



Redesigning for the digital economy

A study of SMEs in Southeast Asia

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Welcome

Amid globalization and technological advances, small and medium enterprises (SMEs) around the world are tapping into digital technologies to enhance their competitiveness and resilience, expand and create new sources of value. The benefits of investing in robust new technologies such as artificial intelligence, machine learning and robotics process automation range from raising customer service, to managing costs, keeping pace with competition and building ecosystem connectivity. These are well-documented, and success stories abound.

Transformation is, however, an immense continuous undertaking. Effective digitalization requires SMEs in Southeast Asia to depart from traditional operating models and legacy architectures, and demands a longer-term view on resource investments. This calls for organizations to leverage new tools and applications, digital talent and new ways of working, and ecosystem connectivity to deliver enhanced products and services, and pursue new markets and customers. With risks intensifying alongside digital adoption, they also need to consider new dimensions of security challenges such as cyber threats and vulnerabilities.

As digitalization becomes the competitive game-changer, how are SMEs in Southeast Asia leveraging emerging technologies to future-proof themselves for the new economy? How can they more effectively reboot their businesses for the digital future? These are among the questions addressed in our report covering almost 370 SMEs across six core ASEAN markets.

We trust that you will find this an insightful read. As always, we are happy to connect and extend this conversation further.

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About this study

How have the SMEs in core ASEAN economies fared and what lies ahead? This EY survey-based study analyzes how these organizations are sustaining and pursuing future growth, and innovating amid today's competitive landscape.

An aerial night photograph of a city, likely Singapore, showing a complex network of multi-lane highways with light trails from cars. Modern high-rise buildings with illuminated windows and balconies are visible. The scene is lit with a mix of warm yellow streetlights and cooler blue and white building lights. A large, semi-transparent white number '1' is positioned on the left side of the image, serving as a background for the title text.

SMEs: the growth engine in Southeast Asia

SMEs are the engines of growth in Southeast Asia, creating jobs for the masses, motivating the development of new products and services, spurring consumption growth, and playing a crucial role in promoting industry competition.

The small and medium enterprise (SME)* segment is a pillar of economic expansion for the ASEAN countries. SMEs are responsible for up to 99% of all business establishments, over 90% of employment, and contribute almost 60% of the gross domestic product (GDP) in many ASEAN countries¹.

Being less financially material and visible compared to the multinationals, and perhaps less conspicuous than some start-ups, SMEs are typically the least publicly profiled organizational sector. Albeit more discreet, SMEs are in reality the engines of growth in Southeast Asia. These organizations create jobs for the masses, motivate the development of new products and services, spur consumption growth, and play a crucial role in promoting industry competition. With deeper investment pockets compared to micro enterprises and start-ups, yet with less legacy baggage vis-a-vis their multinational brethren, SMEs can be nimbler in pursuing transformational change.

With weakening global economic conditions nudging some international competitors to exit Southeast Asia, homegrown SMEs now have an even more important role and opportunity to hold center stage. Enhancing their competitiveness and resilience is key to supporting a more dynamic, inclusive and sustainable growth for the region.

* There is no universal definition for SMEs, with classification differing across industries and countries. In the context of this report, SMEs are categorized as organizations with annual global revenues from US\$1m upward to US\$500m per annum, and with staff strength of up to 2,000 employees.
However, focus on this piece is specifically referencing the middle-to-upper segment of SMEs, with annual revenues of US\$20m-500m.

ASEAN economies remain on a growth trajectory

Despite rising challenges that undermine broader near-term global growth, the impact on SMEs is somewhat buffered in the ASEAN region, given these reasons.



The rise in the middle-class segment (to 363 million individuals or 52% of the population by 2025²), a youthful workforce and real wage acceleration are driving consumer spending.

By 2025, about 68% of the population in the ASEAN region will be of working age. Unlike more mature countries, the region's working population surpasses its older dependents, spurring economic expansion, generous consumer and investment spending, and wealth accumulation. This is particularly apparent in Indonesia and the Philippines, where domestic demands are getting additional support from election-related spending along with an expansionary fiscal stance.



Continued uptrend in government spending on infrastructure and utilities projects, and influx of foreign direct investment (FDI) into emerging ASEAN markets, are bolstering employment, talent creation, and enhancing production value chain. For instance, the Philippines' ambitious P9t (US\$176b) "Build, Build, Build" infrastructure program aims to restore roads and bridges, revamp airports and introduce its first subway.



The region's merchandise trade is valued at US\$2.56t (or 22.9% of the share of intra-ASEAN trade³). This helps to cushion the more sluggish momentum in advanced economies, counter softer external trade demand from major partners, and offset some lost opportunities from trade policy protectionism and uncertainties.

These developments support resilient expansion across the ASEAN region, with the Organisation for Economic Co-operation and Development (OECD) forecasting almost sustained growth of 5.2% (between 2019 and 2023) from 5.3% in 2018. Among the larger ASEAN markets, Philippines, Vietnam and Indonesia with GDP expansion of 6.6%, 6.5% and 5.3% respectively⁴ are the outperforming economies.

Such respectable domestic growth paves the way for SMEs in ASEAN nations to thrive, with a cumulative economic power that could probably rival that of dominant multinationals.



Survey findings

ASEAN SMEs look to invest in digital technologies within the next three years as the key enabler to drive new business propositions and user experiences, and deliver on significantly enhanced offerings.

This EY study covered almost 370 mid-market organizations* across the six largest ASEAN markets of Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam to understand their strategic priorities, growth expectations and challenges, approaches to digital transformation (DX)** and application of transformative technologies.

The collective insights provide an understanding of the performance of these organizations and their unique traits across geographies, industry clusters and market sizing. This study also helps executives to benchmark their organizations against peers.

So, why the added focus on digital?

The dramatic disruptions of digital on businesses is already well-documented. While disruptions have been upending all industries – some more radically than others – many organizations have hitherto achieved limited genuine successes with digital transformations.

This EY survey provides a progress report on the extent to which ASEAN SMEs have digitalized their organizations (or feel they have digitalized), their digital approaches and the IT enablers, and challenges in transforming effectively.

More critically, having senior stakeholders from the ASEAN SMEs comment on these issues provides primary data for analysis. Based on these insights, suggestions are then offered on how they can be better equipped for the digital economy.

* ASEAN is a heterogeneous region, with an extremely varied pace of development, opportunities and challenges across the various member countries. These stem from differences in the scale of operations, types of funding, government support, size and skill base of the labor force, among others. These would influence the country-level responses.

However, for the purpose of this report, EY aggregates data for the six featured ASEAN countries and discusses collective findings for the region.

** For the purpose of this study, digital transformation (DX) is defined as the deployment of new tools and technologies, and alignment of these with business models and processes. These promote more frictionless ways of interacting and transacting, enhance existing offerings or create new ones.

Growth and operations

While the ASEAN economies present regional SMEs with ample growth opportunities, organizations still face headwinds from multiple fronts. This section explores the specifics around their growth expectations and overarching strategies, core operational concerns, areas of investments and sources of funding.

Factors influencing expansion

ASEAN SMEs come across as a resilient, resourceful segment with interviewees expecting an average revenue growth of 12.6% in FY19. Of these 368 respondents, 91% anticipate this year's performance to be better than that in FY18, with 56% projecting double-digit expansion.

The Net Positive Score (NPS) thus registers a very robust 86% for the region. This averages the more optimistic respondents from Vietnam, the Philippines and Indonesia with their economies remaining on solid footing in 2019, against the slightly more cautious sentiments emerging from those in Singapore, Malaysia and Thailand (see figures 1 and 2).

Figure 2
NPS by markets and major industry



Note: The major industries above are as follows: property (real estate, hospitality and construction), information and communication technology (ICT), financial services (FS, covering banking and capital markets, insurance, wealth and asset management, private equity), health covering health care, medical and life sciences, and consumer products and retail (CPR, including food and beverage). Other smaller segments (not shown above) include: automotive and transport, oil and gas, power and utilities, manufacturing and engineering, and education.

NPS are based on respondents' sentiment when the survey was conducted in early 2019. Given the openness and high interconnectivity of the ASEAN economies with the rest of the world, this would be continually influenced by how global developments, such as the US-China trade dispute, are panning out.

Looking at strategic pursuits to drive growth, 85% cite an urgency to raise customer service as they seek to differentiate through customer-centricity and experience and drive brand loyalty (see figure 3). This is particularly important as expectations are being elevated by leading players in industries such as information and communication technology (ICT) and retail e-commerce, with other sectors feeling pressured to measure up.

