



Market Insight Report Reprint

Indonesia's digital transformation, Part 2: Sector transformation and digital ecosystem

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The Indonesian government has been an enabler of and a partner in several national digital programs. In part two, we will examine the extent of sectoral transformation and its implications for the rapidly evolving competitive landscape.

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Introduction

Although nationwide digital transformation is just the beginning, Indonesian businesses are more receptive to digital technologies and platforms. With the continued efforts made by regulators to clarify issues related to data localization requirements, such as Government Regulation No. 71 of 2019 (GR 71) and MSME-specific programs like the National Digital Literacy Program, there is a growing sentiment toward creating a digitally enabled workforce to improve competitiveness. The limited mobility caused by the COVID-19 pandemic has created a sense of urgency for businesses, large and small, to establish their digital footprint if they haven't already done so. Generally speaking, the increasing use of the internet, social media, mobile apps and, to some extent, digital platforms makes it possible for the nation to cross the digital chasm. For example, Indonesian startup TaniHub's e-commerce platform is now home to more than 45,000 farmers and 350,000 buyers (businesses and consumers). In addition to streamlining distribution channels with TaniSupply, it also provides micro-financing through its fintech platform, called TaniFund. As the level of digital awareness continues to rise in the country, so does the complexity of the vendor ecosystem.

THE TAKE

The digital ecosystem in Indonesia continues to expand, with serious cloud contenders developing ambitious growth strategies. On the demand side, we have already witnessed an early sign of business transformation as digital startups and traditional businesses look for new ways to reinvent their business for long-term sustainability. Given that various digital initiatives in Indonesia remain highly concentrated in Java, there is plenty of room for growth and development. This will prompt market participants – technology vendors, MSPs and IT consultants alike – to tighten up their in-country strategy. While the level of digital awareness and the availability of talent are perceived as a formula for successful business transformation, the dynamism of a digital ecosystem is the source of change in a country that has a relatively young population.

Digital adoption

Propelled by the growing availability of digital services and user-friendly digital platforms, demand for cloud-based services has been on the rise in recent years. Despite variations in the extent and pace of transformation among local businesses, to offset the impact of disruptive forces, traditional businesses, including Asian conglomerates, have jumped on the digital movement. Some have gone beyond experimenting with new ideas and technologies, actively seeking new growth opportunities by investing in digital-native startups. Salim Group is one such example, investing in Youtap to bring its digital payment services to an extensive network of businesses, consumers and distributors. In comparison, small and medium-sized enterprises (SMEs) tend to prioritize business essentials over digital innovation due to limited resources, particularly micro businesses, which accounted for more than 98% of the total number of SMEs in the country.

Paradoxically, the unprecedented challenges caused by the COVID-19 pandemic have somewhat reversed the trend. In the face of new business realities, small businesses have little choice but to scale up their digital games if they have not done so. According to a survey conducted by the World Bank in June 2020, the use of the Internet, social media, specialized applications or digital platforms was the main adjustment for almost half of the Indonesian businesses that remained open or reopened after a temporary break. Not surprisingly, large companies had the highest adoption rate of digital technologies; however, MSMEs were not far behind, small and medium businesses in particular. The same survey conducted four months later revealed that micro businesses were rapidly catching up with respect to digital adoption.

In the context of cloud implementation, anecdotal conversations with market players suggest that medium-sized companies and tech-savvy small firms appear to have a reasonable understanding of the benefits associated with various digital business models and their impact on IT operations. Many of these companies tend to have stringent requirements in terms of agility, resiliency and security. That said, their service engagement model is somewhat different – there is no need for lengthy proofs of concept to address their business pain points. They typically start with a small task and then expand the project scope within a period of three months. The likelihood of creating upsell and cross-selling opportunities for adjacent services could be within six to nine months. Some of the digital enterprises in Indonesia include FinAccel, Halodoc and Mambu.

Sector transformation

Providing an enriched customer experience is becoming a differentiating point, thus local businesses are turning to new technologies for product innovation. Technologies such as data analytics, robotics, cloud computing and automation are gaining momentum and becoming more adaptable. As far as vertical segments are concerned, the power of digital innovation continues to make its way into the financial services and retail segments.

