthropy as a way to preserve family legacies across generations. Actively engaging family members in philanthropic efforts can help enhance family harmony while having positive social impact. They are also able to do this thanks to the financial strength they have built over the years.

Notably, the contributions of the companies profiled in the study extend well beyond epidemic relief to champion causes such as the environment, women empowerment, and poverty relief. Indeed, philanthropic endeavours allow companies to reflect and redefine their values and their commitments to society. They are also able to consolidate their legacy and reputation and rethink the traditional boundaries around philanthropy and social responsibility.

Conclusion

While many companies took a tumble when COVID-19 swept across the globe, there were many family businesses that bucked the trend. It is apparent from our case studies that they were able to do this because they had certain traits that are typical of family businesses.

Not only was the pandemic an opportunity to exercise flexibility in redirecting resources towards new investments and acquisitions to support existing functions. Companies also demonstrated resilience, adaptability, and a keen desire to give back to society. It is safe to say that these traits helped these companies navigate the stormy times of the pandemic.

Ayala Corp (Philippines)

Recommitting to a Broad Stakeholder Ecosystem During the Pandemic



Ayala Corp (Philippines)

Recommitting to a Broad Stakeholder Ecosystem During the Pandemic

By Winnie Peng, Pauline Yeung, and Colleen Howe

Ayala Corp

Region

Philippines

Year of Founding

1834

Headquarters

Makati City

Type of Company

Listed Company, Family-Controlled Business

Number of Employees

56,000

Total Revenues in 2019

₱264.91 billion (US\$5.49 billion)

Major Businesses

Real Estate, Banking, Telecommunications, Water, Energy, Electronics, Healthcare, Industrial Manufacturing, Automotive, Education

COVID-19 Initiatives in a Nutshell

Support for Employees and Business Eco-System: Wage Continuance, Construction of Dedicated Treatment Facilities for Employees, Rental Condonation in Malls, Fee Waivers, Deferred Bill Payment

Support For Community: Emergency Relief for 2.8 million Families/14 million Individuals, Construction of COVID-19 Testing, Treatment and Isolation Facilities, Donation of PPE

The following case study is based on interviews with Ayala Corp. Chairman and CEO Jaime Augusto Zobel de Ayala on July 29, 2020, and with Fred Ayala, CEO of AC Education; Maripi Jalandoni, Strategic Communications Advisor for Ayala Corp.; and Guillermo Luz, Chief Resilience Officer of the Philippine Disaster Resilience Foundation, on August 28, 2020.

“We have always recognized the need to support nation-building, but during an unprecedented crisis like COVID-19, the desire to help becomes even more urgent and compelling,” said Jaime Augusto Zobel de Ayala (JAZA),¹ Chairman and CEO of leading Philippine conglomerate the Ayala Corp., recalling the day in April 2020 when he agreed to join a government-led task force to fight the COVID-19 pandemic.² By the end of the year, Ayala’s COVID-19 response would evolve into a ₱12.7 billion (\$264 million) aid package to help the wider community even as the company’s own revenues fell.³

Philippine society was severely challenged by the public health crisis and the resulting economic downturn. By April, there was already unrest over food shortages in Metro Manila and the pandemic was becoming a social and humanitarian disaster. While major corporations in the Philippines have traditionally supported the government response to crisis situations, the scale and magnitude of the pandemic meant that it was exceptionally challenging to meet the needs of the community with finite resources.

The Ayala group prioritized its response to first ensure that its employees could work safely, through wage continuance, early bonus release, as well as work safety protocols. Work-from-home arrangements helped guarantee business continuity in core functions. The group then assisted its business ecosystem of partners, suppliers, customers, and agencies, many of which were small and medium enterprises. Finally, Ayala mobilized its wider network, not just the private sector but also religious organizations and civil society at large, to channel resources to and support the

But a passive-reactive response to such tragedies did not appear to be enough. PDRF leadership decided to shift the organization's focus from disaster response to preparedness and resilience. "We realized we couldn't keep being reactive. We needed to be more proactive."

broader community. The combined efforts acted as a force multiplier in alleviating the unprecedented crisis.

The Ayala group's roots as a family business are said to have influenced the company's sense of social responsibility. Founded as a trading house by Basque entrepreneurs in the 1830s, the family had an interest in philanthropy from the beginning, with early generations engaged in poverty relief and the establishment of an arts academy in Manila.⁴

After World War II, the company supported the reconstruction of Manila through its Hacienda Makati development and ultimately evolved into one of the country's major real estate firms. When the current generation of leadership took over

in the 1990s, it expanded beyond the core businesses of real estate and banking into the public utility business, to provide basic services at a time when access to water and telecommunications infrastructure were lacking.⁵ More recently, Ayala has started investing in the healthcare, energy, industrial manufacturing, and education sectors.

"The group's mission is to help solve large national social problems by developing sustainable solutions that can scale," said Fred Ayala, who leads the group's education initiatives and is not related to the Zobel de Ayalas.

The COVID-19 pandemic offers a lens to examine how a publicly listed, family-controlled business with a social mission can mobilize a broad stakeholder ecosystem to address a society-wide crisis.

Philippine Disaster Resilience Foundation

Based in a region prone to natural disasters, Ayala Corp. had transferable experience from the past when it had also acted to support the community. In 2009, the group participated in the creation of what is now known as the Philippine Disaster Resilience Foundation (PDRF), a consortium of some of the largest private-sector corporations and NGOs that would, in the words of JAZA, act as a "support mechanism for our partnership with government" in times of crisis.

In 2013, Typhoon Haiyan, or Yolanda as it is known in the Philippines, became one of the worst disasters in Philippine history, leaving over 6,000 dead and nearly 30,000 injured.⁶ Ayala supported the recovery through PDRF as well as the group's aviation unit, which spearheaded an initiative to send telecommunications equipment and relief goods to the affected regions.⁷ Ayala was among the first of a group of large companies that committed to assist the recovery in Yolanda-affected areas.

But a passive-reactive response to such tragedies did not appear to be enough. PDRF leadership decided to shift the organization's focus from disaster response to preparedness and resilience. "We realized we couldn't keep being reactive. We

needed to be more proactive,” said Bill Luz, an Ayala executive who became the first Chief Resilience Officer of PDRF.

As part of the strategic shift, JAZA chaired a task force and Luz managed an effort that culminated in PDRF building the world’s first private sector-run national emergency operations center (EOC) in a former U.S. Air Force base in Clark, Pampanga. The EOC coordinates business contributions to disaster management and helps companies reduce their risk and plan resiliency measures.

Project Ugnayan

When the coronavirus hit the Philippines in early 2020, PDRF was able to mobilize the business community to mount an impactful food relief initiative, Project Ugnayan, within a short period of time. Through funds raised for Project Ugnayan, PDRF became the single largest source of COVID-19 financial assistance in the Philippines by dollar value, contributing \$35.3 million (₱1.7 billion).

The idea for Project Ugnayan was sparked by Metro Manila’s enhanced community quarantine in March 2020, a lockdown measure to slow the spread of the pandemic that also meant a sudden and drastic loss of income for informal workers. “If their issues were not addressed, they would face significant hardship,” said JAZA, who serves as co-chair and trustee of PDRF.

With his brother Fernando Zobel de Ayala, COO and president of Ayala, JAZA reached out to the business community for financial support. A total of 270 companies and individuals signed on to the project, with many of the larger partners joining in the first 24 to 48 hours.

The brothers settled on distributing aid in the form of ₱1,000 vouchers from supermarket chains in low-income areas of Manila. Distributing one voucher per family was more efficient than cash donations because the Philippines has no national identification system that could be used to send bank transfers. Vouchers also eliminated the need for oversight of large in-person cash transfers, while offering recipients more choice than in-kind donations.

Notably, the vouchers were distributed via the parish system of the Catholic Church, a trusted partner with close ties to communities in the majority-Catholic Philippines. PDRF and Caritas Manila, the social services arm of the archdiocese of Manila, together provided over 14 million individuals with food aid. The gift checks were distributed in the Manila metro area and nine other dioceses on the main island of Luzon.

In addition to alleviating hunger, Project Ugnayan lessened the need for working-class families to leave their homes to earn money during the lockdown, contributing to the effectiveness of public health measures.



Task Force T3

Ayala Corp.'s leadership in public-private partnership Task Force T3 is another example of the group's ability to mobilize a broad stakeholder ecosystem. On April 22, 2020, Philippine Secretary of Finance and the country's lead economic manager, Secretary Carlos G. Dominguez, asked JAZA if he could help organize more private sector support for the Inter-Agency Task Force for the Management of Emerging Infectious Diseases (IATF) in its battle against COVID-19.

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The following day, Fred Ayala, Bill Luz, and Paolo Borromeo, head of Ayala's healthcare arm Ayala Healthcare Holdings Inc. (AC Health), met with the Department of Health and the Asian Development Bank to explore how the Ayala group and the business community could help.

On April 24, the IATF and the private sector group — which by now included the Metro Pacific Hospitals of the MVP Group, pharmaceutical product producer Unilab, and the Philippine Red Cross — publicly launched Task Force T3. Coined by National Task Force Chief Implementer Secretary Charlie Galvez, the name referred to the government's three-pronged strategy to combat

COVID-19: "Test, Trace, Treat." Task Force T3 aimed to facilitate collaboration across sectors to improve the Philippines' capacity in these areas. The task force ultimately included dozens of private sector partners as well as civil society and multilateral organizations.

This illustrated a significant aspect of the crisis response, according to JAZA. Organizations used to working in a competitive environment came together to

promote the greater good: “Out of a negative situation came one where trust and a sense of communal undertaking became priorities.”

At the creation of the task force, the Philippine government faced two major challenges. The first was a lack of testing capacity. The government needed to test 30,000 individuals per day to ensure it had sufficient data to determine when it would be safe to lift the lockdowns imposed in March. But laboratory constraints meant the country could administer only 4,500 tests per day.

The second challenge was to provide sufficient personal protective equipment (PPE) for healthcare workers, who accounted for over 15 percent of confirmed COVID-19 cases at the time.⁸

The private sector provided financial support, and government and civil society organizations seconded staff. Each work stream had both a public and a private co-chair or champion to ensure representation from all sides. Internally, Ayala Corp. assembled a dedicated team of project managers and project associates to carry out initiatives. Over time, the Ayala group began to shift more responsibilities to the government side, emphasizing that they viewed their role as a supplement to the government response.

Testing

The combined efforts of Task Force T3 increased the number of laboratories able to conduct COVID-19 tests to 198 as of December 21, 2020, up from 17 in April when Task Force T3 was formed. The expanded laboratory capacity subsequently increased national operational testing capacity to over 120,000 tests per day in December, up from just 4,500 tests per day in late April. By July, the Philippines led the ASEAN region in COVID-19 tests conducted per day.⁹

Ayala Corp. also formed a consortium of seven companies that contributed seven biosafety level 2 laboratories for COVID-19 testing. Together, the companies upgraded three existing laboratories and built four new laboratories. AC Health led the consortium, which included Qualimed Health Network, owner of the hospital where the new laboratories would be located, and Ayala Land’s subsidiary Makati Development Corp., creator of the modular laboratory design.

Upon completion, these laboratories could process 5,500 tests per day, accounting for approximately 10 percent of national daily testing capacity at



COVID-19 testing site of Manila Water (an Ayala company)

PHOTO: ROLLY BARAYANG/AYALA CORPORATION

the time. Ayala Corp. worked with the Department of Health to pursue timely accreditation of the facility,¹⁰ and AC Health donated machines and equipment to the Tropical Disease Foundation, the owner of an existing laboratory facility specializing in tuberculosis testing, to help equip the facility for COVID-19 testing.

Tracing

Ayala Corp. took steps to enhance capacity for contact tracing, which remains hampered by the lack of a national identification system, including refining contact tracing protocols and identifying technology systems to support efficient contact tracing.

Treatment

The Philippines' treatment strategy required dedicated quarantine facilities for less severe cases to reduce pressure on the health system. Ayala companies Ayala Land, Globe, Manila Water, Integrated Micro-Electronics Inc. (IMI), and AC Energy worked to convert Manila's World Trade Center into a 500-bed quarantine facility with isolation cubicles in April, when hospitals were becoming overwhelmed.

The Ayala companies pooled their resources to complete the project in seven days, with Ayala Land's Makati Development Corp. leading the planning and construction, Globe Telecom funding the construction cost and providing Wi-fi

services, and IMI donating sanitation booths.¹¹ The facility was then turned over to the Armed Forces of the Philippines to operate. Ayala companies also converted the QualiMed Hospital in Santa Rosa, Laguna, into a COVID-19 referral facility.

Importantly, Ayala Corp also sought to support its business partners and customers, many of them micro, small, and medium enterprises (MSMEs). "We made it a key priority to provide critical and direct support to the very stakeholder ecosystem that helped us become successful."

Ayala Corp. also stepped up to procure personal protective equipment via a voluntary employee donation program in which workers had the option to contribute part of their bonuses, and Ayala Health handed out 10,000 N95 masks in hospitals.¹²

The Ayala group plans to continue supporting relief efforts through Task Force T3 by creating a training program for new recruits hired by the government. The group is also supporting the Task Force's "Ingat Angat Tayong Lahat" campaign to restart the economy by encouraging citizens to resume their normal activities, while following safety protocols.

In all these efforts, Ayala was well-prepared to take a leadership role and serve as a resource for other companies because of its vision in identifying the healthcare sector as a key area of disruption over the past four to five years. This had resulted in a well-trained workforce, from the entry level to the C-suite, with expertise in both medicine and business.

Ayala Enterprise Circle

Importantly, Ayala Corp also sought to support its business partners and customers, many of them micro, small, and medium enterprises (MSMEs). “We made it a key priority to provide critical and direct support to the very stakeholder ecosystem that helped us become successful,” said JAZA. In addition to providing ₱6 billion (\$125 million) in financial relief for these MSMEs during the crisis, the group began to invest in initiatives to encourage their longer-term development.

One example is the Ayala Enterprise Circle program, launched in May 2020. The initiative offers MSMEs access to mentorship from industry leaders, online classes, and networking opportunities. In a sign of the demand for such services, the first webinar held during the pandemic was attended by over 900 MSME clients, suppliers, and partners.¹³

Under Ayala Enterprise Circle, many of the Ayala subsidiaries provide services targeted at the MSMEs in their sectors. For example, AC Health offers unlimited consultation healthcare plans for individuals and small businesses that otherwise may not be able to access healthcare. Ayala Land provides digital tools for MSMEs, including home deliveries and online marketing support.

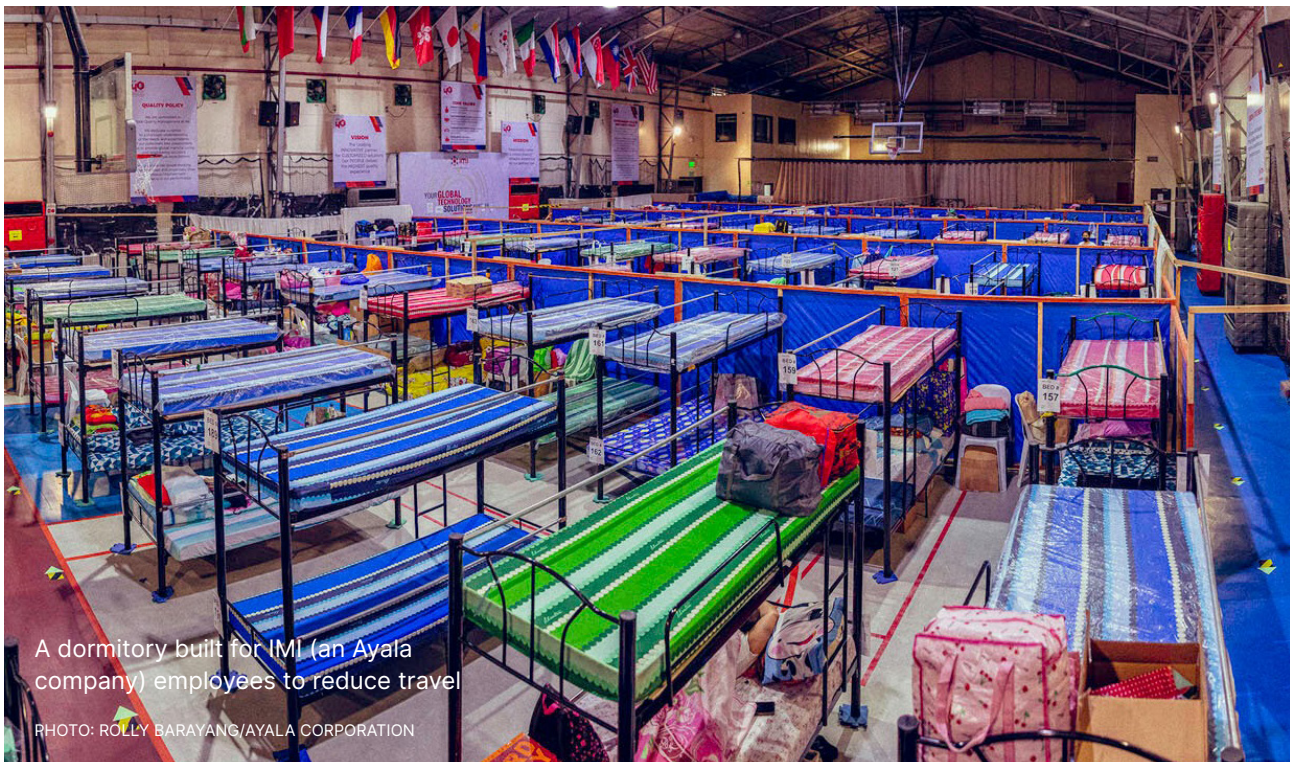
Future Outlook

While the short- and medium-term focus for Ayala is on returning employees to work safely and assessing immediate changes in the consumer landscape, over the longer term the group must evolve to keep pace with permanent changes in the economy.

JAZA notes that three trends are expected to impact all aspects of the business. First, traditional working styles will be permanently disrupted. There may well be a “dual structure” where working from home or centers near home at least part of the time will become the norm. Ayala Corp. enabled working from home in the early stages of the pandemic by providing internet access, where needed, and free online learning tools.