Being agile and customer-first calls for deeper utilization of digital technologies, with 81% of respondents strongly opining that transformational technology would enhance the way customers are served, and business processes are conducted.

These two strategies, however, require SMEs to modernize and frame their human resource strategy around new technologies and deeper customer alignment. Employees are the bridge between businesses and customers, and organizations with great employee experience can possibly double customer satisfaction and generate 25% higher profitability over competitors.⁵ Accordingly, rounding up the top three growth drivers is the urgency to upskill staff to future-proof the workforce, and attract and retain employees in the digital economy.

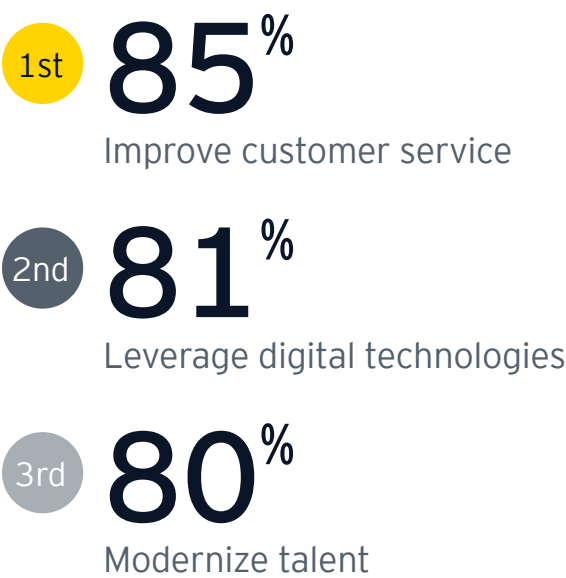
Operational concerns

In their quest for expansion, SMEs must adapt to challenges and changes to seize the opportunities ahead. The leading concerns are threats stemming from cyber risks, with almost a-third identifying this as a core concern (see figure 4).

Such attention is indeed warranted as threats of cyberattacks grow in both sophistication and frequency as technologies evolve. According to research, the median time for a typical enterprise in Asia-Pacific to discover that its corporate security has been compromised is 520 days, compared to the global average of 146 days. The same research also highlighted that corporates in Southeast Asia are still generally lagging others in Asia, even as the region makes progress in cybersecurity.⁶

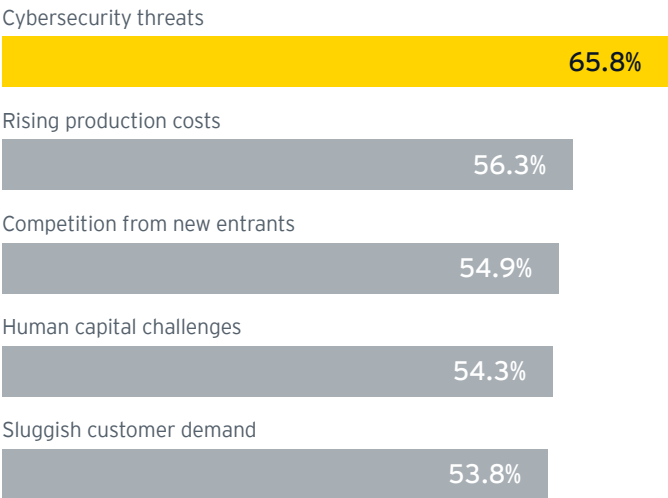
Awareness that cyber risk is a pressing issue is crucial in setting the stage for a strengthened risk management posture. Cybersecurity needs to be at the forefront especially with new technologies bringing new vulnerabilities.

Figure 3
SMEs' top business strategy by percentage of respondents



On a scale of 1 (not important) to 5 (very important), percentage of respondents citing this business strategy as a 4 or 5.

Figure 4
Top operational challenges by percentage of respondents



On a scale of 1 (not a major concern) to 5 (a very critical concern), percentage of respondents citing this operational concern as a 4 or 5.



Investment priorities

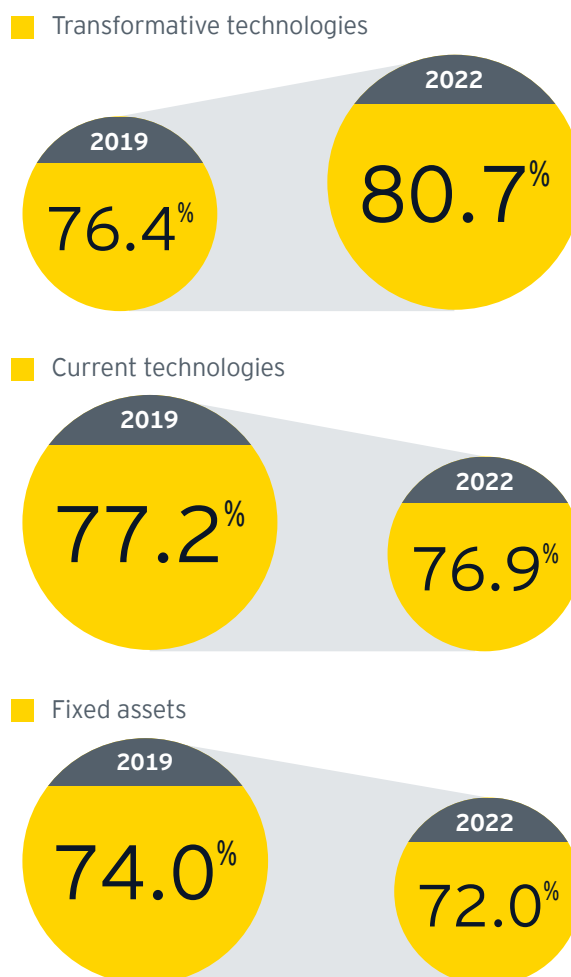
In terms of where investment dollars will be spent, for the current year (i.e., FY2019), 77.2% of the respondents are keen to invest in current technology solutions to drive business-as-usual (BAU) performance. This means that marginally more are placing importance on conventional over transformative technologies and fixed asset spending.

However, the interest in transformative technology is apparent. This rises almost four percentage points over the medium term, with 80.7% planning to prioritize resources in three years' time (i.e., FY2022) for more cutting-edge applications such as artificial intelligence (AI), machine learning and robotics process automation (RPA).

This existing focus on current technologies to strengthen and reconfigure core IT capabilities before diving deeper into emerging solutions is broadly evident across all the core verticals, be it in property, financial services (FS), health or consumer products and retail (CPR).

Figure 5

Current (FY2019) and planned 3-year forward (FY2022) investment priorities



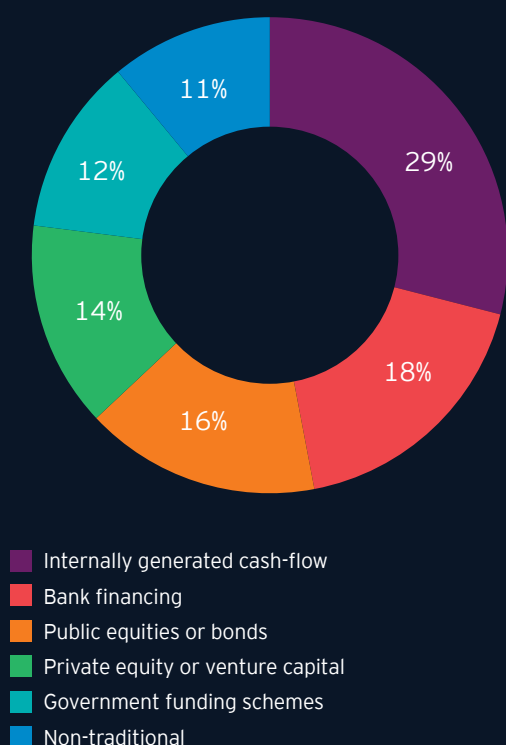
On a scale of 1 (not important) to 5 (very important), percentage of respondents ranking this investment as a 4 or 5 in FY19 and FY22.

Note: For this survey, current technologies is defined as the upgrades and expansions to existing ICT hardware, software and services. This includes the network infrastructure and the business-oriented tools such as e-commerce solutions and those relating to customer relationship management (CRM) and basic business intelligence, content and database management, accounting and billing management, business process management, enterprise resource planning and supply chain management.

Transformative technologies cover digital applications such as artificial intelligence (AI), robotics process automation (RPA), blockchain technology, Internet of Things (IoT) and smart sensors.