While Indonesia's fintech ecosystem is relatively small compared with Singapore's, the fintech boom has created a perfect storm in the financial services and insurance (FSI) segment. Instead of launching competing offerings, traditional banks seem to be cooperating through financial injections. KoinWorks is a case in point. The P2P lending startup raised \$16.5m in a series A round, led by Bank Mandiri's venture capital arm Mandiri Capital Indonesia, with participation from investment firm Convergence Ventures and local conglomerate Gunung Sewu. Likewise, some of Modalku's investors include Singapore-based DBS Bank and Indonesia's Bank Sinarmas.

Thanks to the enthusiastic development of digital payment platforms such as Ovo and GoPay in recent years, the e-commerce market in Indonesia has begun to pay off. For e-commerce activity, Indonesian businesses are more inclined to sell their products and services through social media and instant messaging apps, due to a high concentration of social media activity – about 84% of the country's Internet population are on social media. With roughly one-third of its population lacking access to formal financial services, nearly 60% of e-commerce transactions were carried out in cash, according to World Bank.

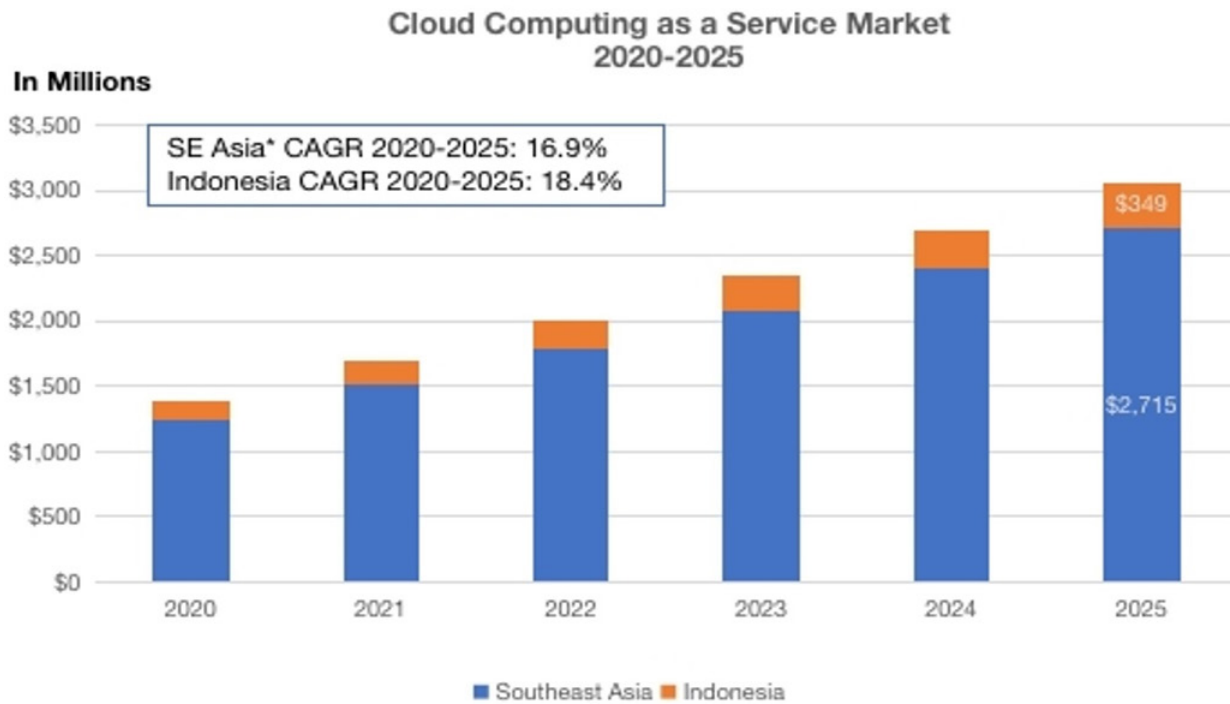
Despite lack of official data, it was no surprise when Gojek, Shopee, Tokopedia and Grab, among other digital players, reported a significant increase in transactions during the COVID-19 pandemic. The recent merger between Gojek and Tokopedia to form GoTo Group will likely energize the e-commerce marketplace. With that said, e-commerce activity is expected to be Java-centric, at least in the near term because the government continues to bridge the digital divide with new infrastructure projects and digital empowerment programs, particularly in rural areas and remote communities.