Secondly, Ayala Corp.’s focus on supporting the broader stakeholder community will become increasingly important. The company’s financial results are a sign of the company’s commitment. Net income after tax dropped by 79 percent in the first half of 2020 to ₱7.9 billion (\$164 million). By comparison, the company directed a combined ₱9 billion (\$187 million) before tax toward the COVID-19 response during that time.

Thirdly, there will likely be a fundamental shift in consumer behavior, with COVID-19 accelerating financial inclusion and boosting digital businesses. Ayala Corp. has benefitted from investments it previously made in digitalization, including investments in telecommunications; a partnership between its GCash app and Alibaba Group’s financial services provider Ant Financial for mobile



payments; and investments to digitize the infrastructure of its bank. JAZA emphasized the importance of analyzing business metrics to predict future trends. The success of this strategy will likely be key to Ayala Corp.'s future growth in the digital economy.

Conclusion

While the initial shock from the novel coronavirus has subsided, the economic and health impacts of the pandemic remain. Ayala, which saw its net income fall significantly during the first half of 2020, as did most private sector firms in the country, will have challenging times ahead. Moving forward, the Ayala businesses will need to simultaneously revive profits and address the continuing needs of the community, all while reinventing the centuries-old conglomerate's business model for a new, digitized economy.

To address this challenge, JAZA has crystallized the lessons of the pandemic into a strategy that he describes as “shared prosperity, collaboration, and sustainability.” He is steering a course that will see the company adapt its business model to changing consumer needs while ensuring a fair return on capital, making a positive impact on communities, and protecting the environment for future generations. He believes aligning the institution's goals to the broader development goals of the country allows a company to create sustainable value.

The coming years will show whether the support Ayala has extended to the community during the pandemic, for MSMEs as well as the poor and vulnerable, have helped put the company on track to achieve this vision.

Endnotes

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DatVietVAC

Group Holdings (Vietnam)

Leveraging Entertainment as
a Force for Good in Face of
COVID-19 Challenges



DatVietVAC Group Holdings (Vietnam)

Leveraging Entertainment as a Force for Good in Face of COVID-19 Challenges

By Winnie Peng, Pauline Yeung, and Chun Hei Hung

DatVietVAC Group Holdings

Region

Vietnam

Year of Founding

1994

Headquarters

Ho Chi Minh City

Type of Company

Non-listed Company, Family Business

Number of Employees

720

Total Revenues in 2019

VND 4.5 trillion (US\$197 million)

Major Businesses

Entertainment, Media, and Content

Entertainment Shows

Vietnam Idol, Chung Sứ (Family Feud), Ơn Giờ Cậu Đây Rồi (Thank God You Are Here), Người Ấy Là Ai (Who Is Single Vietnam), Siêu Trí Tuệ (The Brain Vietnam), Rap Việt

Drama Productions

Không Thể Rời Mắt (Can't Take My Eyes Off [You]), Gạo Nếp Gạo Tẻ (Plain Rice Sticky Rice)

COVID-19 Initiatives in a Nutshell

Engagement of Vietnamese Celebrities to Promote Official COVID-19 Information App BlueZone; Launch of Online Streaming Service VieON; Entertainment to Comfort and Relieve Stress

The following case study is based on written correspondence with DatVietVAC Group Holdings in October and December 2020, and an interview with Dinh Ba Thanh, Founder, Chairman and CEO of DatVietVAC, and Dinh Thi Nam Phuong, Advisor to the Chairman and CEO, on October 27, 2020.

Introduction

With fewer than 1,500 confirmed cases at the time of writing, Vietnam has been a bright spot for control of the COVID-19 pandemic. One factor that contributed to containment efforts was the rollout of BlueZone in mid-April 2020, an official app by the Vietnamese government that registers health information, traces potentially risky close contacts, and provides up-to-date information on the coronavirus.

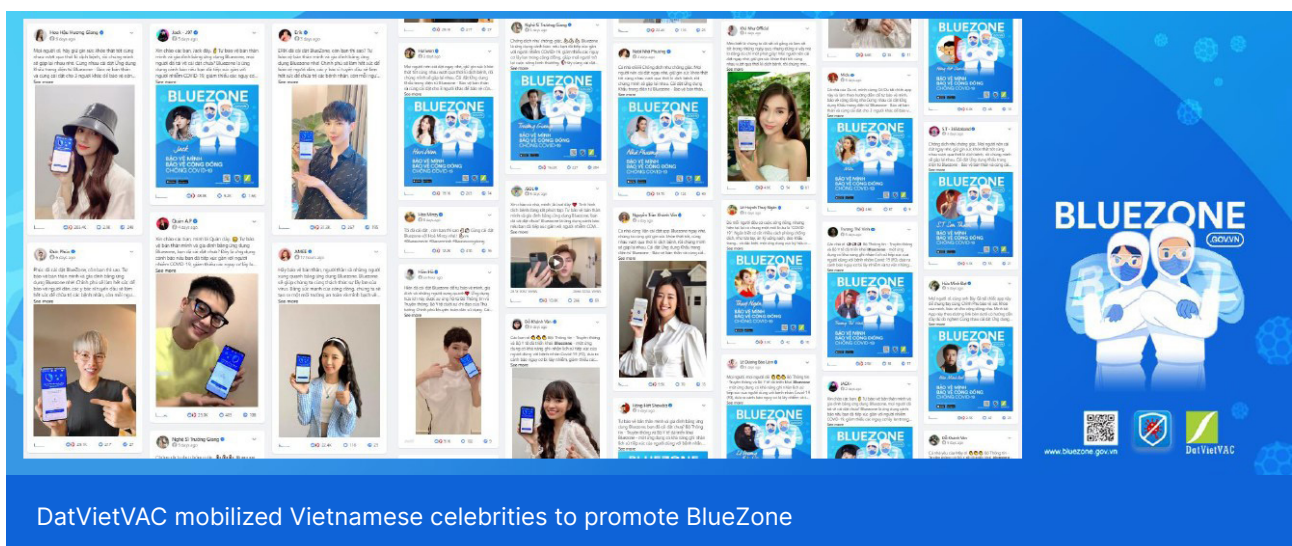
But in April and May, the government faced the problem of distribution; moreover, it would have to convince a population of nearly 100 million to voluntarily download and use a contact-tracing app. In this case, the answer for the government lay in leveraging Vietnam's rapidly growing entertainment sector – and particularly a partnership with DatVietVAC Group Holdings, the leading media technology company in Vietnam.

Dinh Ba Thanh, Founder, Chairman and CEO of DatVietVAC, recalls a call from the Minister of Information and Communications, during which the minister described the government's plan to improve the country's contact-tracing and early warning systems using the BlueZone app. Since DatVietVAC has business relationships with more than 600 top Vietnamese celebrities, the minister wanted to see whether Thanh could help promote the campaign. Thanh agreed, and DatVietVAC started by assigning a few prominent influencers to the campaign. Soon, a wave of celebrities followed.

The hashtag #BlueZoneVie was used for the campaign, which resulted in a reach of 349 million and more than

900,000 interactions on posts by Vietnamese celebrities introducing BlueZone, giving download instructions, and encouraging their fans to use the app. DatVietVAC also ran short clips about BlueZone on its proprietary content channels, with an estimated reach of more than 300 million impressions on Facebook and 2 billion on YouTube.

DatVietVAC stands proud to have contributed to efforts to make Vietnam safer during the COVID-19 pandemic, and its support of the nation-wide rollout of BlueZone reflected the ambition to change how Vietnamese people consumed digital content. Not only did the company believe it could use digital media for good, via social platforms like YouTube and Facebook, it was also taking a giant step toward becoming that type of platform itself.



Launching Online Streaming Service VieON

Over the past four years, DatVietVAC had begun an operation to transform itself from a leading media company to a leading media technology company. Having seen the rise of over-the-top (OTT) players in other markets, such as Netflix or Amazon Prime, DatVietVAC saw a gap in Vietnam. To meet the demand, it began developing a streaming platform called VieON that integrates over 100 TV channels and provides 100,000 hours of copyrighted content. What the company did not realize at the beginning was how COVID-19 would speed up that timeline.

Indeed, COVID-19 and the uncertainty surrounding it was a unique opportunity for DatVietVAC to advance its plans. In June 2020, amidst the global public health crisis, Thanh made the decision quickly to launch VieON, even before a formal arrangement had been reached with its partner BCG Digital Ventures. The VieON team started working to meet the new release timeline immediately; it adapted plans, moved the launch event online, and organized a promotional concert in under three weeks.

On the first day of launch, VieON became the most downloaded app both on Android and iOS platforms in Vietnam. Part of the appeal was the one-stop-shop

for Vietnamese and international content. Thanh explained that, for the first time in Vietnam, audiences were able to watch copyrighted content, local and global, through a single app.

Just like DatVietVAC's work with BlueZone, the company used its vast network of celebrities to promote its platform. In total, VieON was endorsed by more than 500 celebrities in Vietnam and enjoyed cross-promotion within the DatVietVAC Group's network of 170+ social pages and channels, which average a combined total of 1.8 billion views per month. VieON's launch was also covered by more than 400 online sites and all major newspapers in Vietnam.

A Strong Belief in the Role of Entertainment in Times of Crisis

Behind the accelerated launch of VieON is DatVietVAC's strong belief in the crucial role of entertainment amidst the pandemic. As everywhere in the world, at the time of the June 2020 launch, COVID-19 had brought uncertainty and anxiety to the Vietnamese people, from concerns about a brittle health system only able to deal with a modest number of cases, to concerns regarding job security and the economy.

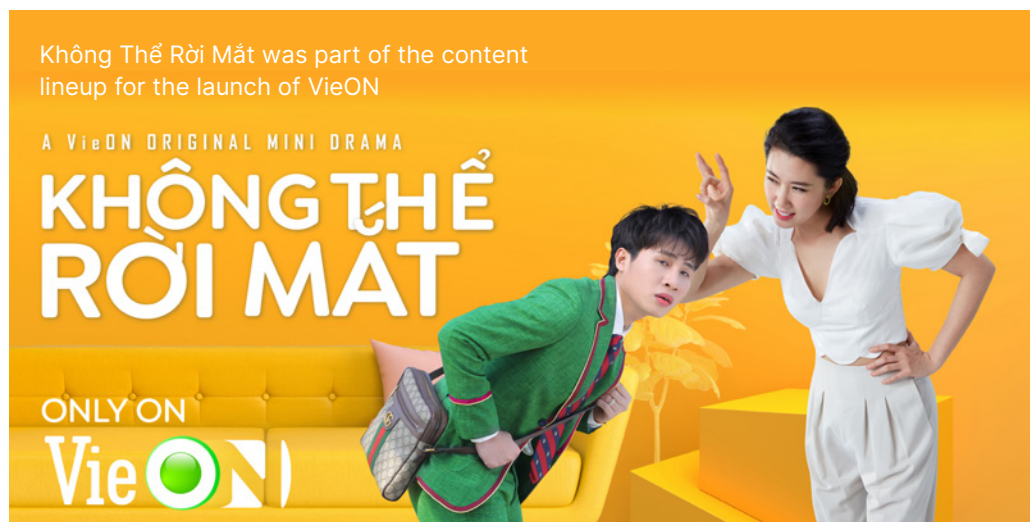
DatVietVAC was able to initiate another groundbreaking cultural phenomenon that transformed the standing and influence of rap music in the country. First released on 1 August 2020, Rap Việt was the most-viewed program in Vietnam in 2020, reaching 2 billion views on VieON, YouTube and Facebook.

DatVietVAC uses a particularly broad definition of "entertainment" that includes everything to do with the senses, such as sight, hearing, smell, and touch. It aims to bring a welcome relief to consumers and allow for a positive distraction, even if just temporarily.

"Adults can have light-hearted laughter, and children, who suddenly must stay home away from school and friends, could be entertained. Families could also bond over a TV series," Thanh explained. During the trying times of the pandemic, entertainment can help maintain a sense of familiarity and inspire hope that the future might not be so bleak.

An Emphasis on Local Content

Having said that, in contrast to global streaming platforms like Netflix, DatVietVAC emphasizes the importance of local content, which it has many years of experience in producing; VieON has the largest curated content library in Vietnam. DatVietVAC pledges to continue to secure top scripts for TV shows and series; engage successful actors, actresses, directors, and producers; and conduct research and development (R&D) on content that will thrive in Vietnam.



While VieON does offer non-Vietnamese content and acquires blockbuster titles from other markets such as China, South Korea, Japan, the United States, and the United Kingdom, Thanh believes that “emotional engagement comes from seeing people who look like you on TV.” As an example, the mini-drama *Không Thể Rời Mắt* (*Can’t Take My Eyes Off [You]*), which was part of the content lineup for the launch of VieON in the summer of 2020, has amassed over 5.5 million views for a single episode to date. The drama featured VieON’s brand ambassadors: Jack J97, one of the most talked-about singers in Vietnam, and co-star Thuy Ngan, one of Vietnam’s top actresses.

Another good example is the *Sóng Show*, which has been a top-rated show in Vietnam for the past few years and has become part of the Lunar New Year Tradition. *Sóng* means “Waves,” and the annual *Sóng Show* is meant to be a celebration of everything culture-related that has made waves in Vietnam in the past year. During the pandemic, DatVietVAC produced a summer variation of the *Sóng Show* – the first time the show was produced for an occasion other than Lunar New Year, resulting in quite a bit of anticipation for the program.

In fact, DatVietVAC has a track record of pioneering entertainment shows, including *Chung Sức* (*Family Feud*) and *Vietnam Idol* decades ago, and *Ơn Giời Cậu Đây Rồi* (*Thank God You Are Here*), *Người Ấy Là Ai* (*Who Is Single Vietnam*) and *Siêu Trí Tuệ* (*The Brain Vietnam*), which not only set new records for trending content and concurrent users (CCU) on YouTube, but also became the source and origin of expressions that went viral and became catchphrases for a whole generation of Vietnamese.

A Truly Groundbreaking Show on Rap Music

Perhaps it should come as no surprise then that DatVietVAC was able to initiate another cultural phenomenon in 2020 that transformed the standing and influence of rap music in the country. First released on August 1, *Rap Việt* was the most-viewed program of the year in Vietnam, reaching 2 billion views on VieON,

YouTube and Facebook in four months, breaking YouTube's premier record in Vietnam (previously set by Siêu Trí Tuệ) with more than 1.1 million CCU, and creating a media frenzy with more than 1,000 articles.

While rap music had lived “underground” for over 10 years prior to the Rap Việt show, DatVietVAC is seen to have “activated a revolution in the history of Vietnamese music culture, bringing rap to the top, shoulder to shoulder with music genres in the mainstream.”

In the words of Thanh's daughter Nam Phuong, an Oxford graduate who now works in the family business, “It is difficult to find a Vietnamese person who does not know about the show, from young children to 80-year-old retirees. Coffee shops have the episodes on, bars and clubs play Rap Việt songs, and multiple school re-openings have students doing performances related to the show... It has been the talking point of the whole country since the first episode was aired.”

The content offering attracts a wide demographic for the VieON user base, which currently has a 50-50 split between male and female audiences and a broad distribution of viewers across age groups. Thanh hopes that VieON will be able to reach all parts of the Vietnamese population with popular shows and series, spreading hope and cheer and helping audiences go through these uncertain times.

Notably, DatVietVAC also has plans to go beyond Vietnam's borders. There are at least 5 million Vietnamese living around the world.¹ The company's first step internationally will be to launch VieON in markets like the United States, Cambodia, France, and Australia, where it can provide Vietnamese content to overseas Vietnamese communities. In Thanh's view, this audience living far from home craves home content and culture, while also being used to high standards of offerings from their new home economies, so VieON's premium content and world-class product would potentially be a very good fit.



Rap Việt has brought rap shoulder to shoulder with music genres in the mainstream

Vietnam's Over-the-Top (OTT) Market

From a commercial perspective, VieON seems well placed to capture the opportunity in Vietnam's rapidly growing OTT market, where total revenue was projected to reach approximately \$105 million in 2020 and rise at a compound annual growth rate of 9.4 percent through 2024.²

Vietnam's current GDP per capita is approximately \$2,700, and Thanh believes that once GDP per capita reaches around \$3,500, consumer spending will significantly increase, as was the case elsewhere in Asia. In other words, Vietnam appears to be at an inflection point in terms of OTT adoption, and a market-leading service could potentially see growth curves comparable to other markets such as India and China.

Our peoples' mindset became that of a member of a digital start-up rather than a 26-year-old media company, and as a result, our innovation is stronger than ever. Our leaders are now highly encouraged to aim for speed over elegance, take decisive actions with courage based on imperfect information, and embrace the long view...

But growth in OTT still requires a few other factors. In addition to increases in GDP per capita, also important are growth in access to digital payments and stricter controls over piracy.

Pirated content remains a big issue in Vietnam.³ But the Vietnamese government had already taken some significant steps to shut down illegal websites prior to VieON's launch.⁴ For example, Vietnam's Cybersecurity Law was passed in 2018, followed by new regulations in 2020 on penalties for Intellectual Property (IP)-specific online violations, and a new practice of blocking access to pirate websites.⁵

Just like in other markets, where consumers have moved from pirated low-quality content to a paid, high-quality user experience, Thanh believes that Vietnam will also make this transition. The higher video quality and superior user experience provided by platforms like VieON are factors that would encourage viewers to use legal channels. Thanh also remarked that the VieON subscription fee is only 66,000 dong (\$2.85) per month, which is the same price as a bubble tea or a cup of coffee in beverage chains in Vietnam, and a fair price to pay for the convenience of a content service.

Transformation of Internal Operations

Internally, the COVID-19 crisis has forced DatVietVAC to take a closer look at different aspects of the company's operations, organization, and processes to track progress. The company could no longer operate like before when meetings took place in face-to-face settings. To respond to the need to work digitally, DatVietVAC's IT department worked to adopt new tools for use, while each department began to set up daily meetings and shared folders so people could work from home.

As Thanh said, “Almost overnight, we had to change our workflow and adapt completely new ways to work. Our ‘firefighters,’ aside from responding to challenges in their own departments, also had to be coordinated to make well-informed joint decisions, both for business and for regulations and compliance. It was the diversity of the task force and the inclusion of very young members that helped realize the company’s vision and allowed us to keep producing content throughout the lockdown despite studio closures and crowd restrictions.”