How are ASEAN SMEs funding expansion?

Figure 6
Sources of financing



Expansion plans are operational costs that require funding.

A typical SME finances these via ploughing back internal funds (29%), which is the most cost-effective and ideal. At 18%, the next largest source of funding comes from bank financing, then from public equities by listing on the stock exchange for some.

While SME may have longer financial histories and more attractive balance sheets compared to smaller and riskier micro enterprises, financing can still be a challenge. Raising equity is more time-consuming and costly compared to multinationals, with less well-established bank relationships leading to tighter covenant enforcement and tougher credit requirements.

This means that these SME firms need to consider other sources of funding such as private equity financing and government schemes. An example of such government schemes is the International Partnership Fund in Singapore, an equity investment scheme with a commitment of S\$600m (US\$443m) to help more established firms scale up globally.⁷ In addition, there is a series of other grants* for smaller organizations to enhance technologies, efficiencies, resourcing and marketing.

However, these funding sources may not always be accessible across industries and markets. Venture capital investors tend to gravitate toward high-growth sectors, while government funding schemes may not be permanent and typically carry specific conditions. This creates opportunities for non-bank digital lenders such as peer-to-peer (P2P) crowdfunding platforms to offer merchant and e-commerce financing, invoice financing and online trade financing that are specifically tailored for SMEs and smaller peers. These account for the 11% of the non-traditional sources of financing in figure 6.

* The Ministry of Trade and Industry in Singapore categorizes SMEs as companies with at least 30% local shareholding; and group annual sales turnover of not more than S\$100m (US\$74m), or group employment size of not more than 200 employees. Tier 3 SMEs (as defined in this report as those with annual revenues of US\$20m-100m) that fall into these segments could qualify for SME grants. The list of grants for 2018 are available at <https://www.smeportal.sg/content/smeportal/en/moneymatters/grants.html>

Digital transformation

Achieving a digital-first mindset for SMEs is now possible with transformative technology becoming increasingly commercially viable. As applications mature from Proof-of-Concepts (PoCs) feasibility studies to pilots and then larger-scale deployment, new technology should help organizations to:

- ▶ Adapt to changing business landscape and scale at speed
- ▶ Modernize business, amplify efficiency, agility and scalability and boost revenue from operations
- ▶ Reduce costs and risks with improved quality of information for informed decision-making
- ▶ Deliver high-touch convergent customer experiences that are personalized, insightful and data-driven
- ▶ Empower employees, mobilize business, boost workforce productivity and drive innovation
- ▶ Form closer partnerships with increased collaboration
- ▶ Engineer next-generation products and services that are focused on the digital age
- ▶ Leapfrog into a more competitive position against peers in the regional or even global arena

Organizations that are determined enough to forge ahead with their digital transformation strategy are front-running the competition. Multinationals with deeper pockets and capital for investments, robust human resources and easier access to digital talent are likelier to be ahead with their transformational program. Separately, micro enterprises and start-ups may be unencumbered by traditional business models and legacy infrastructures, and funded by new investment criteria. These are probably led by a younger generation of entrepreneurs who are more attuned to customer experiences, might already have digital innovation in their core DNA, and are more willing to experiment with emerging technology and challenge existing ways of conducting business.

With lesser resources than their larger peers and lesser agility than the smaller start-ups, how does ASEAN SMEs compare in terms of digital readiness?

In this section, the digital drivers and maturity level of these organizations are assessed, and interesting observations across the countries, industries and tier-sizing are highlighted. Digital investments, challenges and desired support to further advance their transformation agenda are also outlined.

Drivers of transformation

From the EY survey, it appears that the digital tidal wave is sweeping through ASEAN SMEs. Qualitative feedback indicates four impetus for digital investments.

- ▶ **Raise the bar on customer service:** Today's customers have higher service expectations – with many, particularly the younger digitally native individuals being increasingly accustomed to round-the-clock digital availability, and expecting organizations to manage relationships and deliver products and services at hyper speed. As respondents previously cited in figure 3, heightened customer expectations, coupled with diminishing loyalty, are forcing them to elevate relationships. The application of digital technology would help organizations to achieve near real-time fulfillment, provide contextual interactions and personalization, and enable more frictionless user experiences.

“

Adoption of emerging technologies doesn't come instinctively for us. However, we see the need to act decisively to close the gap between our nimbler competitors and better serve the younger, more fickle-minded generation of digital customers.

Director of a financial services firm in Malaysia

► **Build connectivity and leverage off ecosystem**

partners: Regardless of their size or sectorial focus, organizations should not operate in isolation, particularly as borders separating industries converge and start to blur. As customers increasingly conduct their life on digital platforms for offerings such as FS and health care, SMEs comprehend the value of collaborating with participants within their broader ecosystem. Such collaboration provides organizations with connectivity into the digital network of other businesses, plus the opportunity to capitalize on external expertise and collective innovation, and to co-create new products, pursue new markets or customers.

- **Manage operating cost:** Meeting these high customer expectations call for SMEs to accelerate the digitalization of business processes, particularly labor-intensive back-office processes to reduce paperwork, raise automation and quicken turnaround times. For the front-office, expense management is also critical to reducing the cost to serve or deliver more services and solutions via digital, self-serve channels.

For instance, with escalating salaries in most ASEAN markets, RPA is emerging as a new class of digital labor that serves to eliminate manual, repetitive processes. Benefits include cost-saving opportunities from continued enhancements to processes and advancements in robotic tools, higher dependability, and transactions that are more accurate, documentable and auditable with process automation.

► **Keep pace with competitors, some emerging from**

unexpected places: SMEs are facing competitive threats from nimbler entrants born in this digital age that are leveraging data instead of physical infrastructures as their currency of choice. Competitors could be micro enterprises that do not need to reach comparable scale to negatively impact profitability, or new entrants that are able to leverage disruptive technologies to achieve significant scale and pose a challenge within a short span of time.

In the CPR sector, for example, small e-retailers with minimal operating overheads could cherry-pick segments of products and severely undercut the pricing of SME retail companies. To retain relevance and contest these competitors, incumbents need to quicken their technological pace to deliver on new business propositions.



Digitalization is rewriting the rules of the game and we don't want to risk being left behind as other players forge ahead. Transformation is needed to improve our creativity and efficiency, and ensure that we stay profitable and ahead in the game.

CFO of a property company in Thailand

Digitalization is – if not already the case, will – impact almost every facet of organizations. It alters the competitive landscape and performance across industries and creates an urgent imperative for SMEs to transform for growth and competitiveness.

As a respondent from the ICT sector in Indonesia succinctly sums it up, “with innovation serving as a differentiator in today's marketplace, we need to implement digital transformation. This is the only way we can retain relevance in the eyes of our customers and build a scalable, sustainable business.”

Digital innovation maturity

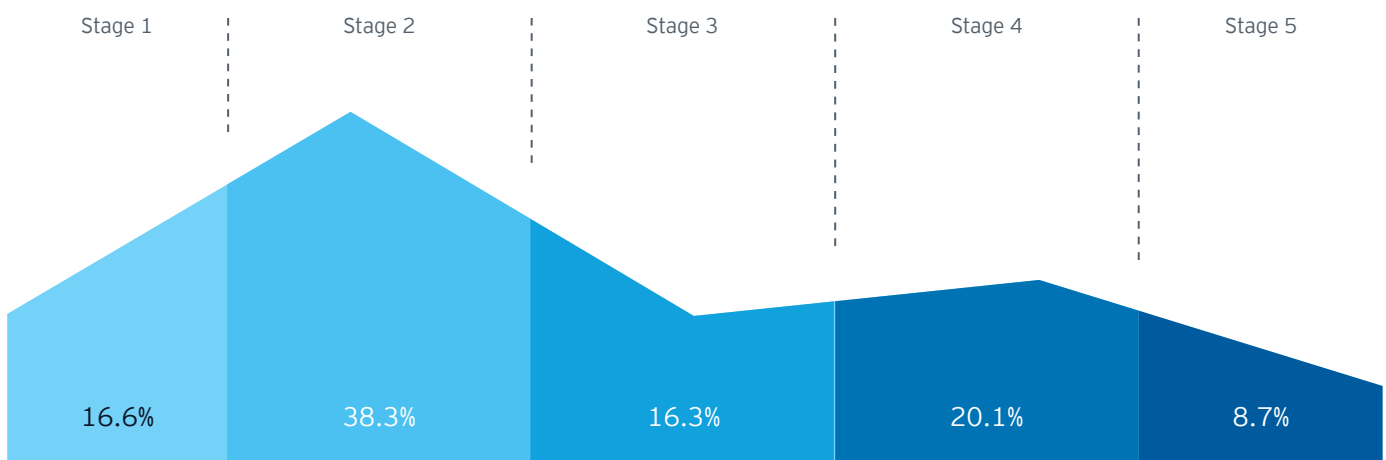
The benefits from digitalization are apparent to the SME respondents. But how are these digital ambitions syncing up with their level of (perceived) digital maturity?