The innovative use of technology has given rise to subsegments such as edtech and healthtech over the last few years. While the competitive landscape for edtech and healthtech grew, with startups providing a variety of self-learning tools and telehealth platforms, it was only during the global health crisis that demand increased exponentially. Startups like Ruangguru, Zenius, Aalodokter and Halodoc have clearly caught the attention of investors. There has been increased collaboration between the government and the private sector as well. The Indonesian Ministry of Education, Culture, Research and Technology (MoECRT), in partnership with the Asian Development Bank (ADB) and Tanoto Foundation, has engaged an edtech firm and educational research organizations as consultants to design a teaching system using a high-touch high-tech (HTHT) approach. Meanwhile, Halodoc partnered with the Health Care and Social Security Agency (BPJS Kesehatan) to provide digital health services and information to residents of the archipelago. The existence of these tech startups creates a ripple effect, changing the way traditional businesses interact with their customers. Pertamina's integrated hospital system and PT Siloam Hospitals Group's MySiloam mobile app for patients are two examples of market-driven transformation in the healthcare sector. As promising as it may sound, the success of these sub-segments will depend on the availability and reliability of data connectivity and digital talent going forward.

The cloud market: an agent of the digital future

The total cloud-computing as-a-service market in Southeast Asia is composed of three service segments: IaaS, PaaS and infrastructure SaaS. At the country level, the cloud-computing-as-a-service market in Indonesia has experienced healthy growth over the past few years, thanks to continued government support, investor optimism and growing digital awareness among local businesses. We predict that the cloud revenues in Indonesia will account for about 12% of total cloud revenue in Southeast Asia by the end of this year. Cloud computing revenue in Indonesia is projected to maintain a healthy double-digit growth, with a CAGR of 18.4% throughout the forecast period (see figure below).

Cloud Computing as a Service Market Sizing: Southeast Asia and Indonesia, 2020-2025



*SE Asia: Singapore, Malaysia, Indonesia, Thailand, Philippines, and Vietnam

Source: 451 Research's Market Monitor: Cloud Computing as a Service Market Overview, July 2021

As traditional businesses, including Asian conglomerates, continue to replace their legacy IT infrastructures with cloud-based infrastructures, the country is likely to maintain its momentum in the next wave of growth. By service component, we believe that the bulk of IaaS cloud revenues is generated from compute as a service. In the wake of the COVID-19 pandemic, some companies have migrated their production workloads to the cloud for business continuity purposes, while others have ramped up their investment in automating back-end systems for unified management and monitoring. In the context of PaaS, the growing deployment of digital platforms using technologies such as AI/ ML, IoT and big data will have a bigger role to play in accelerating the future uptake of PaaS in Indonesia.

The evolving digital ecosystem

Overall, government-led digital programs have been instrumental in building an ecosystem of market participants for digital innovation. The influx of foreign investment in joint venture establishment, technology transfer and professional training has helped improve digital awareness and boost digital literacy. This is especially the case for local ICT providers and enterprises looking to 'cloudify' their offerings and/or internal operations, yet lacking the expertise required to do so.

The telecom incumbent Indosat Ooredoo is a case in point. In transitioning from telecom operator to digital services partner, the company has invested in building an ecosystem of digital enablers. It has already partnered with technology providers such as Fujitsu and IBM for IoT and cloud capabilities, respectively. In addition to leveraging datacenter facilities from its subsidiaries Lintasarta and Indosat Mega Media to enable private cloud deployment, the company jumped onto the hybrid cloud bandwagon by partnering with Alibaba Cloud in 2020. It is also invested in tech startups and innovative entrepreneurs through IdeaBox, an early-stage startup accelerator. Meanwhile, Telkom Indonesia, which is still majority-owned by the government, continues to add skills and expertise in new service segments such as managed IT, cloud computing and IoT through working with strategic partners including Fujitsu and SK Telecom for network transformation.

Local SIs and MSPs such as Multipolar Technologies, PT VADS Indonesia, Realta and WGS understand local business culture and market dynamics and are positioned to be a trusted partner amid a digital revolution. From seeking cooperative agreements and investing in startups to enabling service provisioning and management, they are an integral part of an expanding digital ecosystem in the country.