In addition, Thanh pushed each department to design offerings more relevant to clients and the audience in a COVID-19-affected world; this led to a discernible

expansion in DatVietVAC’s digital businesses. The push worked – the company launched three new businesses in 2020, with a solid pipeline for the first half of 2021, while maintaining its existing client base.

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Thanh believes one of the most significant outcomes of COVID-19 was the impact on company culture. While an organization-wide cultural shift takes years, if not decades, to achieve, the crisis pushed the DatVietVAC leadership to change its mindset and attitude within weeks.

In Thanh’s words, “Our processes and organization became leaner. Our employees became more empowered. Our people’s mindset became that of a member of a digital startup rather than a 26-year-old media company, and

as a result, our innovation is stronger than ever. Our leaders are now highly encouraged to aim for speed over elegance, take decisive actions with courage based on imperfect information, and embrace the long view, that is, staying focused on the horizon, predicting the new business models that are likely to emerge, and sparking the innovations that shape the future.”

Future Outlook

While COVID-19 has no doubt been a crisis, Thanh believes that 2020 helped to further cement DatVietVAC’s position as a market leader. The severity of the pandemic caused many smaller players to fold or significantly scale down their operations and investments. DatVietVAC was presented with numerous interesting business opportunities, many of which would not have been available in a more “normal” market.

Looking forward, Thanh envisions DatVietVAC as a leading technology company in the media and entertainment space, with a core strategy of growing through the commercialization of content and the interaction of such content with data and platforms. The company plans to invest heavily in Big Data and Predictive Analysis; it is in the process of setting up a dedicated Artificial Intelligence and Tech Lab at the Group level and is looking to enter more businesses borne out of data, such as digital advertising, e-commerce partnerships, and fintech.

Looking forward, Thanh envisions DatVietVAC as a leading technology company in the media and entertainment space... The company plans to invest heavily in Big Data and Predictive Analysis; it is in the process of setting up a dedicated Artificial Intelligence and Tech Lab at the Group level and is looking to enter more businesses borne out of data...

Given its dominance in traditional media, DatVietVAC also aspires to build robust digital platforms: these will be anchored by proprietary intellectual property from within the group, and enhanced by curated external material, including user-generated content (UGC). This content will form the basis of two types of product offerings: *entertainment services*, which will encourage consumers to “Watch, Listen, Read, Talk, and Play” in the Vie ecosystem; and *influencer services*, which are plans for e-commerce and a celebrity services marketplace.

On the entertainment side, DatVietVAC’s flagship product VieON addresses the “Watch” component, and VieZone, a recently launched online news platform, will address the “Read” component. The plan is to continually add other components such as comics, books, podcasts, as well as interactive chat platforms.

While its Influencer segment is younger, DatVietVAC has made solid preparations to expand into online retail after a successful merchandising pilot under VieSHOP, with a launch underway for a platform offering personalized content from celebrities who are scheduled to appear in shows in the next quarter.

Overall, the group’s approach to business expansion is twofold: DatVietVAC will continue to create or acquire companies that complement its existing platform, while remaining committed to investments in content as the foundation and strength of its commercial offerings.

DatVietVAC is also under no illusions that it is going alone: Its communities include those acquired through partnerships with social platforms such as YouTube and Facebook, as well as strategic collaborations with leading local news sites. Thanh’s vision is a convergence of a community of “influencers to influence,” the audience of which then amalgamates into a large VieCommunity.

Conclusion

Thanh is keenly aware that the current way of life “makes all of us a part of the world of media, entertainment, and technology.” But he also believes that tech is not everything, and that there needs to be a human element. At a time when he believes social media is simply used for self-expression, he wants his group to “lead the responsible media movement, to help inspire and encourage good thoughts and healthy habits, and to be part of efforts against the seven social sins.”⁶ As Nam Phuong explained, “The idea is to shape a community with positive, reliable content, rather than simply cheap laughs and sensationalist thrills, while making sure that it is neither pretentious nor overly contrived.”

Indeed, DatVietVAC positions itself as a company that uses technology as a vehicle to inspire human aspiration. At the end of the interview, a reflective

Thanh concluded by saying, “Let your heart speak truth. People talk a lot, but is it with genuine feelings? Are you talking with reason and cause, or is it just cosmetics? Is there an inner spirit that is devoted to other people? Our ultimate goal is to inspire people and make each and every moment in their lives a happy one.” In DatVietVAC, we see an example of a company that leverages entertainment as a force for good, especially during the highly stressful times of the COVID-19 pandemic.

Endnotes

- | | | | |
|---|---|---|---|
| 1 | “Vietnam courts overseas diaspora to boost digitization, exports.” VN Explorer. Nov. 22, 2020. https://vnexplorer.net/vietnam-courts-overseas-diaspora-to-boost-digitization-exports-a2020126796.html | 4 | Ibid. |
| 2 | “Local OTT looks to win on home turf.” Vietnam Investment Review. June 22, 2020. https://www.vir.com.vn/local-ott-looks-to-win-on-home-turf-77208.html | 5 | Ibid. |
| 3 | Yen Vu. “Vietnam Tackles Online Piracy with More Assertive Regulation and Practice.” Rouse. June 1, 2020. https://rouse.com/insights/news/2020/vietnam-tackles-online-piracy-with-more-assertive-regulation-and-practice | 6 | The seven social sins are: science without humanity, wealth without work, knowledge without character, pleasure without conscience, commerce without morality, belief without sacrifice, governing without principle. |

Esquel Group (Hong Kong)

Launching a Sustainable Mask
Amidst a Public Health Crisis



Esquel Group (Hong Kong)

Launching a Sustainable Mask Amidst a Public Health Crisis

By Winnie Peng, Pauline Yeung, Colleen Howe, and Chun Hei Hung

Esquel Group

Region

Hong Kong

Year of Founding

1978

Headquarters

Hong Kong

Type of Company

Vertically Integrated Textile and Apparel Manufacturing and Technologies (including Cotton Research, Ginning, Spinning, Knitting, Weaving, Garment Making, Accessories and Packaging, Merchandising and Retail)

Number of Employees (2020)

35,000

Total Revenue in 2019

HKD 10 billion (US\$ 1.3 billion)

Major Business

Textile Manufacturing (including Apparel Making; Brands & Distribution; Cotton Research, Ginning & Spinning; Knitting & Weaving; Merchandising; Accessories & Packaging; and Specialty Yarn Spinning)

Retail Brands

PYE and DETERMINANT

COVID-19 Initiatives in a Nutshell

Development of a Sustainable Mask

The following case study is based on interviews with Marjorie Yang, Chairman of Esquel Group, on September 22, 2020 and with Edgar Tung, Head of Global Operations at Esquel Group, on August 31, 2020.

Introduction

On February 3, just as the COVID-19 pandemic was unfolding, Esquel Group Chairman Marjorie Yang received a call from a close friend. “You’re in the textile business, you should do something to help Hong Kong. You should start making masks,” he said. Yang initially replied, “We don’t know how to do that. We’re a cotton house. We make men’s shirts.” Indeed, Yang’s first reaction was that unless one was going to wrap a shirt around one’s head and turn it into a mask, she didn’t see how Esquel was going to become a mask manufacturer. Masks are made from non-woven material and are a totally different business.

But Yang got off the phone and started asking her colleagues, just out of curiosity, “Do you think we know how to make a mask?” Several people said maybe. In the following days, Esquel established a team consisting of representatives from research and development (R&D), manufacturing operations, engineering, and procurement to brainstorm ideas for producing a sustainable mask. The reusable element was particularly important because as many as 129 billion disposable face masks are thrown away every month worldwide, according to a study in *Environmental Science and Technology*.¹

Yet this was no easy task. In Yang’s words, “We had to go through so much pain trying to make the first 300,000 masks, trying to find the chemicals and other materials. We used the interlining from men’s shirts — talk about innovation — because the regular material was not available.”

This took place in the midst of a public health crisis and at the fastest possible speed. Esquel launched its mask

on Valentine's Day, around 10 days after Yang received the initial phone call. The mask was later named DET30, which comes from Esquel's brand, DETERMINANT, and the number of times each mask can be washed. The mask was attractive because of three features: sustainability, affordability, and the fact that its anti-bacterial treated fabric offered reasonable protection for the wider community while sparing medical masks for healthcare professionals.

Given the global shortage of masks, Esquel's workers worked overnight and on Sundays to make sure that the high demand could be met; at its peak, Esquel produced one million reusable masks in a single day. The drop in orders for clothing meant that workers could be moved into mask production.

Initially, the masks were for donation only. Esquel donated masks to the communities where it had operations, such as Guangzhou, Guilin, and Xinjiang. The company also donated masks to institutions such as Imperial College in the United Kingdom and Yang's alma mater, the Massachusetts Institute of Technology in the

United States. And while the priority was to meet the community's needs, Esquel was also able to turn mask production into a business by selling its masks online both domestically and internationally on platforms like Amazon, Shopify and WeChat.

Along the way, Temasek Foundation also tested the masks and realized they were good for non-medical use. After a small initial donation, which was very well-received, Temasek Foundation placed orders for millions of masks for its *Stay Prepared* initiative, which offered all Singapore residents a free pair of reusable masks.

As of December 2020, Esquel had shipped 43.5 million reusable masks to more than 27 economies worldwide, potentially saving 1.3 billion single-use masks from disposal in the environment.



DET-30 Reusable Mask

A Deeply Embedded Commitment to Sustainability in the Family

The advantage of running a privately owned family business during a crisis is that the company can afford to incur short-term losses without being afraid of losing the confidence of its shareholders. In the case of Esquel, another aspect – and advantage – of family influence is the deeply embedded commitment to sustainability across generations.

Yang recalls being at MIT in the 1970s, when there was the emergence of an environmental movement around books like *Silent Spring* and *The Limits to Growth*. The people in her social circle were very environmentally conscious and very much influenced by these works. So Yang came out of that era where that was the fashionable thing to do, and that influence stayed with her as the environment became worse and worse.

“We had to go through so much pain trying to make the first 300,000 masks, trying to find the chemicals and other materials. We used the interlining from men’s shirts—talk about innovation—because the regular material was not available.”...As of December 2020, Esquel has shipped 43.5 million reusable masks to more than 27 economies worldwide.

Yang’s father also inspired her. A textile chemist by training, he studied chemistry as an undergraduate and did his Master’s degree at Lowell Textile Institute. He used to tell Yang, “The textile industry does not have to pollute. There are ways of doing things better.”

After Yang joined Esquel, she found herself at one of the satellite factories and noticed that the fish in the nearby fish-pond had died. When she asked the factory manager about this, he said, “Boss, we are in the textile industry, and this is natural.” But when she went home and asked her father, he responded from a very practical engineering perspective. He said, “That is not so. We can treat it.” So she felt that Esquel should adopt this as the way to work in the company.

Yang’s daughter, Dee Poon, is also an environmental champion. In an interview in September, Poon spoke about “50 Simple Things Kids Can Do to Save the Earth,” a book Yang gave her as a child.² Poon recalls going into Yang’s office when she was growing up and putting little notes here and there saying “Be careful how much toilet paper you use,” or “Do you need to print that.”³ It is safe to say that the concern for the environment runs deep in this family, and that they are prepared to act on it.

Esquel’s eCulture

In fact, the Environment is a core component of the eCulture at Esquel, which also includes Ethics, Exploration, Excellence and Education. Yang credits the eCulture for Esquel’s sustainable mask story.

In terms of Ethics, Esquel wanted to help. The mask initiative stemmed from a deeply ingrained ethos of caring for people and the community. Importantly, Esquel was transparent with the limitations of its mask in comparison to a mask that was designed for medical use. The involvement of public health specialists on Esquel’s consulting panel ensured that the company delivered what it promised, but did not promise more than what it could deliver.

Exploration is another component of Esquel’s eCulture, and it is worth noting that the sustainable mask, which was ready for shipment within 10 days, was the result of years of R&D and materials science knowledge. As an example, the outer

layer of the mask is water repellent and treated with an anti-microbial chemical, meaning that this could not have been done overnight.

Esquel's culture also emphasizes the need to challenge the status quo and explore all available options through trial and error before coming up with a new product. In the words of Esquel's Director of Global Operations Edgar Tung, Esquel's reusable mask exemplifies how "innovation is the key cog to moving the three interlinking processes of discovery, experimentation and optimization."⁴



Excellence is also a core value. When making the mask, Esquel relied on automation because it wanted consistent production quality and minimal human handling to avoid contamination. But the ear loops still had to be attached manually, and Esquel encountered initial problems when Temasek Foundation asked for colored ear loops in cheerful colors such as red, yellow, and green.

While Esquel had thought it could easily dye them in house, this turned out not to be easy. The ear loops were made of polyester, and after dyeing they got tangled up like spaghetti. So one weekend the workers had to do it by hand until engineers came up with the clever solution of autowinders. Yang believes that this drive to solve problems and strive for excellence is what got them over that hump.

Education is the final component of Esquel's eCulture. Yang notes that while a lot of people think that means training people, at Esquel it also means "dare to err," or a culture where people are not afraid to make mistakes. This is complemented by efforts within Esquel to make sure that all departments build on the same experiences and that no one single individual or unit makes the same mistake twice.

In Yang's words, "When you graduate from a great university, you're probably a good student. One of the things you've been told all your life is you should hand in a paper that gets you 95 points out of 100. So you're very afraid to hand in any kind of work unless you're sure that it's near perfect, but that's a bad habit. You have to remember that you need to work as a team. If everyone had held on to their work until it was perfect, we would not have made a mask or even half a mask."

Wellness Initiatives

Yang is also particularly proud of the emphasis on health and wellness in Esquel's corporate culture, which played a critical role in the launch of the DET30 mask and allowed for its rapid adoption across the firm.

Esquel had wellness initiatives long before the pandemic started. The program is aimed at maintaining a healthy work-life balance for employees and includes tai chi classes, mindfulness workshops, and seminars on different aspects of wellness, as well as the recognition and alleviation of mental health issues by building a supportive environment.



Tai Chi at Esquel's Sustainable Development Garden in Guilin China

Over the years, the company has also worked to improve the health and safety of its frontline workers by educating them on practices such as wearing shoes while in the factory or washing their hands after using the toilet. While these habits may seem basic to most, many workers in developing countries were not brought up this way. For example, some Sri Lankan workers at Esquel were accustomed to going to work barefoot.

On bathroom hygiene, Yang exclaimed, "Toilets are critical! While everyone focused on the masks, it is also about handwashing, having clean water, and having proper sanitation, particularly in a crowded environment."

Yang vividly recalls going to a lecture where they talked about how toilets are the most important indicator of how a McDonald's store is managed. In her words, "I believe toilets are the easiest way to see if a factory is well-managed, too. Not the VIP toilets, but the regular toilets. That has been an indicator that we use."

With this kind of effort, it is not surprising that Esquel's workers feel safe. The company also gives its employees options and lets them decide whether they want to work from home or go into the office. While the company gives some basic guidelines, employees are encouraged to use their own discretion. Hence, the wellness program and the sense of trust between the company and the workforce contributed in no small part to the mask story.

Challenges in the Garment Sector

The confluence of innovation, sustainability, and wellness in producing reusable masks is particularly remarkable given that Esquel has been hard hit not only by the pandemic but also by U.S.-China tensions. Since the onset of the pandemic, the company has closed down all factories in Malaysia and Mauritius, one factory in Fenghua, China, and another factory in Sri Lanka.

As Tung remarked, "Esquel has experienced several crises since its founding, ranging from the consumer backlash after the 1989 Tiananmen Square incident, to the 1997 Asian financial crisis, to the 2002-2004 SARS outbreak. However, none of these previous crises had the same scale or impact as the current

pandemic." Nevertheless, Tung noted that the crisis is also an opportunity for Esquel to speed up the process of transforming its business, which the company was unable to do previously.

"...One of the things you've been told all your life is you should hand in a paper that gets you 95 points out of 100. So you're very afraid to hand in any kind of work unless you're sure that it's near perfect, but that's a bad habit...If everyone had held on to their work until it was perfect, we would not have made a mask or even half a mask."

For Esquel, around half of its exports went to the United States and just under a third to Europe. During the pandemic, many of Esquel's customers in the United States requested extensions of the payment cycle – from 30 days to 60 days to 120 days. Some even said that they did not have the money to pay.

Esquel helped some of its customers cope with the negative demand shock by assisting with product development, for example by developing clothes with anti-bacterial

properties. In addition, it reduced lead time and increased order flexibility so that customers could exhibit more agile responses to fluctuations in demand. For others, Esquel mitigated the impact on its business through credit insurance or decided to sever its relationship with customers before they went bankrupt.

In addition, some of Esquel's customers said that they have plans to move their supply chains away from China because of U.S.-China tensions. As Tung explained, from Esquel's point of view, if a customer has, for some time, wanted to move away from China, then perhaps the pandemic is a good time to re-evaluate the relationship. In this way, COVID-19 actually gave Esquel the opportunity to evaluate which of its customer relationships would be long-term and which would be more transactional, so that it could focus its resources on the partnerships that are most important.

Future Outlook

In terms of the future outlook, Tung noted that the overall theme among Esquel's customers is, unsurprisingly, one of uncertainty: They do not know how many orders they will require in the next season, so they often place smaller orders, leaving room for the possibility of increasing volume if demand permits. In order to mitigate the risks of uncertainty, Esquel hopes to maximize its value in the supply chain, diversify its customer base, and invest in its own brands.

First, Esquel hopes to maximize value according to the "Smiling curve," which states that the marginal value added by the first and last stages of the value chain – R&D and branding – is much higher than the value added by the intermediary stages of manufacturing. Therefore, Esquel now wants to focus on identifying opportunities to monetize its extensive library of patented technologies.

"in Chinese history, every six decades we have a year of great turbulence. But that doesn't mean that it is only crises. There are also opportunities...So early on, I started to look for opportunities rather than just defending against all the adverse events."

Secondly, Esquel has been developing a reorientation toward clients in Asia, especially China. The share of Esquel's revenues in China as a proportion of total sales grew from 17 percent in 2019 to 20–30 percent in 2020 as COVID-19 hit different parts of the world. In line with this trend, and to correct for its previous over-reliance on U.S. customers, Esquel is seeking to develop more business relationships with Chinese customers, notably sports brands like Anta Sports and Li Ning. The company is also looking to produce uniforms for large Chinese corporations. This could be a very profitable business as the number of uniforms required by one corporation could easily be in the order of millions. At the same time, Esquel is also seeking to develop deeper relationships with other Asian customers such as Muji, the leading Japanese brand.