Replies are plotted along a digital continuum in figure 7, ranging from being digital novices (stage 1) to digital native enterprises with innovation embedded in their corporate DNA (stage 5). Most respondents (38.3%) fall within stage 2, having initiated multiple digital activities running parallel across different lines of businesses or functions. This is common across all countries except for Indonesia, with the majority (26%) still at stage 1 of their digital transformation (versus the ASEAN regional average of 16.6%).

While there is a desire for an agile digital strategy, this still eludes many. Most are currently rather tactical when it comes to digitalization, placing ad-hoc smart bets and picking up the lower-hanging fruits, before embarking on deliberate steps toward a more defined DX strategy in stages 4 and 5.

Figure 7

Respondents' digital maturity along an adoption continuum



Stage 1: In the initial phases of DX. Initiatives are largely informal, tactical and separate from our broader enterprise strategy

Stage 2: DX initiatives are initiated at the functional or lines of business level, with multiple strategies running in parallel. These have some alignment to our enterprise strategy

Stage 3: DX initiatives reside with a central digital team. These are part of our enterprise strategy but typically have a short-term funding and focus

Stage 4: Making operational and cultural changes to embed digital throughout the organization, with funding for DX coming largely from long-term capital budgets

Stage 5: Have a single digital platform to scale technology innovations and would consider ourselves a digital native enterprise

For this report, reference to the definition of a digital native enterprise (DNE) is taken off ICT research company, IDC, which describes a DNE as an organization that can scale its operations and innovate at a pace multiple times quicker than traditional businesses. A DNE is driven by a customer-centric and empowered workforce that embraces risk-taking as it seeks to continuously innovate. Technology and data are its lifeblood, fueling more efficient operations, new revenue streams and customer loyalty.

When analyzing the data across market sizes in figure 8, those in tier 1, with their relatively larger scale and budgets, are predictably the most determined with their digitalization endeavors. These account for the highest proportion of digitally progressive organizations (i.e., 45% and 41% of those in stages 4 and 5 respectively).

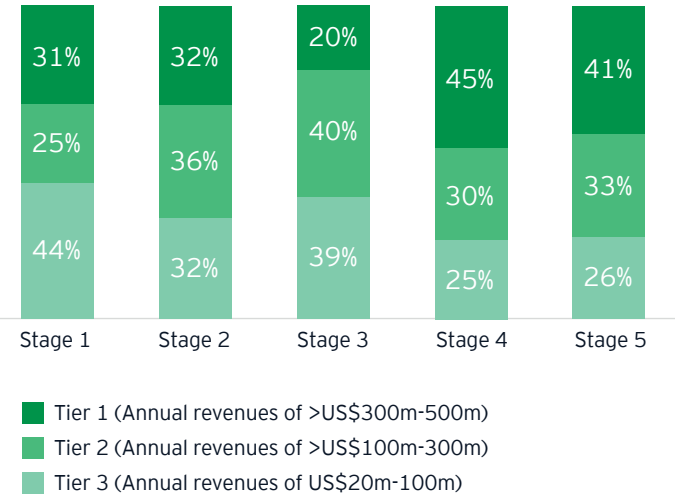
Meanwhile, given their leaner resources and smaller investment budgets, the firms in tier 3 have not progressed as quickly along the digital maturity curve. Interestingly though, they were not too far behind compared to the mid-tiers, with an almost equal percentage being at stage 3 and having transformational programs residing centrally with a digital team. Perhaps these smaller SMEs have less rigid and formal hierarchies, which allow for greater collaborations and a quicker pace of change.*

Figure 9 looks at the extent to which these ASEAN SMEs are extending their digital reach and influence across the back-to-front office. Aligned with earlier comments on the need to digitalize to reduce expenses via automating back-office processes or trimming front-end client servicing cost, almost two-thirds of office functions are almost, or completely, digitally enabled.

Organizations understand that digital transformation is not consigned to customer-facing processes like sales and marketing to enhance customer experiences, but that operations need to be transformed end-to-end, from front-, mid- (e.g., for strategy planning, supply chain, risk management, R&D), through to back-office, so as to reinvent how they conduct businesses. In this aspect, the back-office operations are slightly more transformed given that digitalization presents very tangible benefits for functions such as finance, accounting and human resource. Intense manual work and stacks of paperwork are replaced with more efficient computer-based automation.

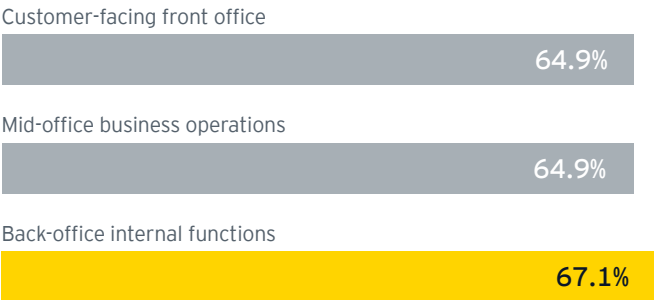
Yet, while office functions are already somewhat digitally enabled, almost 55% of respondents also concurrently classify their organizations within stages 1 or 2 along the maturity curve in figure 7. For these companies that are digitally enabled within their front-, middle- or back-offices, there could be various strategies operating in parallel along these functions and thus the need for more unified enterprise digital strategies.

Figure 8
Digital maturity by size of organization



Note: There were relatively more respondents from tier 2 as compared to tiers 1 and 3 (see figure 15 in Appendix). As such, the data above has been adjusted to equalize the distribution of respondents across all tiers, so that the respondent count does not skew the results.

Figure 9
Level of digital enablement across office functions



On a scale of 1 (not digitally enabled) to 5 (fully digitally enabled), percentage of respondents citing their level of front/mid/back-office digitalization as a 4 or 5.

* A point of caution that being higher or even highest up the maturity curve does not necessarily mean being better. The SMEs in ASEAN region spans multiple industries, each varying in their states of disruption, conservatism, culture, customer bases and strategic objectives.
What works for one organization or industry may not necessarily be effective for the other. Not every organization in every industry can or should move forth at the same pace. Hence, disruptive potential and digital maturity will vary across industries and business sizes and influence the SMEs' transformation strategies.

Investment in transformative technologies

Digitalization is becoming synonymous with the use of transformative technologies as real-world applications become practical and start to redefine how businesses are conducted or goods and services are consumed. New technologies range from AI, machine learning and RPA, to blockchain and smart contracts, Internet of Things (IoT), to cutting-edge applications that engage customers through augmented and virtual reality.

ASEAN SMEs are using emerging technology to:

Improve payment applications

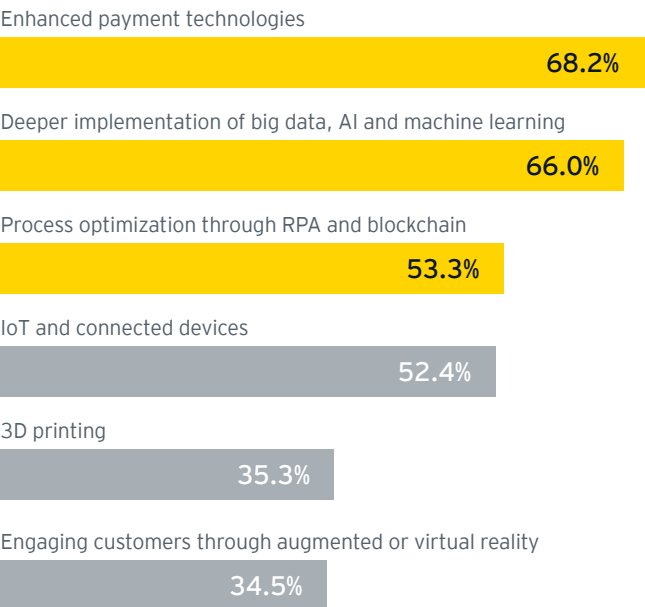
On an aggregated basis, payment technologies top the chart with 68.2% currently investing to enhance online payments. This is driven by e-commerce, e-banking and e-wallets, particularly more so within emerging ASEAN markets like Indonesia, the Philippines and Vietnam with low credit card penetration.⁸

Industry statistics estimate that the region's internet economy will exceed a gross market value of US\$240b by 2025, more than twice that of US\$72b in 2018, with the ASEAN population being the most engaged mobile Internet users in the world. Thus, having a good payment technology for online transactions is a basic hygiene requirement for SMEs to drive online revenues and become more entrenched in the digital economy.