While Singapore is a destination of choice for global multinationals to establish their regional headquarters, regional and global IT providers are also looking for opportunities in Indonesia, using Singapore as a hub. Companies like Acclivis (acquired by CITIC Telecom), Accenture, Deloitte, CLPS, Cloud Comrade, DXC, IBM, Linkbynet (acquired by Accenture in July) and Rackspace are in this group. In the case of Acclivis, the regional MSP claims to have implemented more than 500 projects in both private and public sectors, spanning five core service domains – cloud and infrastructure, business continuity and disaster recovery, network and connectivity, technology support and maintenance, and workplace support. Hoping to gain immediate access to local resources, IJ in Japan has entered the local cloud market by establishing a joint venture with Biznet Networks. Likewise, the joint venture between Telstra and Telkom Indonesia to form telkomtelstra allows the joint venture to grow its base of local enterprises and global MNCs across the banking and financial services, healthcare, media and communications industries.

With more than 70% of overseas Chinese in Southeast Asian countries, Indonesia is clearly a strategic market for Chinese cloud providers. Alibaba Cloud entered the Indonesian market in early 2018, becoming the country's first international public cloud service provider operating locally. It then opened its second datacenter in 2019, targeting key vertical segments – the Internet, media, finance, logistics and retail. Some of its customers include Adira Finance, JNE Express and MNC Group. Tencent, on the other hand, is readying itself for the launch of a second datacenter by the end of this year. The cloud provider has already gained traction in the fintech, gaming and media industries, building a base of local customers: Bank Neo Commerce, Bank Mega and GOX, to name a few. It also works closely with local partners such as Astrindo Starvision to reach a broader market for transformation projects. Positioned as a secure and high-performance cloud infrastructure services provider, the company has invested considerably in achieving industry-recognized certifications, such as Uptime Institute's Tier III (for design and facility), PCI DSS, Indonesian National Standard (SNI) and ISO 14001, among others.

Local cloud providers – PT Telkom (Telkomsigma), PT Indosat/Lintasarta, Indonesian Cloud, CBN Cloud, Infinys System, ViBiCloud and XL Axiata, among others – have stepped up their cloud game through collaborating with global and Chinese cloud providers. PT Telkom (via Telkomsigma) already operates datacenters spanning Indonesia, Singapore and Hong Kong, and will add new datacenters in the country to address demand. ViBiCloud, meanwhile, is collaborating with global hyperscalers. It is an AWS consulting partner and became a Microsoft Gold Partner for cloud platform and is an Alibaba Direct partner.

Global internet heavyweights are emerging as important investors and active players as they seek to engage local startups and digital enterprises more broadly. Google opened its Jakarta Cloud Region in June 2020; the local cloud region has three availability zones from the start to support local customers, mainly digital-native startups like GoJek and Tokopedia and traditional enterprises such as Bank BRI and XL Axiata. Because data sovereignty is a priority for highly regulated industries, having a local cloud region aligns with Google's vertical strategy toward the FSI, healthcare, telecommunications, retail, manufacturing and public sectors.

Meanwhile, Microsoft is growing its capabilities in Southeast Asia, partnering with government agencies, public healthcare and educational institutions for their digital-led initiatives. In early 2021, Microsoft announced its Berdayakan Ekonomi Digital Indonesia initiative, which signaled its stronger push in Indonesia. As part of the initiative, the company will establish a local cloud region in Indonesia to meet business demand for data localization. The new cloud region will have availability zones with independent power, network and cooling for additional datacenter fault tolerance. This is clearly a welcome call for its longtime customers and partners such as Pertamina and Bukalapak. Additionally, it also announced plans to provide an additional three million Indonesians with digital skills to reach its goal of empowering more than 24 million Indonesians by the end of this year.

In 2019, AWS announced an expansion plan in the Asia-Pacific region with the addition of a new infrastructure region in Jakarta, Indonesia. The new AWS Region will have three availability zones at launch, expected to be operational by the end of 2021 or early 2022. In a recent conversation with the local team, the company remains on track to implement the rollout schedule. AWS has already provided support to the local business community prior to the establishment of a physical office in 2018, delivering cloud services from the Singapore Cloud Region. Its commitment to the local market is an appeal to its long-standing customers such as Traveloka and Qiscus as well as the recently added new logos, including PT ABM Investama Tbk, Arista Group, XL Axiata, Gox.id and Mikatasa Agung.

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