Finally, Esquel will focus on developing its own brands, including PYE, which targets higher-end consumers with shirts selling for more than \$100, and DETERMINANT which is designed for value-seekers, with shirts selling for around \$40. Esquel is also seeking to diversify its revenue streams by expanding its lineup of wellness-related products, such as masks, eye masks, travel pillows, sleeping bags, and clothing with anti-bacterial and water-repellent properties.

Esquel has benefitted from vertical integration over the years, with control over the whole production process up to the point of selling the product to retail companies. Thus, it has been less exposed to supply chain disruptions, like shortages of raw materials, than other firms. By developing its own brands, Esquel believes it can further reduce its risk to disruptions like order cancellations or changes in its customers' policies toward working with Chinese suppliers. This would also bring the company one step closer to the end consumer, so that it can better understand their tastes and preferences and directly communicate a strong belief in sustainability.

Conclusion

When asked about how the year 2020 has been for her, a contemplative Yang says that she began some of her annual dinners of the year by noting that in the Chinese zodiac, this year is the year of the metal rat. “In Chinese history, every six decades we have a year of great turbulence. But that doesn’t mean that it is only crises. There are also opportunities. So I dug up some of my speeches from the beginning of the year, and that was quite inspirational, because, as Winston Churchill says, in every crisis there are opportunities. So early on, I started to look for opportunities rather than just defending against all the adverse events.” From the development of the idea to the donation and distribution of sustainable masks, it is fair to say that Yang is a woman of her word who has spotted – and acted upon – a meaningful opportunity in the COVID-19 crisis.

Endnotes

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Fubon Group (Taiwan)

Forming a Mobile Phone-based
Information System to Prevent
Community Outbreaks



Fubon Group (Taiwan)

Forming a Mobile Phone-based Information System to Prevent Community Outbreaks

By Winnie Peng, Pauline Yeung, and Chun Hei Hung

Fubon Group

Region

Taiwan

Year of Founding

1961

Headquarters

Taipei

Type of Company

Listed companies under Fubon Group include Fubon Financial Holdings, Taiwan Mobile, and momo.com Inc.

Number of Employees (2019)

68,000

Total Revenue in 2019

NTD 624.2 billion (US\$20.6 billion)

Total Net Profit in 2019

NTD 72.4 billion (US\$2.39 billion)

Major Businesses

Financial Services, Telecommunications, Media Services, among others

COVID-19 Initiatives in a Nutshell

Mobile Phone-based Information System To Prevent Community Outbreaks; Insurance Plans for Notifiable Diseases; Free Digital Entertainment for People under Quarantine; Free Internet Services for Students Attending School Remotely

Note: Total Revenue and Total Net Profit are summation of the three listed companies under Fubon Group.

The following case study is based on written correspondence with Fubon Group in September 2020, and an interview with Jamie Lin, President of Taiwan Mobile, on September 28, 2020.

Introduction

On October 29, 2020, the international media was abuzz with reports on how Taiwan had managed to mark 200 days without a locally transmitted COVID-19 case, making the island a success story in the fight against the coronavirus.¹

Experts and academics have offered various reasons for Taiwan's feat. First, Taiwan's painful experience in dealing with the SARS crisis in 2003 led to the creation of a legal and institutional framework for containing outbreaks of infectious diseases in the future.² The SARS outbreak also resulted in a cohort of "veteran professionals" in key positions in the government who held a vigilant attitude toward novel diseases.³

Second, the early activation of Taiwan's Central Epidemic Command Center (CECC) on January 20 and the decision to upgrade its authority to the highest level of government agency on February 27 enabled a "single-line of command" in "coordinating and mobilizing all sectors" to control the pandemic.⁴

Third, Taiwan was able to garner private sector support, both to ramp up mask production within a short period of time, and to create the Intelligent Electronic Fences System (IEFS), a real-time mobile phone-based information system that monitors Taiwan's entire quarantined population and individuals with whom they may come into contact.⁵ While the former involved raw material providers and manufacturers of face masks, the latter involved the five major telecom carriers in Taiwan.

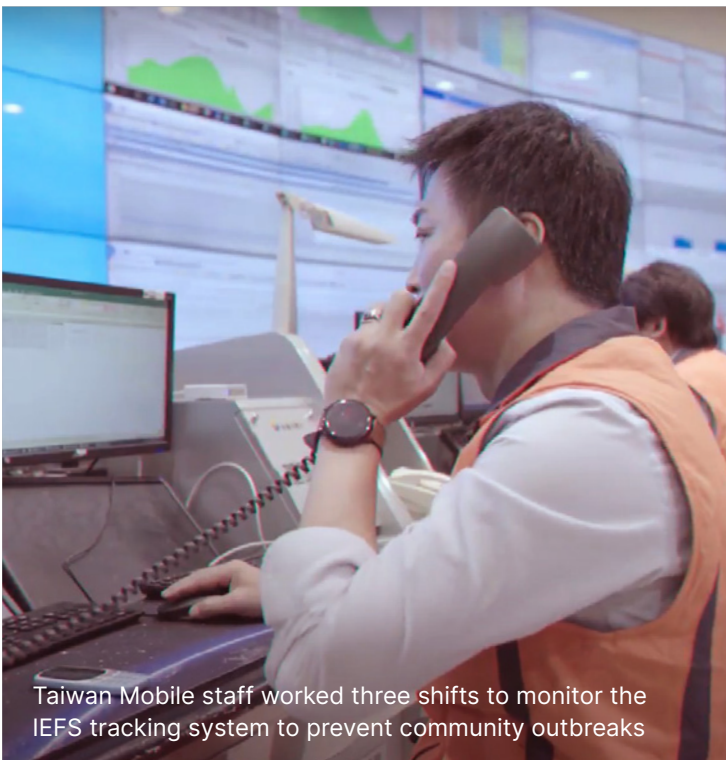
Jamie Lin, President of Taiwan Mobile, the telecom arm of Fubon Group, recalls the very meeting where the government met with relevant industry leaders to brainstorm ideas on

how they could best contribute to containing the pandemic. It led to the creation of a “team Taiwan” which worked to increase the local production of face masks eightfold within three months to 16 million per day,⁶ and the formation of the IEFS, which proved to be highly effective during the pandemic.

The Intelligent Electronic Fences System (IEFS)

When asked about the IEFS, Lin notes at the outset that the IEFS was a collaborative effort – between the Taiwan Centers for Disease Control (CDC), the official agency that combats the threat of communicable diseases in Taiwan, and the five largest local telecoms companies – and that no one actor can take all the credit.

Lin explained that the collaboration among the telecom carriers was “natural” because they were used to working with each other. “In a small place like Taiwan, it is impossible for five carriers to build five separate sets of infrastructures, so half of our infrastructure is actually shared. The companies worked very closely with the government, and I am proud of how our firm and the industry as a whole contributed to the containment effort.”



Taiwan Mobile staff worked three shifts to monitor the IEFS tracking system to prevent community outbreaks

In terms of the division of labor, each telecom company was responsible for monitoring their own customers who needed to be quarantined and were using SIM cards from their companies. The government, on the other hand, operated an aggregated platform that monitored all subjects.

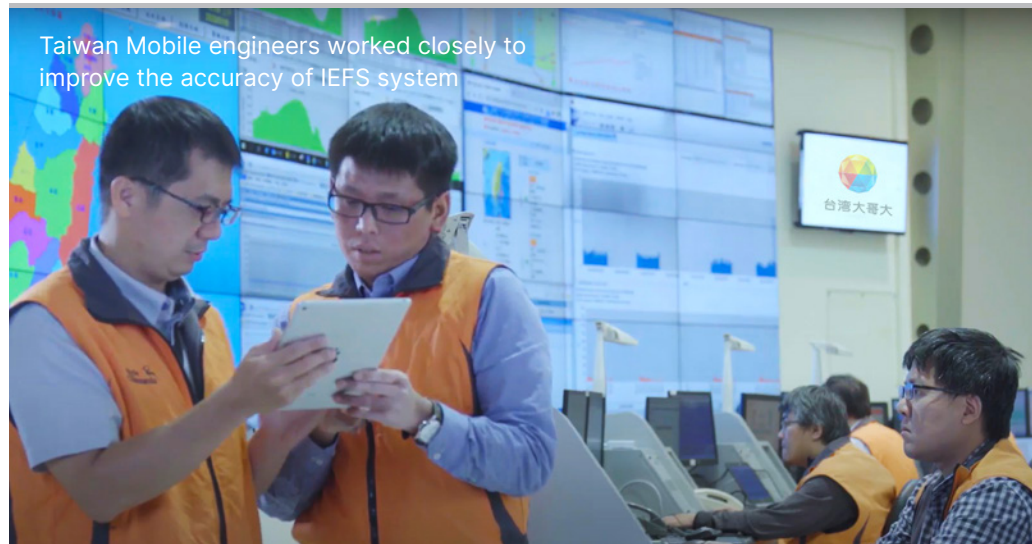
For Taiwan Mobile, and for the other carriers, the monitoring process began whenever someone registered with the CDC. Once the individual arrived at the location where he or she was supposed to be quarantined, they would send him or her a welcome message with official information detailing what the individual had to know.

Simultaneously, the carrier would send a message to local officials so that they could send someone to pay a visit to those

quarantined in order to ensure that they were complying with regulations, and also to give people a point of contact if they needed help from the government.

From then on, the telecom companies would monitor the subject for 14 days. If all went well, then the companies were responsible for notifying the subjects that their quarantine periods had ended.

At Taiwan Mobile, around 20 to 30 of its employees worked closely on IEFS, while close to a thousand people worked on it on a more extended basis, since engineers were needed to make sure that all of the cell towers, which were used to locate individuals, were functioning as expected.



Utilizing “Blocks” of 200 Meters by 200 Meters

One of the unique features of the IEFS is the lower precision in tracking a subject’s whereabouts because it utilizes “blocks” rather than the Global Positioning System (GPS). Lin contends that this raises fewer privacy concerns and results in higher effectiveness. “The system works by dividing cities into 200 by 200 meter ‘blocks’ and locating each subject within a block by triangulating their position using nearby cell towers,” Lin explained.

“Whenever the subject, or more specifically, his or her phone, leaves the block, the local authorities are notified. This way of tracking a subject’s location is less precise because no alarm is raised so long as the subject stays within the ‘block,’” he continued.

Since any given subject will not know the exact boundaries of the “block,” which also means that they do not know how far they can travel before the authorities are notified, Lin believes that fewer people will take the risk. It also appeared unlikely that people would want to leave their house without their phone. Finally, Lin says, “We trust that the Taiwanese people will comply with the law, even if they are aware that loopholes exist.”

Having said that, in a scenario where a subject is detected to be outside his or her “block,” the telecom carrier would notify both central and local government officials, who would send representatives to check up on the individual. And if the suspicions were confirmed, the carrier would send the subject’s rough locational data to the government so that they could track him or her down and make the individual return to the quarantine site.

While the IEFS does raise privacy concerns, Lin sees this as a judgement call about the relative weighting assigned to health and privacy within a particular society. In the words of Lin, “Once you have this, you need to choose the right technology to do it; for us, using cell towers to triangulate a person’s position struck the right balance between respecting privacy and promoting public health. In contrast to Hong Kong’s tracking bracelets, the IEFS system allows for greater privacy as it does not collect data on people’s exact locations. Moreover, relative to both Hong Kong and mainland China, Taiwan’s solution is actually much cheaper. We will not be adopting any bracelet-based solution in the foreseeable future, as many Taiwanese people would feel that it is too much.”

Containing a Possible Outbreak from the Diamond Princess Cruise Ship

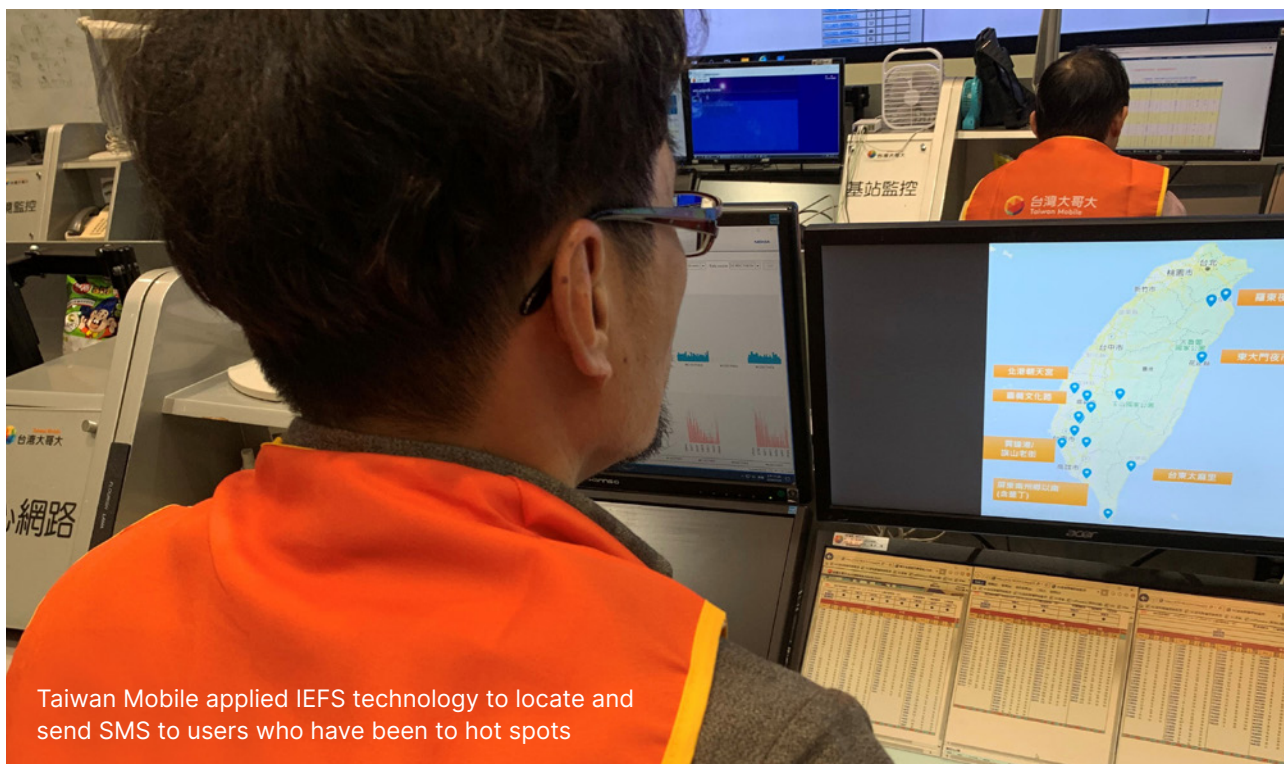
One of the major accomplishments of the IEFS was the containment of a major crisis involving the Diamond Princess cruise ship. On February 5, 2020, an outbreak of COVID-19 was reported on the Diamond Princess, which had docked at Keelung harbor on January 31, so that passengers could have a one-day excursion in Taiwan.⁷ In order to trace the potential exposure to the virus, Taiwan authorities sought the help of the five local telecom carriers, including Taiwan Mobile.

Lin opined, “...In a small place like Taiwan, it is impossible for five carriers to build five separate sets of infrastructures, so half of our infrastructure is actually shared. The companies worked very closely with the government and I am proud of how our firm and the industry as a whole contributed to the containment effort.”

After identifying the mobile phone numbers of the passengers, it was possible to find the rough locations of the phones and the phones’ users.⁸ With the help of the local government, it was found that 34 percent of the passengers took shuttle buses for local tours, 5.2 percent took taxis, and the rest biked or stayed near the harbor area.⁹

The Taiwan authorities then proceeded to identify individuals in Taiwan who had stayed more than 5 minutes and within 500 meters of the locations that the passengers of the Diamond Princess had travelled to.¹⁰ These individuals who were at risk were advised to self-quarantine at home, monitor their health, and refrain from public gatherings.¹¹

Similarly, in another incident, 36 navy sailors who had returned to Taiwan after an overseas mission were found to have been infected with COVID-19.¹² Again, the IEFS was used to track the travel routes of the sailors, who had visited family and friends in multiple cities.¹³ Warning messages were sent to individuals who had potentially been in contact with them, and a community outbreak was prevented.



Crisis Management and Digitalization

While the IEFS was an external project that helped prevent virus outbreaks in the community, Taiwan Mobile itself demonstrated agility and foresight in its response to the crisis. The management team began discussions on how it could best respond to the pandemic in late January, before Chinese New Year, and this allowed them to get a head-start on stockpiling masks and planning response measures before employees went home for the holidays.

After the holidays, Taiwan Mobile became one of the first companies in Taiwan to ask employees who had visited popular tourist locations to stay home for 14 days. At the same time, the company quickly implemented measures to protect its customers by providing hand sanitizers in offline stores.

One strategic initiative was the segregation of company employees into an A team and a B team. The same function was split across two teams so that, if a member of one team became infected with the virus, the other could act as a back-up. This arrangement lasted for six months.

In addition, the company swiftly implemented remote working and meeting initiatives. Although this way of working was initially unfamiliar to the employees, they were able to adjust to the new norm within a month, learning how to conduct efficient meetings online. With many meetings remaining online, Lin thinks Taiwan Mobile's DNA has changed for good as it has accelerated the company's digitalization.

Indeed, aside from taking part in the IEFS, Taiwan Mobile's response to COVID-19 has included offering free digital entertainment for people under quarantine and free internet services to students who were learning from home. For the former, streaming services were offered to tens of thousands of people in quarantine or self-isolation, through myVideo, or Taiwan's Netflix, and myMusic, which is Taiwan's Spotify. Lin is also particularly proud of the 15 days of free internet services provided to students attending school remotely. This was especially impactful for underprivileged students who might not otherwise have had access to the internet.

Future Outlook

On the future of IEFS, although 95 percent of the system has been built, Lin says that there are still quality-of-life tweaks that can be made to make the lives of government officials or those under quarantine easier. While he does not anticipate the need for an IEFS 2.0, there are always minor adjustments that can be made for further improvement.