Advance big data analytics

Following a close second, 66% mention having invested in deeper implementation of big data analytics, AI and cognitive computing or machine learning. Intelligent automation and machine learning techniques apply statistical models to constantly improve as the system learns, extracts and delivers sophisticated and timely information to support more accurate and informed business decisions. These are particularly valuable for organizations serving retail clientele, through collecting customer insights for contextualizing and personalizing interactions and offerings.

Figure 10
Current investment focus for transformative technologies





Raise efficiencies through automation and blockchain

Intelligent systems and automation are highly complementary technologies that can reduce repetitive activities, especially for labor-intensive industries such as manufacturing, transport and warehousing. Hence, 53.3% of respondents are simultaneously investing in analytics and RPA – the business-managed software tools or “bots” that are programmed to follow rules to complete process-oriented tasks much more efficiently than their human counterparts. At its core, RPA mimics and replaces manually intensive functions that traditionally are performed by employees, and not only eliminates the potential for human errors but frees up manpower to dedicate time to more valuable tasks.

Related to these is the application of blockchain (the use of a decentralized, consensus-driven ledger that tracks and records all transactions in a series of sequential blocks) to assist in process automation.

In the ASEAN region, industries that are exploring the use of blockchain include FS, supply chain and health care. For instance, within FS, blockchain is already demonstrating itself to be operationally viable, particularly within trade finance and cross-border business-to-business transactions. Automation and blockchain lend themselves well to the global trade finance industry, which remains paper-heavy and labor-intensive. Blockchain, together with smart contracts that automatically trigger commercial actions, allows multiple trade participants to establish a shared, immutable and transparent record of all terms of trade, verify transactions and accelerate settlement without requiring a financial intermediary.

Specific examples of these digital applications and success stories are illustrated in the next chapter.

Internet of Things (IoT) on governments' digital agenda

IoT is the connection of devices to the Internet using embedded software and sensors to communicate, collect and exchange data (such as their identity, condition and environment) with one another. Country-level analysis indicate that IoT also ranks high on the digital agenda, particularly so for the SMEs in Indonesia, Malaysia and Singapore.

This could be attributed to governments in these countries demonstrating the potential of IoT with public projects, fostering the awareness of its benefits to businesses, and supporting funding and expertise to accelerate the progression of IoT in the digital economy.

Figure 11

Government-led IoT projects

Indonesia:

Multiple initiatives are underway as part of Indonesia's economic masterplan to become Southeast Asia's largest digital economy (through its "2020 Go Digital Vision" program) and have the digital economy contribute US\$130b to its economy in 2020. These include the Ministry of Communication and Information Technology (MCIT) launching "Industry 4.0: Making Indonesia 4.0" in April 2018. Industry 4.0 refers to five industrial digital technologies: IoT, AI, human-machine interface, robot and sensor technology, and 3D printing. The initial prime beneficiaries are expected to be from food and beverage, automotive, electronics, chemicals, textile and garment industries.

The government is aggressively pushing its smart city initiatives as part of Industry 4.0. Under its "Movement to 100 Smart City" plan, Indonesia is using IoT to develop smart cities in Jakarta, and has installed about 400m sensor devices across the country as part of the pilot phase to achieve "smart connectivity, smart solutions and smart user."^{9, 10}

Malaysia:

The "National Policy on Industry 4.0" launched in October 2018 encourages the adoption of Industry 4.0 technologies including IoT. Sectors in focus include the digitization of manufacturing processes in the electrical and electronics, machinery and equipment, chemical, medical devices and aerospace industries.

Since the introduction of "Smart Cities Initiatives" as part of its 11th Malaysia Plan (2016-2020), the country is deploying an intelligent IoT network in populated cities to test out urban management solutions in optimizing cities infrastructure and connectivity and enhancing the livability for citizens. It is also set to adopt 5G technology in the near future – plans are afoot to develop a holistic strategy for 5G deployment in areas such as health care, media and entertainment, automotive, manufacturing, public safety, agriculture and education.^{11, 12}

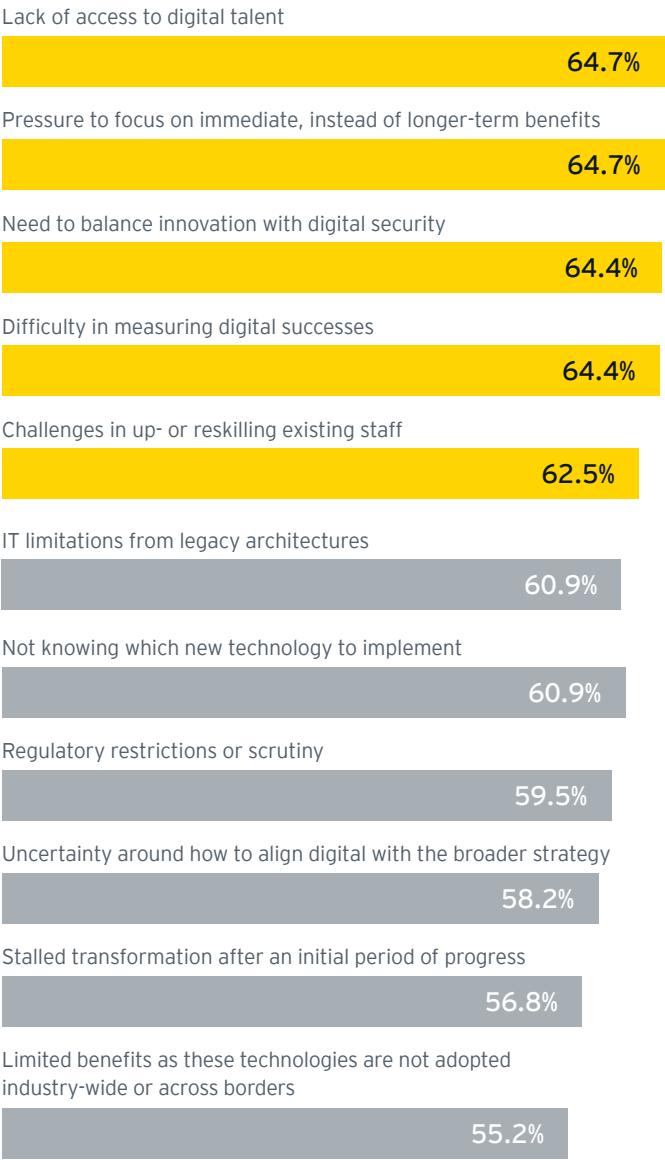
Singapore:

Singapore seeks to position itself as the epicenter for IoT technology in Southeast Asia, with infrastructures being laid out as part of its "Smart Nation initiative" to support IoT deployments in the public and private sectors. This includes rollout of its Narrowband IoT (NB-IoT) network in 2017, the first of its kind in Southeast Asia. Interconnectivity among physical objects from this nationwide NB-IoT network supports applications such as flood monitoring, fleet management, and waste management, and enables businesses and consumers to track their energy consumption.

By 2020, at least two 5G networks would also be rolled out to enable the next-frontier commercial applications such as driverless cars and virtual reality content streaming services.

Various other plans to catalyze Singapore's progress toward a digital society include equipping the workforce with data science and future skills, helping SMEs build stronger digital capabilities, and facilitating the development of a cashless society.^{13, 14, 15}

Figure 12
Issues impacting digital successes



On a scale of 1 (not challenging) to 5 (very challenging), percentage of respondents ranking the impact of these issues on digital strategy as a 4 or 5.

Challenges with transformation

Digital transformation creates significant opportunities for the SMEs but is a difficult proposition to deliver on, with organizational commitment not necessarily translating to successful application. The core idea is not to utilize new technology to merely replicate an existing product, service or solution in a digital form, but ideally, to enhance these offerings to support superior customer engagements and potentially new sources of income.

Respondents face these core challenges in implementing an effective digital strategy.

Procuring or upskilling talent

It appears that digital transformation is as much a cultural as a technological endeavor. Among the top five hindrances are the lack of access to digital experts (64.7%) and difficulties for existing staff to reskill and transition toward a digital-first culture (62.5%).

One of the toughest challenges is securing qualified digital talent like data scientists and social marketers. Individuals with the relevant skillsets are scarce, particularly more so in the emerging markets in Southeast Asia as digitalization outpaces the supply of human resources that can deliver on it. This issue extends beyond just needing to invest to procure digital talent but to appropriately align resources with digital strategies, and to foster a corporate culture that embraces constant experimentation and learning.

Correspondingly, the need to reskill and transition existing staff toward a digital-first mindset is important. This is a pressing concern with research suggesting that about 43% of IT executives across the ASEAN markets do not have the necessary talent to build digital solutions.¹⁶

This lack of new digital talent can be seen in markets such as Indonesia. The world’s fourth-most populous country with more than 260 million people has a legion of young but lowly skilled workers, with 121 million primarily working in fields such as agriculture, manufacturing and services. According to the Indonesia National Development Planning Agency (Bappenas), 90% of workers in manufacturing are classified as low-skilled, 6.5% semi-skilled, and only the remaining 3.5% are skilled. This makes digitalization difficult and drives the need for the government, industry associations, academia and businesses to collaboratively uplift skillsets of the entire workforce to achieve Indonesia’s Industry 4.0 aspirations.

Meanwhile, given that digitalization cuts across all levels of the organization, this lack of digital literacy is not seen in only the rank-and-file but business leaders too. Hesitance or inertia (especially among privately run SMEs with more mature C-suites and board members) to upskill digitally should be addressed. A lack of direction or foresight from senior management could result in SMEs “upgrading” their IT strategy into digital strategy by merely a change in terminology, without a complete work-over and genuine transformational impact.

Viewing investments through a short-term lens

Another issue is the tendency to focus on immediate gains versus investments in longer-term digital-future proofing. Given the competing agendas vying for budget and limited resources, initiatives with more tangible, near-term returns on investments (ROI) appear to take precedence over digitalization programs that are not only longer-term projects but may not yield clearly quantifiable benefits.

This observation is most apparent among tier 1 SMEs (with annual revenues of US\$300m-500m), with 73.5% being challenged to focus on short-term initiatives, against the 64.7% average across all organizational sizing. Bigger organizations have a more structured board of directors or could be listed on exchanges, and hence could be under shareholder pressure to measure corporate performance on immediate-term achievements. Such short-term tendencies and problems around benchmarking digital transformation successes (and justifying spending) can lead to an underinvestment in digital transformation.

Managing new security risks

Managing new digital risks alongside innovation is the third issue top on the minds of respondents. New technologies can be a double-edged sword: it has given rise to rapid proliferation of m-banking, e-commerce and cyber linkages, yet resulted in higher incidences, severity and sophistication of cyberattacks. Cybercriminals are sometimes a step ahead and leveraging increasingly sophisticated technologies to mount attacks.

For instance, the WannaCry Ransomware in May 2017, which blocked access to computer systems until ransoms were paid, crippled over 200,000 computers across 150 countries, costing up to US\$4b in losses.¹⁷ The ASEAN region was not spared, with attacks affecting the Philippines, Indonesia, Malaysia, Vietnam, and Thailand.¹⁸ The more developed Singapore market is a target of cybercriminals. A survey by a private cybersecurity provider indicates that 92% of Singapore organizations suffered an increase in attack volumes in 2018, with 95% noting that breaches are getting increasingly sophisticated.¹⁹

While laws in most of the emerging ASEAN countries are still being strengthened in relation to disclosure and penalties for lapses, respondents clearly understand that cybersecurity breaches have devastating impact that span from service disruption to direct financial and reputational damage. They realize that digital innovation needs to be viewed with a risk-adjusted lens.



Support for transformation

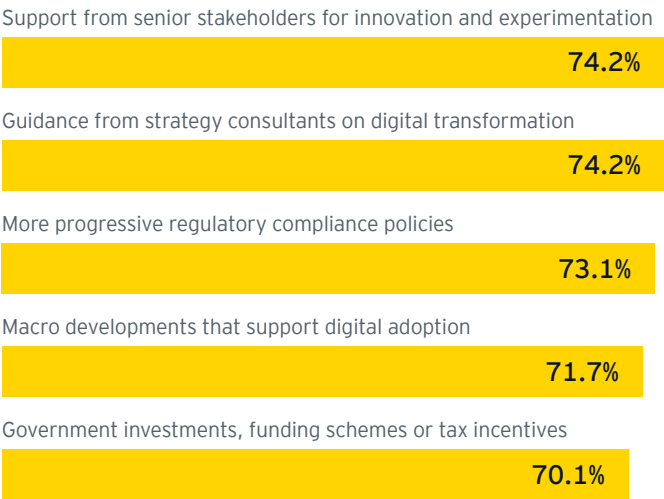
Given the many challenges to achieving meaningful digital transformation, the final question examines the support respondents are currently getting, or would like to receive from ecosystem participants to accelerate their digital progress.

All the five options in figure 13 scored at least 70% in terms of usefulness. In first place at 74.2% is the desire for senior stakeholders to build a model for innovation and experimentation. The concept of trying and failing is not natural in a corporate environment, and probably even less so for a conservative SME organization in the ASEAN region. However, as much as this goes against financial logic, management do need to lay out a vision and strategy for digital innovation, and support a culture that allows for ongoing experimentations, failure and learnings within defined risk parameters.

Tied in the first place and equally valuable is the role of global consultancies, technology integrators, and digital agencies in assisting SMEs in their digital transformation journey. While executives embrace the importance of digital transformation, few probably really comprehend what is required to truly evolve their organizations into effective digital businesses. This is where external expertise can blend strategy and execution with the soft skills for inspiring leadership, and train teams to transform businesses, quickly seize opportunities, and mitigate risks from digital transformation.

It was mentioned previously that 12% of the respondents source government funding. While the ASEAN governments are already proactive in supporting local enterprises, the preference is for them to provide even greater assistance. Respondents show a desire for their respective governments to implement policies that provide a conducive environment to encourage digitalization. Respondents would also like their governments to provide fiscal and financial incentives to help drive digital maturity.

Figure 13
Factors to enhance the pace of digital adoption



On a scale of 1 (not useful) to 5 (very useful), percentage of respondents ranking factors that could enhance their pace of digital innovation as a 4 or 5. (These don't need to currently exist in their markets).

Government initiatives are spurring the digital economy

Given the importance of SMEs to Southeast Asia's vast economic remit, governments in the region are continually introducing new funding schemes, incentives and programs to help these organizations upskill digitally.

For instance, in Singapore, to accelerate the digitalization of local companies, the government has rolled out several assistance plans to future-proof its SMEs (defined as those with revenues of up to S\$100m or US\$74m.) These include the Infocommunications Media Development Authority's "SMEs Go Digital program". This provides structured support to boost employees' digital skills, and harnesses digital tech to enhance capabilities in cybersecurity, data protection and analytics.

While growth segments like financial technology, 5G, smart mobility (such as autonomous driving) and health technology would be the core targets for regulatory support, initiatives extend broader. For instance, Singapore's National Trades Union Congress launched a "Worker 4.0 Digital Readiness Certificate training program" in 2019 to bridge the digital skill gaps faced by technicians in the manufacturing sector.²⁰

Separately, to support local organizations in their regional growth, Enterprise Singapore (ESG) pairs organizations from different industries and across various sizes together. This helps them to leverage capabilities and comparative advantages from suitable partners as they seek overseas expansion. ESG has helped 76,000 organizations to obtain funding, incubation and mentoring support within the 12 months between May 2018 and April 2019. It also supported 7,000 projects to upgrade companies' capabilities and improve productivity through process digitalization. These initiatives are expected to create 10,500 skilled jobs and add S\$10.2b (US\$7.5b) to the economy.²¹

Over in Indonesia, there are challenges with reskilling the workforce and syncing workers with the fourth industrial revolution. To address these issues, the government is training workers to equip them with industrial skills for the digital economy in two vocational schools, as well as developing Industry 4.0 mini factories in three polytechnics across the nation. The country is also helping to establish an Industry 4.0 innovation and human resource development center in their capital, Jakarta, plus a big data and analytics center at an industrial education and training center.

While such initiatives support digitalization efforts, SMEs must have the determination to transform and proactively embrace such programs to reap the full benefits.