In fact, with an effective IEFS in place and a remarkably low number of COVID-19 cases in Taiwan, Lin is focused on building "the next star or stars in the company which would continue to power growth for the next five to 10 years."

In the words of Lin, "once you have this, you need to choose the right technology to do it; for us, using cell towers to triangulate a person's position struck the right balance between respecting privacy and promoting public health. In contrast to Hong Kong's tracking bracelets, the IEFS system allows for greater privacy..."

Lin sees COVID-19 as having benefitted Taiwan Mobile in a sense because its subsidiary Momo is the leading B2C e-commerce firm in Taiwan. During the pandemic, Momo's growth accelerated and it was able to solidify its market-leading position. While the telecoms business is a cash cow for Taiwan Mobile and the e-commerce business is a rising star for now, Lin believes that Momo will also become a cash cow in time, resulting in the need for yet another "star" to provide growth momentum.

Of course, this is not to say that there is no room for existing businesses. Taiwan Mobile will continue to provide fast and stable telecommunication services, as well as video conferencing, online entertainment, and broadband

services. It also plans to provide 5G transformation solutions for more enterprises in the future. On the other hand, Momo will continue to enhance the consumer experience. For example, it has launched voice search in mobile shopping services and plans to optimize last-mile delivery by limiting delivery time to six hours and completing 30 satellite warehouses by the end of 2021.

For the wider Fubon Group, the plan is to incorporate notifiable disease-related protection to existing insurance products and to develop insurance policies to provide protection against the risk of business suspension. This would build on the fixed-term health insurance plan for notifiable diseases launched by Fubon

In fact, with an effective IEFS in place and a remarkably low number of COVID-19 cases in Taiwan, Lin is focused on building “the next star or stars in the company which would continue to power growth for the next five to ten years.”

Life, a first for Taiwan that offers daily hospitalization benefits as well as death benefits to beneficiaries, and the insurance plan for notifiable diseases launched by Fubon Insurance, also a first for Taiwan that provides protection and reimbursement for people in mandatory home quarantine.

Finally, Fubon sees Southeast Asia as benefitting from lingering U.S.-China tensions and the resulting restructuring of the global supply chain, and is looking to extend its current operations in Singapore, Vietnam, and Indonesia, to other neighboring countries such as Malaysia and Cambodia. In doing so, Fubon will be following the footsteps of other Taiwanese companies.

Conclusion

To be sure, as much as 2020 has been the year of the coronavirus, for the island of Taiwan, U.S.-China tensions are seen to have an equally important, if not more important, effect on business, politics, and society. As companies like Fubon expand into Southeast Asia, experience-sharing on initiatives such as the Intelligent Electronic Fences System (IEFS), not just money and deals, will facilitate win-win partnerships and meaningful social impact. Indeed, by bringing the government and telecom carriers together to prevent and contain a public health crisis, it is fair to say that the IEFS is an example of public-private collaboration that has practical relevance well beyond the geographical boundaries of Taiwan.

Endnotes

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Lenovo (Mainland China)

Championing Educational
Technologies to Enable Virtual
Learning Experiences Worldwide



Lenovo (Mainland China) Championing Educational Technologies to Enable Virtual Learning Experiences Worldwide

By Winnie Peng, Pauline Yeung, Colleen Howe, and Theodore Chow

Lenovo Group

Region
China

Year of Founding
1984

Headquarters
Operational Headquarters in Beijing and Morrisville; Financial Headquarters in Hong Kong

Type of Company
Listed Multinational Company

Number of Employees
63,000

Total Revenues in FY2019/20 (USD)
50,716 million

Major Businesses
Computer Hardware, Electronics, Smart Devices, Data Center, Services

COVID-19 Initiatives in a Nutshell
Provided Advanced Education Solutions to Students and Schools to Facilitate Learn-from-home Access, both on a Charitable and a Commercial basis; Provided Equipment and IT Infrastructure to Hospitals; Matched Employee Donations to Support Community Needs

The following case study is based on written correspondence with Lenovo in November and December 2020, and an interview with Rich Henderson, Director of Global Education Solutions at Lenovo, on December 3, 2020.

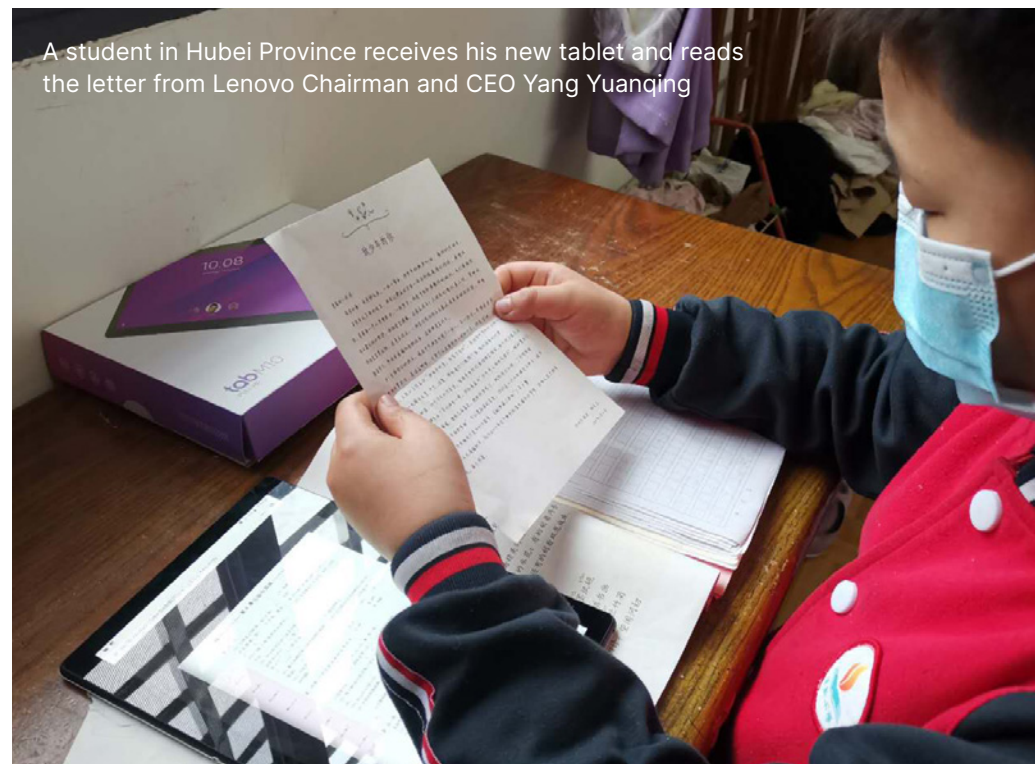
Introduction

“As your elder friend, I would like to support your efforts in this battle,” wrote Lenovo Chairman and CEO Yang Yuanqing in March 2020, in a letter to students from impoverished families in Hubei Province in China.¹ Placed in a gift package with a Lenovo tablet and a three-month data card of 90 gigabytes, Yang’s letter said, “I hope that these tablets help you all. No matter where you are, you can connect to the online knowledge library, browse encyclopedias, take classes virtually, and interact with teachers.”²

Initiated during the pandemic, this public welfare project was called “Lenovo E-classroom” and was supported by a donation of \$1.4 million personally funded by Yang. It also represented an attempt to tackle the “digital divide” in China, where students from underprivileged backgrounds do not have access to virtual learning, an issue that has only become more important because of COVID-19.³ As one of Lenovo’s major initiatives in China in 2020, the project was jointly sponsored by Lenovo Foundation China and the China Foundation for Poverty Alleviation and reached children in 2,375 families in Hubei.⁴

Lenovo’s philanthropic endeavors during the pandemic touched nearly every part of the world. In North America, Lenovo’s efforts included \$2.4 million in hardware donations to support distance learning education.⁵ In Europe, as Italy became hard hit by the crisis, Lenovo partnered with Microsoft to donate 190 laptops to students most in need in schools in Milan.⁶ In the Netherlands, Lenovo donated laptops to enable refugee university students to learn from home.⁷ Lenovo also had numerous

initiatives in Latin America. For example, the company contributed to distance education for LGBTQ+ middle school students in Argentina.⁸



Addressing Systemic Problems in Education in India

But Lenovo also went beyond hardware donations to address systemic problems in education that were exacerbated by the pandemic. In April 2020, Lenovo launched SmarterEd, a free online student-teacher matching platform, in collaboration with eVidyaloka, to tackle the estimated shortage of 1 million teachers in India due to lack of access to technology.

eVidyaloka is a Bangalore-based educational non-profit (“vidya” means education and “loka” refers to human connections), which was founded in 2011 with the goal of providing education to Indian students living in remote communities. Within the first four months of launching the SmarterEd platform, the initiative was able to electronically recruit over 11,000 volunteer teachers from 654 cities and almost 15,000 students from 571 cities.

The innovative aspect of SmarterEd was the use of smart technology via algorithms and an online questionnaire on learning and teaching styles to facilitate matching between students and teachers. The platform also caters to learners from across the country by supporting multiple languages used in India, from English to Hindi, Malayalam, Tamil, Kannada, and Telugu.

In a recent report, UNESCO identified South Asia as one of the regions where students are at highest risk for not returning to school following school closures.⁹ The

report also suggested online educational platforms and flexible enrollment as strategies that can reduce the risk that students will drop out of school permanently.¹⁰

Lenovo believes the SmarterEd platform could be a model for other emerging economies across the globe and potentially nations like the United States, where teacher shortages are arising because of the public health crisis and concerns around teaching in person.



Educational Technologies to Enable Virtual Learning

While Lenovo's philanthropic response to the pandemic has been admirable, the company's business response to the crisis has also been notable. COVID-19 has been a commercial opportunity for Lenovo, as education, business, and social life around the world has increasingly come to revolve around the digital devices that Lenovo and other technology companies provide. As an indicator, Lenovo's overall revenues rose by 7 percent to \$27.9 billion in the six months ended September 30, 2020.¹¹

Although Lenovo had already been focused on educational technologies in the past five years, the pandemic acted as an inflection point. The shift from classroom to online learning became an impetus for the company to put its emerging solutions into practice. While Lenovo has approximately 800 employees globally working in various education-focused teams, it is a team led by Rich Henderson, Director of Global Education Solutions, based in North Carolina, that is responsible for "looking beyond the device" to come up with educational solutions.

Having started his career as a classroom teacher working with autistic and special needs students, Henderson is passionate about the difference Lenovo can make in the education sector. The priority during the pandemic was to re-create the classroom experience in a virtual setting.

In October 2020, Lenovo launched its Hybrid Classroom solution to cater for distance learning and hybrid learning scenarios. Importantly, hybrid learning allows students in remote locations to join classes from “master teachers” at top educational institutions and get access to professors they otherwise would not have been able to meet, albeit virtually.

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As Henderson explained, “In some scenarios, especially in higher education, there is a model called Hyflex. There is a physical instructor and some students in the room, but other students are connecting remotely.” For this solution, Lenovo worked with its alliance partners Zoom, Google Meet, or Microsoft Teams to provide a collaborative offering – while there is a videoconferencing component there are also tools to share content and work.

Lenovo leverages its global footprint to roll out new resolutions, like its Smart Classroom solution in the Philippines, after a successful rollout in the China market. Students connect to the Smart Classroom through tablets, and the teacher provides content to the students through Lenovo Cloud. They can also use smart features like a digital whiteboard and interactive quizzes.¹² As this solution is an end-to-end teaching and learning offering, Henderson sees the potential to introduce it in other emerging markets like the Middle East and Latin America, where there are currently large tablet rollouts that could benefit from being paired with this device management and teaching offering.

Enhancing Virtual Reality Offerings

One educational technology solution that Lenovo has been focused on during the pandemic is virtual reality, which it has been developing since 2018. In May 2020, Lenovo introduced its VR Classroom 2, an updated version of its previous solution.

While he acknowledges that the adoption rate of VR remains low relative to other technologies, Henderson believes that the pandemic has brought out several key benefits of VR. Since the pandemic limits face-to-face interactions in daily lives, people have come to appreciate the importance of presence that VR can bring. The ability to chat with people in a more immersive way, where avatars express the movement of someone’s head and hands, can bring people closer together than interacting on flat screens.

More importantly, in these unusual times of social distancing, the VR classroom aims to immerse students directly into the material they are learning. “During a time of restricted travel because of COVID-19, VR has given students access to places and spaces that would otherwise be unavailable to them. These could be travel destinations like the Taj Mahal, foreign settings and wildlife environments, or specialized training environments such as scientific laboratories. With VR, people can be transported to these places, broadening their horizons and deepening their skills,” explained Henderson.

“VR can improve empathy by putting the students in the shoes of someone from another culture or another time. Students can practice challenging situations and difficult conversations in VR... This allows students to take someone else’s perspective and practice emotionally challenging situations in a safe way where it is okay to fail and try again.”

Of course, VR is also a particularly effective way to engage and spark curiosity among students through experiences that cannot take place in person – with or without COVID-19. For example, a recent Baltimore Public Schools field trip took place inside the human digestive track.¹³

In general, VR is also seen to help improve students’ interpersonal skills. In the words of Henderson, “VR can improve empathy by putting the students in the shoes of someone from another culture or another time. Students can practice challenging situations and difficult conversations in VR by playing the role of a social worker visiting a troubled home, a store clerk facing hostile customers, or by simulating the experience of someone with autism. This

allows students to take someone else’s perspective and practice emotionally challenging situations in a safe way where it is okay to fail and try again.” For students with special needs, schools have also used soothing VR environments to help students relax and learn how to control their emotions instead of lashing out or taking medicine to calm themselves down.

Stepping up Cybersecurity Measures during the Pandemic

Across its virtual classroom offerings, a key focus for Lenovo during the pandemic has been to enhance cybersecurity. Henderson noted that education is a high-risk area for cyberattacks and that cybersecurity becomes more complicated in an online learning environment. There are increasing security risks when students are in remote locations instead of the physical school building – students are often using devices that store their personal information but are not equipped with cybersecurity protections.

Apart from cyberattacks, another concern is content filtering, something that is also increasingly difficult to manage in a remote learning environment where school networks are unable to control incoming traffic to student devices. To address this problem, Lenovo developed a number of tools to prevent students from accessing certain types of content and to alert the school if they are searching for harmful information. For example, Lenovo’s classroom

management software LanSchool is equipped with thumbnail monitoring so teachers can keep an eye on what students are viewing on their screens.¹⁴

According to Henderson, school administrators were less aware of cybersecurity issues before the pandemic. “Before it felt like this was an offering that we were talking to schools about, but there was not a lot of interest. Schools didn’t have a lot of room to add this in the budget.” But since the shift to online learning and a number of well-publicized cybersecurity breaches in educational institutions, school administrators started to see the value in Lenovo’s offerings. “Instead of pushing this solution into the market, it was a pull.”

Esports as a Safe Form of Extra-curricular Activity during COVID-19

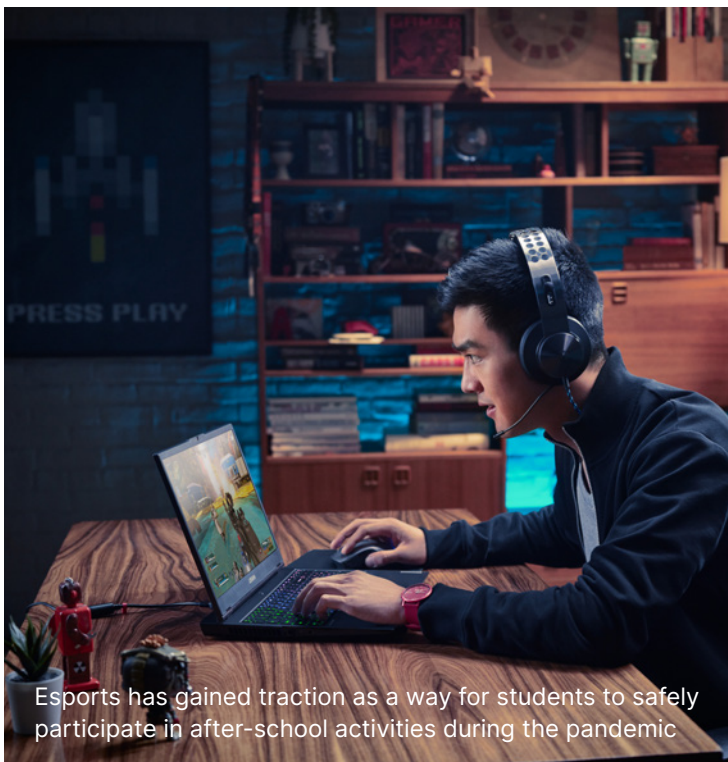
In a time of social distancing when extra-curricular learning is perhaps even more difficult to maintain than classroom learning, esports has gained traction as a way for students to safely participate in after-school activities and be connected with classmates during the pandemic.

“This has been a huge area of concern for educators,” Henderson said. They are asking, “How do I stay connected and keep students healthy both emotionally and socially?” North America has led the surge in interest in esports during the pandemic, but the trend is also growing in Europe, the Middle East and Africa, Australia and New Zealand, and parts of the Asia-Pacific region including Taiwan.

The Lenovo Esports Solutions for Education provides the gaming equipment, tower devices, and mobile devices for esports. It allows students to “play from home with matchups and leaderboards to spur competition”

and comes with “network and league management capabilities to maintain and optimize the experience for esports student athletes.”¹⁵

Lenovo began investing in esports just before the pandemic. Henderson referred to research that shows how students involved in esports are more likely to pursue careers in STEM (science, technology, engineering, and mathematics), an area where the U.S. faces a dearth of qualified graduates. Henderson also emphasized the other benefits of esports, such as the development of communication and team management skills.



Esports has gained traction as a way for students to safely participate in after-school activities during the pandemic

As an example, in a school in Colorado, the esports program gave some students motivation to do well in school, because they had to meet certain academic requirements to be on the team, which in turn helped them make friends and enhanced their social lives.

Of course, not everyone will see video games as a relevant academic experience. But Lenovo is working to integrate esports with academics, taking steps such as introducing software that monitors the amount of time available for students to engage in esports, which in turn is determined by whether they have completed their schoolwork.

Future Outlook

In the aftermath of the pandemic, which has disrupted education for millions of students and teachers around the world, we may see the emergence of a reshaped educational system where geographical barriers will be less of an obstacle and technology will play a bigger role in facilitating learning processes and measuring learning outcomes.

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In the long run, Henderson sees potential for educational technologies to help construct a “more holistic view” of students’ education journeys that goes beyond standardized tests. Amidst the industry shift from more formal testing to informal assessment, Lenovo can help teachers better gauge students’ study skills and social and emotional development. For example, Lenovo’s educational solutions can provide more checkpoints on students’ progress by allowing teachers to see not only whether their students handed in their homework but also how long they spent completing their homework, as well as whether and how students are interacting with other classmates.

In the United States, Lenovo has partnered with classroom platform Exploros which provides a learning system based on social interaction. While students in a typical classroom setting may only have a few interactions during a 45-minute lesson, the Exploros software can generate interaction through polls and student input such that there are an average 17 interactions per student in the same timeframe. Students can also see what their peers have said and interact with them. This allows for more interaction by students compared to a traditional class where they simply listen to lectures.

Conclusion

It is important to recognize that the accelerated shift to virtual learning because of the pandemic also presents significant challenges, in addition to the numerous opportunities mentioned above. Many students have had less than positive experiences with virtual learning. Some students are less engaged when connecting from their homes, and others have reported problems ranging from physical ailments to isolation and depression. Moreover, remote learning still requires technology, and even teacher-student matching platforms like SmarterEd are only available to those already equipped with the necessary devices and internet connections.

Indeed, perhaps the defining challenge for the educational technology sector will be to address the “digital divide” and mitigate the impact of virtual learning on wealth disparities. Speaking of this challenge, Henderson said, “Now, globally, we’ve seen a desire to supply every student with a device. This has been a huge challenge for the entire supply chain. There has been an explosion of demand that has caused longer lead times than we have seen historically. We are setting up new manufacturing lines and qualifying new suppliers. Through these efforts we are working to ensure that every student can have his or her own device.” This suggests that, just as Lenovo is applying cutting-edge technology with VR, cybersecurity, and esports to reinvent education for the future, there will still be a place for traditional forms of philanthropy, such as Yang’s donation of tablets to underprivileged children in Hubei, which could serve as a life-transforming present for the very students who would benefit most from the gift of technology.

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Lotte Group (South Korea)

Embracing “Open Innovation”
in E-Commerce for the Post
Corona Era



Lotte Group (South Korea)

Embracing “Open Innovation” in E-Commerce for the Post Corona Era

By Winnie Peng, Pauline Yeung, and Chun Hei Hung

Lotte Group

Region

South Korea

Year of Founding

1967

Headquarters

Seoul

Type of Company

Listed Company, Family Business

Number of Employees

119,000 (South Korea 71,000,
Overseas 48,000) as of June 2020

Total Revenues in 2019 (KRW)

74 trillion

Total Revenues in 2019 (USD)

63.8 billion

Major Businesses

Retail, Food and Beverage, Chemicals,
Construction, Manufacturing,
Tourism, Finance

COVID-19 Initiatives in a Nutshell

Launch of E-Commerce App Lotte On; Support Programs for Small and Medium Sized Business Partners; Donation of COVID-19 Diagnostic Kits; Aid for Underprivileged Children, Elder Citizens and Healthcare Workers

The following case study is based on written correspondence with Lotte Group in September 2020 and November 2020, and an interview with Tina Youhyun Choi, Team Leader of the Future Strategic Planning Team at Lotte Shopping, on October 6, 2020.

Introduction

“Since the launch of Lotte On, it has been evolving every day, every minute, every second,” exclaimed Tina Choi, Team Leader of Lotte Shopping’s Future Strategic Planning Team, six months after the e-commerce app was launched as a key component of Lotte’s “preparation for rebound in the post corona era.”¹

While Lotte Group is currently the fifth-largest conglomerate in South Korea involved in industries such as retail, food and beverage, chemicals, construction, and tourism, the success of the Lotte On app, Choi continued, “has become a matter of our business’ survival.”

Indeed, as much as Lotte Group has engaged in traditional philanthropy in response to the coronavirus crisis, notably by donating 1 billion won (just under \$1 million) to welfare facilities, providing food supplies to vulnerable children, delaying rents for small and medium enterprises, supporting local farmers in agriculture and fisheries, and providing support to countries like Indonesia and Pakistan,² the *chaebol* is very much focused on its business strategy for the post COVID-19 world.

The pandemic brought forward the digital transformation of Lotte Group, as it has done for businesses globally. In April 2020, the Group’s retail arm, Lotte Shopping, launched Lotte On to integrate the online businesses of seven Lotte affiliates, namely Lotte Department Store, Lotte Mart, Lotte Super, LOHB’s (Love, Health & Beauty Store), LOTTE.com, Lotte Hi-Mart, and Lotte Home Shopping.³

Previously, Lotte's e-commerce apps and their customers' data were not centralized: There was a Lotte Department Store app, a Lotte Mart app, and so on, and collating all the data from these separate apps was very difficult. While Lotte Shopping had always planned to resolve these issues, the timing of the rollout of Lotte On coincided with COVID-19, which was in many ways a wake-up call for Lotte. Although Lotte On had been two years in the making, it was the surge in online shopping during the pandemic that made Lotte Shopping accelerate its launch.

This was also consistent with Lotte Shopping's plans to close down some of its brick-and-mortar shops, which had been facing fierce competition from other e-commerce players for some time. Lotte Shopping, which had 17.6 trillion won (\$416 billion) in sales in 2019, suffered a net loss of 840 billion won (\$772 million) the same year,⁴ and the pandemic sped up its restructuring and downsizing.⁵ In fact, Lotte Shopping planned to close 244 physical stores during the 2020 to 2022 fiscal years.⁶

The Initial Launch of Lotte On

Predictably, sales activity on Lotte On was somewhat tied to the severity of the COVID-19 situation in South Korea. As one example, during the enforcement of social distancing level 2.5 in the Seoul Capital Region in the last weekend of August, sales of "Lotte On" increased by 37.2 percent compared to the previous month.⁷ (The government-mandated social distancing levels in South Korea are based on a scale of 1 to 3, where 1 is the most relaxed and 3 is the most stringent.⁸)

Lotte On also came up with promotions that were directly related to the pandemic. Since people were spending more time at home, Lotte On held a special exhibition in August, "The God of Tidying Up the House" ('정리의 신 기획전'), to offer discounts on home and living products.⁹ Lotte On also offered e-coupons as gifts for the Chuseok harvest festival that began in late September, as social gatherings were cancelled and digital presents became more popular.¹⁰

Apart from online promotions, Lotte On also conducts big data analysis on spending patterns in collaboration with Lotte Members, a membership service that allows Lotte customers to save and use points during purchases. Lotte Members boasts 39 million registered members, or 76 percent of the total population of South Korea. Through "hyper-personalization" services, Lotte On hopes to reduce the amount of time its consumers need to locate suitable products and services, and to improve the recommendations it provides to its customers.

As of October 2020, Lotte On had around 35 million user sessions per month and 13.5 million monthly active users. Customers in their 30s comprised 38 percent of all customers, followed by customers in their 40s who comprised 34 percent of the customer base, making these the two largest segments by age group.

“Open Innovation” in a Large Conglomerate

But beyond the sheer reach of the app, one of the most interesting aspects of Lotte On is arguably its belief in “open innovation,” or the practice of sourcing ideas and solutions from internal as well as external organizations. While the app was launched less than a year ago, an eco-system is already emerging in which Lotte On collaborates with start-ups and innovators in South Korea’s digital economy.

One of the key enablers of “open innovation” in Lotte On and the Lotte Group in general is Lotte Accelerator, the conglomerate’s venture capital arm. Like similar programs at other Korean *chaebols*, Lotte Accelerator leverages Lotte’s business infrastructure and partnerships with government organizations to support entrepreneurs and help their companies grow on a national and global scale. Since its establishment in 2015, Lotte Accelerator has invested in more than 50 startups in fintech, logistics, A.I., robotics, and other areas that could have synergies with the wider Lotte group.

Lotte On is currently collaborating with a number of Lotte Accelerator’s portfolio companies, including online convenience store Nowpick, quick delivery company PLZ, beauty marketing start-up LYCL, seller management tool provider Seller Hub, live commerce solution Mobidoo, F&B co-working space Wecook, and daily discounted products company Last Order.

From “One Hour Delivery” to Beauty Marketing



Lotte On’s pilot “one hour delivery” service in the Jamsil neighborhood in Seoul is a good example of a win-win collaboration between the e-commerce app and Lotte Accelerator’s portfolio companies. Introduced over a summer of social distancing, the Jamsil service allows customers to order about 600 daily necessity products online, including home cooking products offered by Lotte Mart, and beauty and health products offered by LOHB’s.¹¹

As long as the product is purchased between 11:00 a.m. and 1:00 a.m., consumers are eligible for the service and can expect orders to be delivered within one hour.¹² Products are stored at warehouses operated by Nowpick, which is also

responsible for product selection and packaging.¹³ On the other hand, delivery is handled by PLZ.¹⁴

Another good example is Lotte On's collaboration with beauty marketing start-up LYCL. According to an agreement signed in August 2020, LYCL will promote products sold on Lotte On's live commerce channel on unpa.me, LYCL's review and content platform for K-beauty products which boasts more than 1 million users.¹⁵ Lotte On will also conduct marketing on LYCL's Instagram influencer marketing platform palette.me.¹⁶ The goal is to strengthen social network service (SNS) viral marketing,¹⁷ which has only become more important during the pandemic.

deMonZ x Cheetah

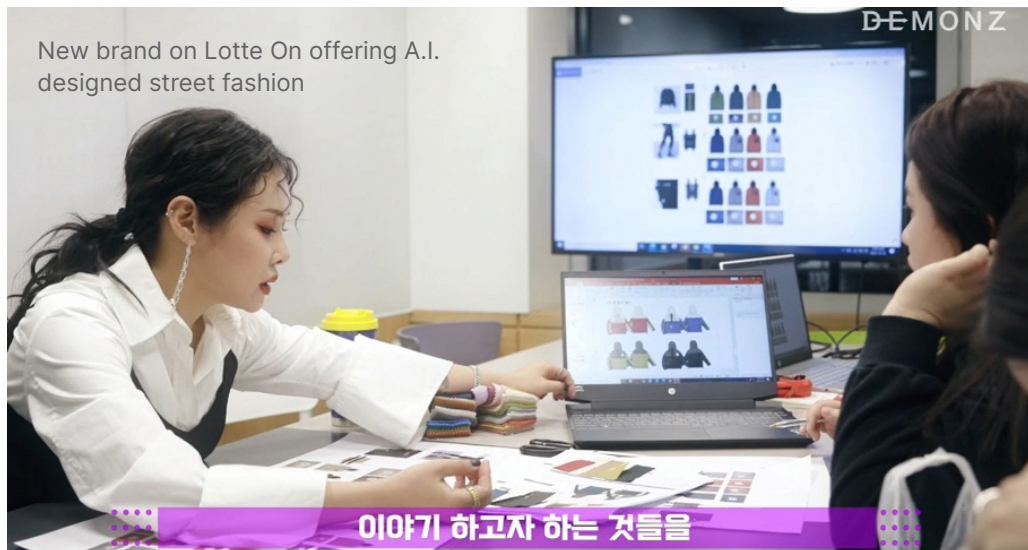
But Lotte On's efforts to embrace "open innovation" are not limited to working with start-ups invested by Lotte Accelerator. With executives like Choi who are focused on opportunities arising from the Fourth Industrial Revolution, perhaps it should come as no surprise that Lotte On announced a new fashion brand *deMonZ* on November 3, 2020, in collaboration with A.I. start-up Designovel, and with rapper Cheetah as the "project muse."¹⁸ This was an experiment in online transformation in the post-coronavirus era.

With executives like Choi who are focused on opportunities arising from the Fourth Industrial Revolution, perhaps it should come as no surprise that Lotte On announced a new fashion brand *deMonZ*... in collaboration with A.I. start-up Designovel, and with rapper Cheetah as the "project muse."

While "de" comes from design, the "M" and "Z" in the brand's name represent Millennials and Generation Z, referring to young people born from the early 1980s to mid-to-late 1990s, and from the mid-to-late 1990s to early 2010s respectively. According to Choi, Lotte On hopes the brand will turn "on" the inspiration for the "MZ" generation.

The team at Lotte On found a partner in Shin Ki-young, the CEO of Designovel and a Millennial himself, who founded a series of failed start-ups before launching the data-based fashion technology company.¹⁹ In the collaboration with Lotte On, Designovel designed sweatshirts, hoodies, and jackets²⁰ by analyzing the global trends of street fashion with its A.I. engine, picking up products that sell

well, inputting designs, and creating clothes for sale exclusively on Lotte On's digital platform. According to media reports, the A.I. technology allows for up to 10,000 designs to be completed in just one second and is a better predictor of the popularity of the sales items than a merchandiser with 10 years of experience.²¹



Digital Marketing Campaign

While traditional marketing relies on advertisements at physical retail outlets like department stores, social media channels such as blogs, YouTube, and Instagram have become more important with the shift toward online shopping since

the onset of COVID-19. To that end, rapper Cheetah was invited to be the brand ambassador for deMonZ, and Lotte On created a series of videos that identified three insight keywords for the entire fashion A.I. project.

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The first insight keyword is “contain” (담다) and refers to containing A.I. In the first video, Cheetah recalls her interest in fashion from a young age, and her experiences of not being able to find what she wanted when she had an interest in a certain type of clothing.²² When an engine “containing” A.I. is able to come up with new products based on the photos that she provides, she reflects that technology has truly become very advanced, which is, in her view, a positive development.²³

The second insight keyword is “protect” (지키다) and refers to protecting the environment. Instead of manufacturing clothes that might not be sold, deMonZ only produces products for consumers who have purchased it. Indeed, in the second video, Cheetah says that she wants to “protect all the people who are precious to me, the earth that I live in, as well as the dogs and cats,” and that the eco-friendly element of the project was an important factor in convincing her to be its “muse.”²⁴

The third insight keyword is “change” (바꾸다) and refers to new ways of doing things. In Cheetah’s words, “It is time to move and change. Not changing to match the changing world but changing myself on my own initiative.”²⁵ To be sure, as a final keyword, “change” seems to be a fitting theme. Choi and the Future Strategic Planning Team at Lotte Shopping emphasize that it is time to move beyond price competition to build a new eco-system for e-commerce –

an eco-system that leverages A.I. platforms and other solutions in information technology. This is particularly true with the sustained shift toward digital consumption during the pandemic, and the team seems intent on meeting this challenge, starting with online fashion.

Future Outlook

Having said that, fashion is not the only area that Lotte On is focused on. In fact, Choi's current focus is on something quite different. "COVID-19 has led to a surge in our fresh food and beverage retail business, which grew from 20 percent of sales last year to just under 30 percent this year. In fact, the online grocery market is estimated to grow almost 40 percent year-on-year in 2020," Choi said. "But online sales penetration in the food category is still under 25 percent, even after COVID-19. This compares to the average penetration of 37 percent for online retail sales in general in South Korea, which is also among the highest in the world. The fresh food category thus offers exceptionally high growth potential," she continued.

Indeed, the "untact economy" is a popular term in South Korea, where the word "untact" comes from a combination of the prefix "un" with the word "contact." The concept is that of a contact-free economy. As consumers prefer to eat at home and minimize their trips to the market in light of the virus situation, Lotte On appears keen to leverage on its existing supply chains and delivery services to offer "untact" solutions.

According to Choi, Lotte On ran a pilot test for the delivery of groceries within two hours and will expand this service, where products are sent through an automated



Lotte Auto Fresh Center is an automated logistics center equipped with 19 robots

rail to the packing zone in stores before being picked up and delivered to the customer. Lotte On will also utilize its fully automated warehouse located in Gimpo and try to expand online grocery services for overnight delivery to rural areas.

In addition, Lotte's Auto Fresh Center, which opened in Gyeonggi Prefecture in March 2019, is equipped with 19 robots that can pick up 3,000 items of products stored at room temperature and place them into 7,200 designated baskets, which are then moved to a conveyor belt line for the addition of frozen food and fresh food.²⁶ With less than seven minutes needed from order to packing, the automated logistics center is expected to play a bigger role in the post-coronavirus era.²⁷

And while fresh food and grocery may be the top priority for now, Choi notes that Lotte On will continue to improve and optimize its various functions for different products and services.

Conclusion

To be fair, as much as Lotte On takes center stage for Lotte as the group seeks to rebound from the coronavirus crisis, the South Korean conglomerate is a corporate giant with many other businesses, affiliates, and employees in multiple sectors and industries globally.

For a glimpse into how Lotte's top executives might be thinking about the

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pandemic, it may be worthwhile to read “BC and AC,” or “Before Corona and After Corona,” a booklet published in May 2020 by the group's research institutes, Lotte Academy and Lotte Institute of Economy and Business Strategy.²⁸ Distributed to all C-suite executives at Lotte Group,²⁹ the booklet analyzes the pandemic from historical, economic, political, technological, and social angles, in addition to offering a public health perspective.³⁰

While Lotte On exemplifies the type of digital transformation taking place across many companies in various economies, the authors of the booklet opine that for South Korea this is an acceleration of pre-COVID-19 trends – rather than a “revolution” – given that the country already had one of the most sophisticated

technological infrastructures in the world.³¹

Indeed, South Korea could well be one of the countries that is more prepared for the “new normal” in the post-coronavirus era, in which there is what “BC and AC” calls the rapid strengthening of the “untact phenomenon.”³² The challenge for Lotte is whether it too can adapt, transform, and emerge as a “winner” from a crisis that is unlike any it has previously seen.