Navigating toward digital success

Digital transformation is a competitive game-changer that raises creativity, revenues, efficiency and profitability, and helps SMEs to potentially disrupt more well-known multinational brands. Transformation is, however, an immense undertaking. Initiatives require a departure from traditional operating models and legacies to leverage new tools and technologies, ecosystems and technology platforms to deliver enhanced products and services. What are the high-level steps that SMEs must undertake to transform their digital vision into reality?

1

Lay a firm foundation for digital success

Transformation begins with having strong and committed executive level sponsorship, with oversight of digital technologies and foresight to prioritize these to champion change. This paves the way for SMEs to move quickly and ensure that executive decisions are not creating transformation bottlenecks. This is echoed by the 74.2% of respondents, who felt that having supportive senior stakeholders is a baseline requirement for a culture of agile innovation.

This journey starts with a current state assessment of the organization's innovation maturity to serve as a benchmark for execution. Leadership needs to be realistic about what the future state model should look like. Among others, this depends on the future consumer – their habits and desires, and how the SME should evolve to serve their requirements; the SME's internal receptiveness to change; and the most

appropriate digital approach for the particular business and industry. SMEs then need to invest in critical assets, from capital investments to IT infrastructure and talent, and integrate these into customer and business strategies to enable a digital future.

Not all organizations can, or should aspire to be within stage 5 of the digital maturity curve (see figure 7). SMEs in Southeast Asia are an extremely diverse group of organizations, and digital maturity will not and should not need to be similar across their businesses, industries and markets.

However, if the intent is to progress up the digital adoption continuum, SMEs should work toward having DX embedded throughout the organization and involve multi-functional team collaboration to align digital with the broader enterprise strategy. In this instance, having cross-functional executives drawn from multiple domains is useful. This ensures that transformation programs reside with a central team instead of being launched in isolation, and with continual change management funding coming from longer-term capital budgets instead of BAU dollars.

2

Balance legacies with new technology

Technological solutions are key digital enablers but the existing IT landscape often cannot support innovative models like smart cities, digital health care and the industrial Internet. Consequently, almost 61% of respondents highlight that technical limitations from legacy architectures are hindering their digital strategies. This is a pervasive issue, with organizations working on old fragmented infrastructures that constrain business agility.

From a technical perspective, some SMEs might opt for major overhauls of core engines but many could probably just decommission specific redundant applications, then recondition remaining systems to reduce complexity and enable these to quickly pivot when needed. Advancements in open APIs, microservices applications, cloud technologies, as-a-Service options and FinTech services also support interoperability between legacies and a lightweight, agile digital platform buildout. Cost savings from these IT legacy modernizations and reduction in BAU maintenance could be invested to fund a continuous digital strategy.

3

Focus on end-to-end, not discrete initiatives

While selecting new technologies to employ, SMEs should not just concentrate efforts within specific areas. Such tactical digitalization efforts may be quicker to execute versus a holistic digital transformation but often only increases IT spending relative to actual enhancements. It is encouraging that two-thirds of the respondents have transformational efforts extending beyond customer-facing processes to include digital solutions for their mid and back-office functions, though cohesiveness could be further improved by integrating horizontally between the front, mid- and back-offices.

While the surveyed SMEs intend to focus more on emerging solutions than BAU technologies by FY22, they should caution against pursuing disruptive technology and digitalizing for the sake of doing so. Not every component needs to be digitalized, and not every initiative would deliver a satisfactory ROI.

Instead, organizations should create and embed the digital strategy into business operations, then design the right products, services or experiences to enhance performance based on these aspirations. To reduce risk, they can incubate digital solutions through prototyping, and test and validate initiatives through small-scale PoC experimentation before activating them on a commercial scale. Post-implementation, it is important to monitor keenly and use feedback mechanisms to drive continual improvement.



Digital transformation shouldn't be an end destination in itself. Instead, digitalization is a critical business enabler that incorporates robust new technologies, operating models, cultures and mindsets to empower organizations to craft new business propositions and user experiences, or deliver significantly enhanced offerings.

Choo Eng Chuan | EY Asean Growth Markets Leader

4

Digitalization isn't an IT-only initiative, so share responsibilities collectively

Executives need to recognize that while digital requires technology, it is not a technology strategy and should be evaluated differently. Adoption of emerging technologies should be cross-organizational such that no one individual or department owns it but responsibility is shared across multiple divisions, with multiple users benefiting from the transformation.

Ideally there should also be small but quick ROI uplift along the various stages of a DX program to justify investments instead of waiting till project completion to realize the complete benefits. Fuller scale adoption can result in quicker incremental wins. This addresses the challenge cited by 64.4% of respondents on digital initiatives needing years before demonstrating return on investments.

Also, organizations should review traditional performance indicators that may no longer be appropriate, and consider new measures for economic success. Technology transformation should not become another cost item on the balance sheet measured by quantitative performance statistics but a means to innovate quicker, faster, penetrate new markets and drive customer experiences.

5

Manage the people dimension

Talent is an extremely crucial factor as transformation creates brand new roles while impacting existing positions. For instance, the range of digital experts that companies need is widening, with high demand for data scientists, user-experience designers and social media strategists who know how to build platforms that appeal to consumers.

However, supply of such talent remains limited, particularly more so in the emerging markets of Southeast Asia. Besides sourcing new staff externally, SMEs need to engage incumbent employees internally to minimize resistance and drive behavioral changes that are needed to integrate digitalization into the business.

Transitions are difficult and investments are needed to incentivize change management, be it to empower staff with relevant digital tools and skillsets, or to retain and reward them for digital successes. Supporting an entrepreneurial culture means giving staff sufficient bandwidth to experiment with digital innovation even if some turn out unsuccessful – accumulate learnings from early failures could yield meaningful improvements to longer-term value creation. The evolved workforce could also mean one with new gig employment models and structures.

Digitalization unfortunately also impacts current roles and responsibilities. Management must tactfully handle redundancy arrangements for employees in affected divisions or those with mismatched capabilities, who cannot be reskilled or upskilled to work with, or alongside new technologies.

6



Mitigate new dimensions of digital risks

Data is growing exponentially by the second, providing valuable data-driven insight that support digital transformation. SMEs are, however, treading a fine line between balancing digital initiatives and concurrently managing data protection and customer privacy safeguards to ensure that these do not impede innovation. They need to govern their data lakes carefully, minimize risks and optimize frameworks through automated, intelligence mechanisms.

Security risks from cyber threats and vulnerabilities are also challenges that merit attention. Cyber breaches not only result in significant reputational and financial impact (and cost organizations on average US\$3.9m p.a.²²) but hamper consumer confidence and impact the resiliency of the digital economy.

With technology risks intensifying alongside digital adoption, SMEs should develop an integrated risk management, compliance and security protocols as part of their initial digital design phase. Such care is required to safeguard privacy and data integrity, avert cyber incidences, and avoid punitive regulatory fines and reputational damage. Organizations must elevate digital risks beyond “just another IT issue” and always approach innovation through the lens of security, integrity and resilience.

“

Adopting a digital mindset goes beyond executing discrete projects within a specified timeframe. SMEs that successfully fuse digital into their DNA to deliver continuous innovation into everyday operations are those effectively redesigning themselves for the digital future.

Liew Nam Soon | EY Asean Markets Leader

7

Don't create digital islands; instead integrate into an ecosystem-based world

Transformation is a massive undertaking with limited successes if undertaken in silos, so organizations need to do away with the “us versus the world” mindset and welcome collaborations. With the customer typically at the core driving the need for digital transformations, partnerships would also be essential to raise competencies that support more holistic customer experiences.

As clearly underscored by 74.2% of respondents, it is important to identify outside experts such as strategy consultants that are equipped with the deep industry knowledge and experience to provide transformational guidance. They could perform a diagnostic study to benchmark the current digital maturity and help set realistic digitalization goals that take into consideration the business, industry and market.

SMEs also need to reimagine the way they conduct business and partner with technology vendors, financial institutions, peers within and even those outside of their immediate ecosystem to augment digital capabilities and drive new opportunities. As technological advances lower entry barriers and

cause long-established industry boundaries to converge, SMEs are no longer confined to supplier-customer relationships within their vertical industry. Instead, convergence is creating new marketplaces that enable ecosystem participants to share data and collaborate to innovate new digital products, access new markets and customers.

Beyond partnering with consultants, partners and peers, SME firms should also focus their attention on supplier enablement to get all parties digitally proficient to reap fuller benefits from digitalization. This is particularly relevant for organizations involved in manufacturing and trade activities, where transactions span across countries and involve multiple parties at varying stages of digital maturity.