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Temasek (Singapore)

Tapping Investment Expertise
and Diverse Networks to Help
Fight the Virus



Temasek (Singapore)

Tapping Investment Expertise and Diverse Networks to Help Fight the Virus

By Winnie Peng, Pauline Yeung, and Theodore Chow

Temasek

Region

Singapore

Year of Founding

1974

Headquarters

Singapore

Type of Company

Global investment firm owned by the Singapore Government but managed according to commercial principles

Number of Employees

c.800

Net Portfolio Value in 2020 (SGD)

306 billion

Net Portfolio Value in 2020 (USD)

214 billion

Major Business

Investments

COVID-19 Initiatives in a Nutshell

Medical Initiatives to Prevent Virus Transmission and Enhance Treatment; Mental Health Support Programs to Help Build Community Resilience; Distribution of Free Hand Sanitizers and Reusable Masks to All Households in Singapore and Surrounding Regions (Batam, Indonesia, and Johor, Malaysia) to Aid in Prevention; Food Aid Programs for Vulnerable and Disadvantaged Groups; Donation of Personal Protective Equipment (PPE) to 35 Countries Worldwide; among others

The following case study is based on written correspondence with Temasek in August 2020, and interviews with Lim Boon Heng, Chairman of Temasek Holdings (Private) Ltd., on May 7, 2020, and with Fidah Alsagoff, Joint Head of the Enterprise Development Group and Head of Life Sciences at Temasek International, on October 27, 2020.

Introduction

On June 29, 2020, BioNTech, a German biotech company that specializes in patient-specific immunotherapies, announced a private investment of \$250 million by Temasek and other accredited investors.¹ Since BioNTech was developing a vaccine for COVID-19 at the time, this was described as a “vaccine bet” on Temasek’s part.² Around four months later, on November 9, Pfizer and BioNTech announced that their vaccine candidate was found to be more than 90 percent effective against COVID-19 in participants without prior evidence of SARS-CoV-2 infection.³ This was great news for investors, and it also offered a ray of hope to millions of people around the world.

Temasek’s investment in BioNTech is just one example of how the government-owned but private-sector-oriented company went full out as an investor and a steward to fight the coronavirus. In fact, its investment expertise and diverse networks allowed Temasek to play an active role in areas that were new to the company: ensuring supplies for diagnostic kits, supporting the development of local manufacturing capabilities for much-needed equipment, and supporting medical research on COVID-19. In the process, Temasek demonstrated its solidarity with its portfolio companies as well as its commitment to giving back to the local and international community.

As Lim Boon Heng, Chairman of Temasek, recalls, in mid-February, two of Temasek’s portfolio companies in Singapore saw sharp falls in sales and revenue and realized

that there would be hard times ahead. The top management knew that belt-tightening would be necessary for their businesses to survive and for jobs to be protected. So the C-suite, with the support of their boards, decided on voluntary wage cuts for themselves so that they would have the moral authority to introduce tough measures when needed.

What followed was a strong sign of Temasek's solidarity with its portfolio companies. On February 21, Temasek's senior management decided on voluntary wage cuts of up to 15 percent of their annual salaries. The most senior executives took the deepest cuts, while the less senior took lesser cuts. The rank and file did not have their wages cut.

The total salary forfeited was matched dollar for dollar by the company, and the funds were set aside for public health resilience initiatives. Temasek board directors also donated to this fund, and a total of S\$20 million (\$15 million) was raised.

Soon, government ministers in Singapore also took pay cuts, as did the management of several other leading companies in the city-state. In Lim's words, "Over the years, we have developed this understanding that when the country faces a crisis, leaders will set the example of belt-tightening."

Investment Expertise and Diverse Networks

Indeed, it was *together* with its portfolio companies and the broader community that Temasek faced the COVID-19 crisis. Temasek Holdings and its philanthropic arm Temasek Foundation engaged in a whole array of initiatives, ranging from the distribution of free hand sanitizers to all households in Singapore; to developing food aid programs for vulnerable and disadvantaged groups affected by the crisis; to providing test kits, surgical masks, and specialized oxygen-related treatment equipment to some 35 countries around the world.

But it is Temasek's medical initiatives that fully demonstrate its agility, resourcefulness, and innovation, and attest to its role as one of the most sophisticated government-owned investors in the world. As Fidah Alsagoff, a physician by training and the Head of Life Sciences, and Joint Head, Enterprise Development, at Temasek reflects, just as there was a global shortage of swabs, testing equipment, masks, and more, Temasek brought together academics, local enterprises, and regulators to "dig deep and find solutions" that would potentially prevent virus transmission and enhance diagnostics and treatment.

Notably, while Temasek is an investment giant with a S\$306 billion (\$214 billion) portfolio, the collaboration with small and medium enterprises (SMEs) was a recurring theme in its initiatives to alleviate the public health crisis. In cases of

What followed was a strong sign of Temasek's solidarity with its portfolio companies. On 21 February, Temasek's senior management decided on voluntary wage cuts of up to 15 percent of their annual salary. The most senior executives took the deepest cuts, while the less senior took lesser cuts. The rank and file did not have wage cuts.

SMEs willing to commit to production of medical supplies or equipment, Temasek was able to place substantive orders, giving them the capital and confidence to quickly scale up their production resources into the millions.

3D Printing of Swabs for COVID-19 Diagnostic Kits

To begin with, detection is crucial to contain the virus, and Temasek found itself working closely with its global and local medical partners to procure reliable diagnostic kits, find new ways of testing, and build up local development and production capabilities for essential supplies.



3D Printing of Swabs

One of the first things Temasek learned was that the full diagnostic kit for COVID-19 consists of the swab sticks, transport media, as well as the tubes to hold the media, with all of these being essential components. Rather than the test kits themselves, there was initially a global shortage of the swabs that enable the tests to be performed. One of the major suppliers of the nasopharyngeal or NP swab was a company based in Lombardy, Italy (itself an epicenter of the virus outbreak), and countries including Singapore were unable to access supplies speedily when Italy was in lockdown.

When it became clear that swabs would run out, Temasek turned to one of its portfolio companies based in San Diego, which was engaged in 3D printing of swabs with the University of California San Diego (UCSD). 3D printed swabs were around two times the price of regular swabs, but Temasek decided that this was a better option than running out of swabs.

Temasek brought together clinicians in hospitals for user feedback and developed the prototypes in engineering research labs with 3D printing capabilities. As Alsagoff remarked, “This took several months as we had to go through clinical trials – no shortcuts.”

In the next stage, Temasek worked with local SME production partners Eye2Eye and Structo, and local hospitals and Institutions of Higher Learning (IHLs) like the National University Health System (NUHS), the National Additive Manufacturing Innovation Cluster (NAMIC), and the National University of Singapore (NUS), to ramp up local manufacturing capabilities.

Leveraging its investment expertise, Temasek supported the SMEs by placing orders in advance, enabling them to balance their financial commitments. Temasek also brought together all the stakeholders, giving input and responding to feedback. At the time of writing, the 3D printed NP swabs are ready for deployment, with a production capacity of approximately two million swabs per month.

Production of Saline for COVID-19 Diagnostic Kits

But the story did not end there. After a person is swabbed, the swab stick needs to be placed into a tube to facilitate reliable transportation to the lab, and the tubes

After ensuring the supply of diagnostic kits, Temasek was also involved in ramping up testing...[It] led efforts to train the testers, plan the testing, and send teams out to test people. In Alsagoff's words, "it was considered necessary to implement ubiquitous testing, instantaneous isolation, and pervasive contact tracing."

have to contain a liquid mixture of reagents that allow the virus to remain viable. Not surprisingly, there was also a global shortage of tubes for this liquid reagent mix, which is called the Universal Transport Media (UTM). Again, Temasek had to go upstream to look at reagents that could be sourced and produced in Singapore.

When the scientific literature revealed Phosphate Buffered Saline to be an effective, locally manufacturable media that worked well for coronaviruses, Temasek partnered with the National University Health System (NUHS) and SMEs Racer Medical and Axil Scientific to produce the saline in Singapore to cater for local needs. This was not the first time Temasek had worked with these SMEs, having known them through Enterprise Singapore, the government statutory board that champions the needs of SMEs. As with the swabs, it was Temasek that helped kick start the manufacturing capabilities of these local SMEs.

After ensuring the supply of diagnostic kits, Temasek was also involved in ramping up testing, especially for asymptomatic carriers. In order to swab and test as many people as possible, Temasek led efforts to train the testers, plan the testing, and send teams out to test people. In Alsagoff's words, "It was considered necessary to implement ubiquitous testing, instantaneous isolation, and pervasive contact tracing."

Medical Research on Treatment of COVID-19

Aside from enabling testing and diagnosis, Temasek also recognized the importance of spearheading local research on treatment of COVID-19. To that end, Tychan, one of Temasek's portfolio companies, successfully gained approval from the Health Sciences Authority (HSA) to start clinical trials on a newly developed monoclonal antibody (mAb) that specifically targets the virus that causes COVID-19.

TyChan is a clinical stage biotechnology company that focuses on infectious diseases



As a clinical-stage biotechnology company, TyChan focuses on infectious diseases and monoclonal antibodies that began due to the Ebola outbreak. Alsagoff appeared heartened to see the company contributing to the global fight against COVID-19. “The founders are American and Singaporean, so they spend some time

in Singapore as part of the Singapore-MIT alliance,” he said. “They were confident that they had a solution to Ebola, and Temasek supported and funded them. Ebola died down, so it never went to Phase 2. They then focused on the Zika Virus and Yellow Fever outbreaks. For Yellow Fever, they worked very quickly and went from concept to Phase 1 trials in seven months, a process that usually takes 18 months. It took them four months to develop antibodies for the coronavirus.”

Temasek brought together clinicians in hospitals for user feedback and developed the prototypes in engineering research labs with 3D printing capabilities. As Alsagoff remarked, “this took several months as we had to go through clinical trials – no shortcuts.”

In addition, Temasek Foundation partnered with Temasek’s portfolio company Advanced MedTech (AMTH) to design and manufacture critical care ventilators in Singapore. As a medical device company, AMTH is currently getting approval from HSA for its Alpha range of ventilators, which allows for remote management and monitoring. This

would be the first ventilator to offer such capabilities and is especially relevant for pandemics and infectious diseases. The manufacturing facility has been set up at AMTH’s Technology Center in Tuas, which is a planning area in the West region of Singapore. When production is fully ramped up, 200 ventilators can be produced monthly, with the ability to scale up depending on market needs.

Advanced MedTech designs and manufactures critical care ventilators in Singapore



Project MyMentalHealth

Beyond physical health, Temasek Foundation also sought to raise awareness of mental health issues, including the need for community resilience, and the importance of watching for signs of stress and mental health pressures. As part of its initiatives related to the pandemic, the Foundation began a public conversation about the mental health impact of isolation, stress, and the blurred lines caused by working from home for prolonged periods.

Pooling key resources such as mental health hotlines and support groups, and partnering with the Agency for Integrated Care, the Foundation sought to provide extra mental wellness support for those who may be struggling during the pandemic.

A MyMentalHealth web portal was also set up with specially curated articles from mental health professionals to encourage mindfulness, improve mental well-being, and enable people to access mental health support via a directory of services, online forums, and hotlines. The most accessed page contained information on anxiety and depression, and the second-most accessed page was on support groups and where to get help.

Indeed, with its wide-ranging initiatives that were designed to fight the virus, including many that went beyond the field of medicine and life sciences, Temasek demonstrated its access to information and resources that was useful in its dialogues with the Singapore government. With its expertise and networks, Temasek was able to back up suggestions for government initiatives with pilot studies and data, dealing with strategic questions such as how the economy can be reopened safely. During the process, Temasek hoped to be a trusted partner for the Singapore government.

Crisis Management at Temasek

To be sure, Temasek's response to COVID-19 was informed by its previous experiences in crisis management; throughout the years, it has weathered the SARS, H1N1 Bird Flu, MERS, and the Zika virus, among others. It was,

The world is shifting toward artificial intelligence and machine learning...technological enablers are...transforming health care, diagnostics, therapeutics and standards of care. The investment opportunities in life sciences will include telemedicine and the internet of medical things, which will open new areas of potential growth.

therefore, relatively easy for Temasek to implement visitor-management systems, thermal scanning, and contact tracing when the coronavirus broke out in January 2020, and staff were also relatively experienced with crisis management through regular exercises.

In fact, Temasek had established a crisis management team more than ten years ago as a standing committee with representatives from various departments, including legal, communications, human resources, finance, and operations. In "peace time," the crisis management team has regular meetings twice a year to go through issues like security screening, cybersecurity breaches, and fire drills, but there is also a small, dedicated two-person team that works full-time to support business continuity planning.

For COVID-19, Temasek activated a team of 20-30 people that met every day at the height of the pandemic and shared its learnings with its portfolio companies along the way. Effective crisis management was no doubt an enabling factor for Temasek's innovative and impactful initiatives for the wider community.

Future Outlook

Looking ahead, the main focus of Temasek is investing and creating value through the companies in which it invests. While China overtook Singapore in 2020 as Temasek's largest single country of exposure by underlying assets, the company invests globally, guided by four themes⁴ and six trends.⁵ It does not have country allocation targets, but as its portfolio is substantially marked to market values of its holdings, exposure will vary along with country market performance.

In relation to investments from a life sciences perspective, Alsagoff notes that there are, in general, challenges associated with aging, mental health, dementia, and more. The world is shifting toward artificial intelligence and machine learning, which can be integrated into healthcare models for the future. And while there may, in some instances, be inertia from doctors and the existing healthcare framework, technological enablers are coming to the forefront, transforming health care, diagnostics, therapeutics and standards of care. The investment opportunities in life sciences will include telemedicine and the internet of medical things, which will open new areas of potential growth.

From a broader angle, the digital landscape is changing lives, and COVID-19 has accelerated the transition into the digital realm. For example, given the persistence and complexity of cyberattacks, there is a need to constantly enhance

security for confidential information. As another example, there is a need for distributed ledgers and blockchains to do transactions safely and to safeguard sensitive information. In the future, there will be an emphasis on digital literacy in the workforce, and this will determine which companies can emerge and evolve, as well as which companies need protecting or nurturing.

Finally, COVID-19 has also resulted in the fragmentation of the global supply chain, and more governments and cross-border businesses will seek to ensure independent critical functionality, particularly in smaller countries like Singapore. Business costs will go up, but the cost of not having access to critical capabilities and essential products and services can be catastrophic. So, there will also be a need for more international cooperation, partnership, and education. A global investment firm like Temasek seems well placed to support initiatives on a global scale.

Conclusion

In many ways, Temasek is a unique organization, wholly owned by the Singapore Government, yet managed according to commercial principles, and deriving its funds from investment returns. In 2020, Temasek showed that it could, among its many endeavors, leverage its investment expertise and diverse networks to bring rapid solutions to the public health crisis. In these highly unusual times, Temasek's response to COVID-19 no doubt prompts a rethink of the traditional bounds of philanthropy and social responsibility.

Endnotes

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- 5 Longer lifespans (healthcare), rising affluence, sustainable living, smarter systems, more connected world, sharing economy.

Yoma Group (Myanmar)

Accelerating Financial Inclusion in a Time of Social Distancing



Yoma Group (Myanmar)

Accelerating Financial Inclusion in a Time of Social Distancing

By Winnie Peng, Pauline Yeung, Chun Hei Hung, and Theodore Chow

Yoma Group

Year of Founding

1983

Headquarters

Yangon

Type of Company

Conglomerate

Number of Employees

11,000

Total Revenues in 2019 (K) *

Kyat 427 billion[†]

Total Revenues in 2019 (USD) *

\$321 million

Major Businesses

Real Estate, Automotive & Heavy Equipment, F&B, Financial Services, Healthcare, Hotel and Tourism, Logistics, Investments

COVID-19 Initiatives in a Nutshell

Acquisition of Controlling Stake in Mobile Financial Services Provider Wave Money, A Digital Platform for the Government, Humanitarian Organizations and Corporates to Deliver Aid to Individuals and Communities Hard Hit by the Pandemic

* FY 2019, from the period April 2018 to March 2019

[†] As per the exchange rate of Central Bank Myanmar (1 USD = 1330 MMK)

The following case study is based on written correspondence with Yoma Group in December 2020, an interview with Melvyn Pun, CEO and Executive Director of Yoma Strategic Holdings Ltd., on December 18, and an interview with Brad Jones, CEO of Wave Money, on December 17.

Introduction

“For us, it is really about having a strong engagement with the local community and ensuring that no matter what we do, we can build a better Myanmar for its people. It is not just about building better infrastructure and better buildings, but also about how you help the people,” said Melvyn Pun, CEO and Executive Director of Yoma Strategic Holdings Ltd. “And rather than doing this as a separate corporate social responsibility program, we want to imbed this into everything that we do and contribute to solving economic inequality.”

A Cambridge graduate who spent 12 years at Goldman Sachs before joining the family business, Pun exuded a quiet confidence when articulating the vision of Yoma Group,¹ which was founded by his father, Serge Pun. As Pun explained, after weighing the good and bad things that resulted from the pandemic, and considering Yoma’s role in enabling and accelerating financial inclusion in Myanmar, COVID-19 was in many ways a “positive defining moment” for Yoma as one of the leading conglomerates in the country.

While Yoma is involved in industries ranging from real estate, automotive and heavy equipment, food and beverage, to investments, it was its financial services business, and specifically its mobile financial services arm, Wave Money, that was instrumental in promoting financial inclusion in Myanmar.

What unfolded in 2020 was a truly remarkable story that has touched the lives of farmers, garment workers, street vendors, and small business owners across the country,

at a time when there was a pressing need to reduce travel, avoid in-person gatherings, and come up with safe avenues for donation and disbursement of relief and emergency funds.

Wave Money was launched in 2016 as the first licensed mobile financial services operator in Myanmar, as a joint venture between Telenor Group, the Norwegian telecommunications giant, and Yoma.

As the fintech sector in Myanmar continued to develop, Yoma Strategic announced a partnership with Ant Group in May 2020 through which the Chinese fintech firm would invest \$73.5 million in Wave Money to become a substantial minority shareholder.² Furthermore, in June 2020, Yoma Strategic announced a \$76.5 million deal to buy a controlling stake in Wave Money by acquiring Telenor Group's 34.2 percent stake.³

While Yoma Strategic's acquisition of Wave Money had been in the works for a long time and would have happened with or without COVID-19, the pandemic underscored the importance of Wave Money and fintech in general, not only for Yoma but for Myanmar as a country. Today, Wave Money is the leading mobile financial services provider in Myanmar with over 68,000 Wave Shops covering 91 percent of the country and 90 percent of rural areas, including very remote locations.

Wave Money saw \$8.7 billion in money transfer volume in 2020. The number of Monthly Active Users on WavePay, Wave Money's mobile wallet application, has exceeded 1.5 million and is expected to potentially reach over 11.2 million by 2024.

Mobile Money in Myanmar

"As people started trying Wave Money and found that it worked, it took off like wildfire," noted Brad Jones, CEO of Wave Money who spent 10 years in the Australian military before becoming a banker and business executive. "When I first got introduced to the concept of financial inclusion around 13 to 14 years ago, I realized that you could make significant social impact and leave a developing country far better off than it was before. I first started seeing how business could make huge social impact through the use of technology when I was working in Cambodia in the late 2000s."

According to Jones' estimates, although less than 1 percent of consumers in Myanmar would have said they transferred their money through mobile payments back in 2016, over 90 percent would say they did it through mobile payments in 2020.

While the development of garment factories and other industries in one of Asia's fastest-growing economies has led to rural-urban migration and a demand for remittance services, the majority of the population of Myanmar does not have access to banking. It was very difficult to move money from one part of Myanmar to another, and people would move cash using taxis, buses, informal middlemen or even by travelling themselves.

This was a particularly big problem in emergency situations, such as when grandma needs to go to the hospital and pay her medical fees upfront. Without a bank account, and prior to the introduction of mobile money, it would be difficult for relatives living elsewhere to make the necessary payments. In addition, when workers had no way of sending their cash back home in an efficient manner, many of them chose to spend the money, resulting in significant erosion in incomes and social problems such as excessive drinking and gambling.

Given the low level of digital literacy and the high percentage of the population in Myanmar that is unbanked, Wave Money launched an over-the-counter money transfer service in which customers could rely on agents instead of having to



Wave Money agents act as human ATMs

navigate a mobile app. Agents tend to be small business owners who seek extra income and act as human ATMs: Someone sending money can give it to an agent, who converts it into a secret code and transaction ID, which can then be forwarded to the intended recipient. It is also possible to make deposits and withdrawals through agents.

As Jones said, “The agents made a fantastic team on the distribution side, and we were able to build our network very quickly. The larger the network, the larger the transaction volume, because you’re creating network points that people can use to move money around.”

With this in place, Wave Money played a critical role in accelerating financial inclusion in Myanmar during the pandemic, not only through enabling

digital payments among family and friends but also by facilitating e-commerce and government disbursements and empowering their predominantly female agents to manage their finances through loans and extra income.

An Essential Service for E-commerce during the Pandemic

In e-commerce, Wave Money proved to be an essential service for both the formal and informal sectors as COVID-19 hit and transportation links were shut down across Myanmar.

The burgeoning e-commerce sector in Myanmar includes formal channels like Alibaba or foodpanda, as well as informal channels that are driven by Facebook. It is estimated that there are around 27 million Facebook users in the country,

out of 40 million adults. Vendors might set up a page for their shops or even sell products directly from their personal Facebook accounts.

For the formal sector, Wave Money has a “Pay with WavePay” Application Programming Interface that allows customers to pay on e-commerce websites using Wave Money, just like how they would use Visa or PayPal. For the informal sector, Wave Money enables peer-to-peer transactions: a vendor would post their mobile phone number, which customers would use for payment.

As Jones reflected on the pandemic in December, he said, “When I’m in Yangon these days, I pay for almost everything with WavePay, including my groceries.

“For us, it is really about having a strong engagement with the local community and ensuring that no matter what we do, we can build a better Myanmar for its people. It is not just about building better infrastructure and better buildings, but also about how you help the people,” said Melvyn Pun.

We have around 360 merchants, online and offline billers, inside the app, so you can pay everything from your Internet bills to e-commerce payments. Currently the only thing I can’t pay for with WavePay in Yangon is my electricity bill, which I pay by cash to my condo provider, but we are trying to digitize that as well. Residents of Mandalay can already pay their electricity bills through WavePay.”

Jones continued, “A year ago, if I had contacted an online vendor through Facebook, I probably wouldn’t have assumed that I’d be able to pay through WavePay. Now, my first question is: ‘Can I pay by WavePay?’ And the answer is almost always ‘yes.’ That, to me, is the most significant change to e-commerce during the time of COVID-19.”

A Trusted Partner of the Myanmar Government during COVID-19

Importantly, Wave Money also served as a trusted partner of the Myanmar government in the fight against the virus. When the government released its COVID-19 Economic Relief Plan, mobile financial services were documented as an essential service. The government also voiced its intention to push as many government services onto digital platforms like Wave Money, which was specifically named as a provider. This was the first time that the government endorsed the expansion of mobile financial services as an objective.

To facilitate execution, Wave Money started working with various government departments and announced before other providers that, for the period of COVID-19, it would make any government disbursements free of charge, and would also cover the cost of the agent’s commission, which is paid when a customer goes to withdraw money.

Currently, Wave Money is working on 37 different projects with the government, including a project through which over 230,000 payments were made to pregnant women across nine regions over the course of a month. The company is also working with the Myanmar Economic Bank which disburses payments to

pensioners and civil servants who used to have to wait in line for five to six hours at their local branches in order to receive their pensions; this process has been significantly expedited by digital payments.

While using cash for disbursements is susceptible to leakages in any developing economy, especially where records are paper-based and the ID system is not very good, the advantage of Wave Money is that it is transparent and minimizes corruption.

Wave Money processes three sets of information for any given transfer. First, Wave Money receives the mobile phone number of the recipient, which can be cross checked against telecoms data to verify an individual's identity and records the name of the owner.

Second, Wave Money tells the government when a payment has been issued to an individual and the amount transferred. Finally, Wave Money records the time and date of a disbursement and how much money remains to be cashed out for a given recipient. For the government, as long as the name of the owner of a phone number matches the name of the person who should be receiving the money, there is no opportunity for leakage in the process.

Empowering Women as Agents during the Crisis

Furthermore, Wave Money has also empowered women during the crisis through its network of female agents. According to field data collected by the company, around 80 percent of Wave Shops are run by women, even though only 40 percent of agent registrations are made by women. It is often the case that the husband registers while the wife runs the shop.



Both Pun and Jones commented that they saw the promotion of financial inclusion among female agents as an extremely meaningful endeavor. First, Wave Money provided an additional source of income for agents during the COVID-19

Importantly, Wave Money also served as a trusted partner of the Myanmar government in the fight against the virus. When the government released its COVID-19 Economic Relief Plan, mobile financial services were documented as an essential service.

crisis. Because mobile financial services providers were classed as an essential service by the Myanmar government, agents did not have to shut down their shops. In many cases, an agent would have to shut down other businesses such as mobile phone retail but could keep transferring money for their customers. In 2020, Wave Money paid \$65 million in commissions to agents across the country.

Second, Yoma Bank is able to offer unsecured loans to Wave Money agents by compiling a simple credit score using data on their earnings. About a third of Wave Money's agents have taken loans, which can be spent on improving their businesses and purchasing commodities. Although some agents have bank accounts, Wave Money did not find a single agent who previously had a loan with a bank. It is likely that banks did not consider them loan-worthy because they essentially ran their businesses through cash and their own logbooks. In total, 50,000 loans have been distributed, amounting to more than \$50 million.

In fact, the commitment to women's empowerment is something that can be found in the wider Yoma Group. While Pun acknowledged that almost all business leaders at the CEO level are men, he said that this is something he wants to address and see whether unconscious bias has happened. Yoma is managing its next-generation leaders and has identified around 30 future leaders every year for a Leading The Yoma Way program. A majority of these leaders are women, and the program will provide leadership training, a peer-group support system, a mentorship program, as well as one-on-one executive coaching.

Future Outlook

In terms of the future, Wave Money will continue to invest in its technology systems and promote digital education, since cybersecurity concerns and the lack of digital literacy continue to be risks and barriers to business growth. The company has also submitted an application to the central bank with hopes to operate international remittances by 2021, focusing on a few key markets such as Thailand, Singapore, Malaysia, South Korea, and the Middle East, where the Myanmar diaspora is concentrated. Wave Money is also excited about the partnership with Ant Financial and expects final regulatory approval shortly.

Having said that, to Pun, with international partnerships there is a need to be sensitive to an increasingly complex geopolitical environment. "I have a lot of Japanese partners in our businesses and also a lot of Western partners like Norwegians, Americans, and of course Ant is Chinese." Pun opined that Myanmar is trying to be friends with everyone and benefit from the dynamics of everyone,

citing the example of the Japanese and the Chinese competing over infrastructure projects and giving very cheap loans to build infrastructure in Myanmar.

At year-end in 2020, Pun conducted performance reviews for the CEOs of all the different entities in Yoma. The first thing that he asked them was: How has your action and your business impacted Yoma's vision to "build a better Myanmar for its people?" This key performance criteria reflects Pun's emphasis on social value.

"We are a Myanmar-Chinese family," he continued. "I grew up in Hong Kong, and my father went through the Cultural Revolution, but at the same time we are a Myanmar company. We have to keep reminding people that our partners are very diverse. We have a wide range of relationships, and will do what makes the most sense for us and for Myanmar in terms of expertise and culture."

According to Pun, while Yoma is very much engaged with Western companies coming from an international governance perspective, there is also a lot of Chinese money coming to Myanmar. Pun is thus careful and sensitive about partnering with a breadth of different companies and getting the right Chinese companies to support Yoma.

Conclusion

At year-end in 2020, Pun conducted performance reviews for the CEOs of all the different entities in Yoma. The first thing that he asked them was: How has your action and your business impacted Yoma's vision to "build a better Myanmar for its people?" This key performance criteria reflects Pun's emphasis on social value. He candidly admitted that Yoma has also made mistakes, where he would look back at a project and realize that "it made money, but there was no real social value for the country."



The Yoma Micro Power project is about building off-grid solar sites and renewable solar power

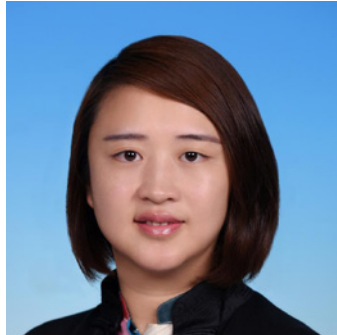
In fact, Yoma, on the contrary, has entered into a few businesses with great social impact but that also carry a larger financial risk or a lower financial return than is normally expected. As an example, Yoma is building off-grid solar sites and renewable solar power for areas that would probably not get linked to the national power grid anytime soon. The company is doing this because renewable energy makes a lot of sense, and the people would not be able to get power otherwise. So the project ticks a lot of boxes, but the financial return is uncertain because no one has successfully completed a project like this.

In his final thoughts, Pun spoke on the concept of “stakeholder capitalism,” noting that the disparity between rich and poor and its impact on the social-political environment is an issue that will dominate discussions in the next decade or so. Pun said, “In Myanmar, while there are those who are wealthier and those who are poorer, it is still an environment where the poor have the ability to rise up. I think a parallel can be drawn between Myanmar today and Hong Kong in the 1960s and 1970s, because we have people that are poor but there still is an environment where the poor have the opportunity to climb the social ladder.” Indeed, with a socially conscious leader at its helm, Yoma is set to make a positive difference for the people of Myanmar in a post-pandemic world, as it has already done for so many by accelerating financial inclusion during the trying times of COVID-19.

Endnotes

- 1 Serge Pun set up Serge Pun & Associates Group in Hong Kong in 1983. In 1992, he set up First Myanmar Investment (FMI), which became the first company to be listed on the Yangon Stock Exchange in 2016. In 2006, Yoma Strategic Holdings was established and listed on the Singapore Stock Exchange. In 2018, Memories Group was set up to bring together a portfolio of travel and tourism businesses and was listed on the Catalist Board of the Singapore exchange. FMI, Yoma Strategic and Memories Group, together with their respective subsidiaries, are collectively referred to as the Yoma Group.
- 2 “Wave Money and Ant Financial Services Group forms strategic partnership to promote financial inclusion for the unbanked in Myanmar.” Press release, May 2020. https://www.yomastrategic.com/attachment/2020051807032228978584_en.pdf
- 3 “Proposed Acquisition of Controlling Interest in Mobile Money Myanmar Limited.” https://www.yomastrategic.com/attachment/202006241525061734509902_en.pdf

Author Biographies



Winnie Peng

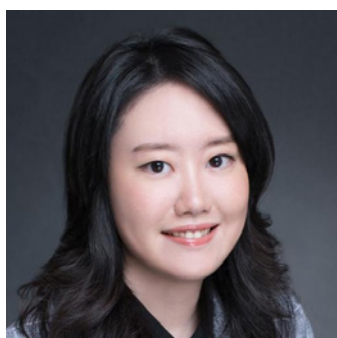
Professor Winnie Qian Peng is Director of Tanoto Center for Asian Family Business and Entrepreneurship Studies, Director of Thompson Center for Business Case Studies at The Hong Kong University of Science and Technology (HKUST). She is also Board Member of International Family Enterprise Research Academy (IFERA, the largest membership association of family business scholars in the world),

Director of Education for Hong Kong Family Office Association, and Founding Committee Member of the Case Center of Association of Asia-Pacific Business Schools. Her research and teaching interests include family business, family office, family philanthropy, entrepreneurship, private equity and venture capital, etc.

Professor Peng's research has been published in top academic journals as well as local and international media. She also writes case studies on companies such as Lee Kum Kee, Wanda Group, Sun Hing Group, Chevalier Group, Yung Kee, Pacific Coffee, Crown Worldwide, Harilela Enterprises, Jebsen Group, Cathay Capital, GE Equity Asia, Cathay Pacific Catering Services, Hong Kong International Terminals, Gree Electric, etc.

Professor Peng teaches MBA, EMBA, and executive programs on family businesses and entrepreneurship at HKUST. She is also an instructor for PEVC course of the Hong Kong Venture Capital Association. She has been invited to teach family business for family business owners and their senior executives in Mainland China and around the world. She is a frequent speaker at local and international conferences.

Professor Peng received her Bachelor's degree in Accounting from Tsinghua University, and her PhD degree in Finance from HKUST. She is also a graduate of Harvard Business School Executive Education program "Private Equity and Venture Capital".



Pauline Yeung

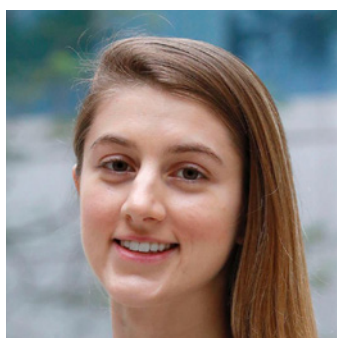
Pauline Yeung is the Program Director at the Asia Business Council, where she promotes dialogue and understanding on economic developments in the diverse and dynamic region. She holds an A.B. in Public and International Affairs from Princeton University and an M.A. in Arts and Cultural Enterprise from Central Saint Martins, University of the Arts London. Fluent in five languages and learning her

sixth, she speaks Korean and Japanese and was the Master of Ceremony for a live event in Mandarin featuring the first Chinese astronaut in space.

From 2017 to 2020, Pauline was a political appointee in the Government of the Hong Kong Special Administrative Region, specializing in financial policy. During her tenure, she was instrumental in facilitating the development of digital and sustainable finance within and beyond the city. She led efforts to consult lawmakers, financiers, and academics on government initiatives and engage local and overseas experts on comparative studies of financial law and regulation. She also promoted the opportunities in the Greater Bay Area and along the Belt and Road at the Asian Financial Forum and the Swiss International Finance Forum.

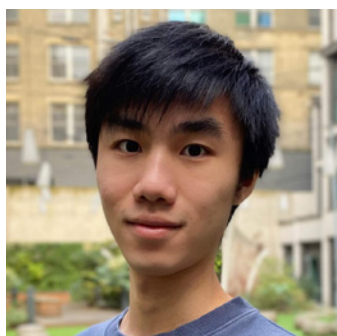
As a Hang Seng Scholar and Sir Edward Youde Scholar, Pauline has a longstanding interest in education. She has served on the judging panels for the Sing Tao Interschool Debating Competition, the South China Morning Post Student of the Year Awards, and the Sachs Global Fellowship at Princeton University. She is also passionate about mentoring young people and has shared her experiences at schools, universities, and next generation programs at Tencent and UBS.

In relation to the arts, Pauline's interest in culture and creativity encompasses the classical and the contemporary, the Eastern and the Western. She has worked on exhibitions by French artist JR and Japanese artist Takashi Murakami and interviewed more than 100 creatives globally as the head of arts innovation at a top-ranked think tank in Asia. Pauline began her career at Morgan Stanley and is based in her home city Hong Kong.



Colleen Howe

Colleen Howe is Program Associate at the Asia Business Council, where she supports research, communications, and events. Previously, she was a reporter with the energy and commodities news agency Argus Media in Singapore and Washington D.C. Colleen holds a B.A. in history from Pomona College, an M.A. in energy, resources, and environment from the Johns Hopkins School of Advanced International Studies, and a graduate certificate in Chinese studies from Nanjing University. A recent transplant to Hong Kong, she was selected as a member of the Class of 2021 for the American Chamber of Commerce Future Leaders program. She speaks Mandarin, German, and Spanish, and her translations of Chinese scholarly works have appeared in journals and other publications. A Phoenix, Arizona native, she enjoys hiking and competitive ballroom dance.



Chun Hei Hung

Chun Hei Hung is a research intern at the Asia Business Council and a final year Philosophy, Politics and Economics (PPE) student at Balliol College at the University of Oxford. He has worked as a risk advisory intern at Deloitte Hong Kong and will join McKinsey as a business analyst in the London office after graduating in 2021. Chun Hei's academic interests include microeconomics, probability & statistics, as well as 18th and 19th century history. In the future, Chun Hei would like to work in policy research, economic consulting, or academia. In his spare time, he enjoys video gaming and trivia (as well as video game trivia).



Theodore Chow

Theodore Chow is a research intern at the Asia Business Council and a freshman at Columbia University in the City of New York. Theodore is an editor for the Columbia Economics Review and his academic interests are in economics and psychology. He is also a volunteer at Columbia's Youth for Debate program, having distinguished himself as an avid debater. Some of his achievements in debating include: captaining the Champion team of the 33rd Sing Tao Interschool Debating Competition, twice representing Hong Kong to compete at the Oxford Schools Debating Competition, and leading his school team to place first in the high school category in the Thailand Debate Open.