Finally, because digital ecosystems are not static, organizations should reposition themselves as market dynamics evolve and value pools shift. They must continually scan the horizon for new potential partners, re-evaluate existing alliances to ensure that interests remain aligned, and monitor how collaborations are impacting reputational, financial and regulatory risks. They also need to address the governance, accountability and management of these partnerships.

Reinventing stronger digital entities

SMEs in Southeast Asia are vital contributors to their national economies but their continued economic support hinges partly upon their ability to leverage digital solutions to expand exponentially and efficiently, and create new sources of value.

While these organizations cannot expect to become digital powerhouses overnight, the external digital

environment is rapidly evolving and they cannot risk being left behind

Well-crafted and executed digital initiatives could help elevate progressive SMEs of today into the multinationals of tomorrow. While the challenges from digitalizing may be great, the rewards are far greater.

A woman with dark hair tied back, wearing a dark green lab coat over a grey t-shirt, is looking intently at a 3D printer. The printer is a large, black, industrial-style machine with a transparent front door, revealing internal components and a glowing purple light. She is holding a rolled-up white document in her left hand. The background is a laboratory or workshop setting with various equipment and a metal shelving unit.

4 Case studies

While the concept of business transformation may appear simple, a sizeable gap exists between vision and reality. Successful digitalization requires senior executives to go beyond statements of intent to hardwiring digital across multiple functions and business units, while concurrently revising their business processes, systems, structures and staff incentives.

The following are three use cases where the senior management has successfully done so, with their organizations reaping tangible benefits from transforming digitally.

Vietnam: Consumer financing company

Technology: Big data and AI

Enhanced app for completely digitalized lending and efficient customer acquisition

Challenge

With the imminent entry of foreign players into Vietnam's consumer lending market, this incumbent consumer credit company wanted to overcome challenges and inefficiencies inherent in its traditional lending model, improve experiences, and attract and retain customers. It looked to emulate consumer lending companies in India and China that offer completely digitalized loan application, approval and disbursement processes.

Impact

Limited digitalization for loan application

- ▶ The organization had a basic app, which allowed for loan application but customers had to submit physical documents and sign a paper contract before loan disbursement.
- ▶ Most documents in Vietnam that are needed to verify customers' identity (e.g., ID, utility bills) are paper-based and had to be digitized.

Limited efficiencies and market share risks

- ▶ Staff intervention required at subsequent stages of the application, extending the borrowing process by up to five days.
- ▶ While this organization already covers over 50% of the retail financing market, such inefficiencies put it at risk of ceding market share to new, more digitally savvy entrants.

How EY helped

The organization worked with EY and several FinTech partners to integrate via APIs a host of digital technology and solutions to create an end-to-end digital leading platform app. This included working with EY teams from India on leading practices in app design, vendor selection, and prototyping. The outcome was the digitalization of the entire process from customer onboarding, to loan application, know-your-customer (KYC), credit underwriting, and loan approval and disbursement with all customer interactions available via their mobile devices.

Benefits

First-mover advantage in consumer lending

- ▶ Their app was launched in the second half of 2018 and registered over 10,000 downloads within the initial three months. It is simple, self-explanatory and intuitive to encourage customer adoption, offering significant improvements to time and convenience.
- ▶ Elimination of paper-based application and in-person KYC procedures decreased risks of potential customers dropping off during the application process.
- ▶ Processing time for consumer loan borrowing was reduced from four to five days to less than 15 minutes.

Cost savings

- ▶ Digitization of entire customer journey (as opposed to only onboarding) eliminated human intervention and associated cost of acquiring and onboarding customers.

Further collaborations on customer acquisitions

- ▶ The organization is using AI algorithms and KYC insights to analyze the unbanked and collaborate with FinTech lenders to offer more financing options for the financially excluded.
- ▶ It is also working with the International Finance Corporation (IFC) to extend lending services to rural areas to raise financial inclusion and support economic progress.

Singapore: Health care company

Technology: RPA

Automation of business process outsourcing (BPO) engagements

Challenge

This provider of a integrated health care platform was trying to manage the processing of high daily volumes as part of its BPO engagements. However, existing processes were manual and required domain knowledge that was not easy to acquire. The organization faced additional challenges in scaling up new businesses as it expands regionally. These put pressure on staff clear daily volumes, resulting in longer, intense working hours and heightened stress levels.

Impact

More rework and checks

- ▶ Checking for human errors.
- ▶ Inconsistency in outcomes between individual staff processing the documentation.

Difficult to hire and train

- ▶ Challenge in finding replacements with comparable skillsets and efficacy.
- ▶ Temporary staff arrangements not viable as processing requires domain knowledge.

How EY helped

As a technology advisor to the client, EY teams designed, developed and provided a broad service covering process, people and technology to streamline processing. EY teams ran workshops with the C-suite and business leads to contextualize the RPA requirements, including addressing pain points with current processes and identifying elements and steps for RPA. Bots are now being utilized to execute majority of the process steps with straightforward scenarios, while leaving those that require human judgment to the BPO team.

Benefits

Support business with their topline growth

- ▶ Ability to instantly augment current team with RPA bots without any lead time for training.
- ▶ Capacity to scale up quickly to support business growth domestically and regionally.

Significant productivity gains, with potential for more

- ▶ Potential productivity gains of processing up to over twice the current volumes from improved speed from bot utilization.
- ▶ With increased confidence in bot processing, these bots could be given a higher “authority threshold” to execute more straight through processing in the future.

Singapore: Statutory board

Technology: All emerging technologies

Enhanced digital capabilities of non-ICT workforce in Singapore

Challenge

To ensure that local businesses are well-equipped to adapt to digital advancements, this statutory board prioritized the need to upskill Singapore's non-ICT workforce. It identified retail and logistics as pilot sectors to focus on given the strong presence of digital disruptions within these industries, particularly from the impact of e-commerce. It aims to assist companies in enhancing their competitiveness by equipping employees with relevant skills for the digital economy.

Impact

Jobs being affected by rapid digital transformation

- ▶ Automation from disruptive technologies such as AI and RPA are impacting jobs – changing or replacing some, while creating new ones.
- ▶ Today's businesses need to adapt to retain relevance, sharpen their competitive edge by upskilling staff via continuous training, and leverage new ways of working and strategic workforce planning.

Companies are unsure of how to begin digitalization

- ▶ While multiple initiatives are available to help companies embark on their digital journeys, many may not know where, or how to begin.
- ▶ These grants and schemes need to be made known and easily accessible for local companies to utilize based on their digital requirements.

How EY helped

EY teams worked with this statutory board to list key digital training areas for the non-ICT workforce to equip themselves with new technological skills that not only enhance their own digital development, but enable their employers to capture opportunities in the digital marketplace. EY teams identified linkages to government initiatives and training programs that both companies and individuals can access through a single source to help kickstart the nation's digitalization journey.

Benefits

A single repository of information on government-supported digital programs

- ▶ The outcome was a user-friendly digital learning guide, detailing all the government's initiatives around digital business approaches that companies can adopt to capture new opportunities.
- ▶ It lists the training available for the workforce in the retail and logistics sectors to upskill digitally and benefit from the evolving digital landscape.

Assess technology skill gaps within the non-ICT workforce

- ▶ This guide also provides capability assessment by identifying skillset gaps within the companies' workforce to enable targeted training based on specific business needs.
- ▶ Users will be directed to a government skills training portal that offers various programs to prepare them for the digital economy.

Note: EY has been recognized by independent research firm Forrester Research as a leader in The Forrester Wave™: Global Digital Business Transformation Accelerators, Q1 2019. This report cited EY for its integrated transformation capabilities, ability to bring a customer-insights-driven strategy to clients, and integration of global EY WaveSpace™ innovation centers into client engagements. It also mentions EY's acquisitions that add a broad range of digital capabilities to its services portfolio.

The background of the page is a dark blue field filled with intricate, glowing teal wavy lines that resemble topographical contours or fluid motion. A large, semi-transparent, light grey number '5' is positioned on the left side, partially overlapping the text.

Appendix: Survey demographics

The primary research for this EY report was conducted by a third-party digital insights agency that surveyed SME organizations with annual global revenues of between US\$20m-500m. The six core ASEAN markets of Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam were covered. Results aggregated responses of 368 senior decision-makers or influencers for organizational digital strategy, with their profiles illustrated in figures 14 and 15.

Figure 14
Composite of survey respondents by country and business sectors

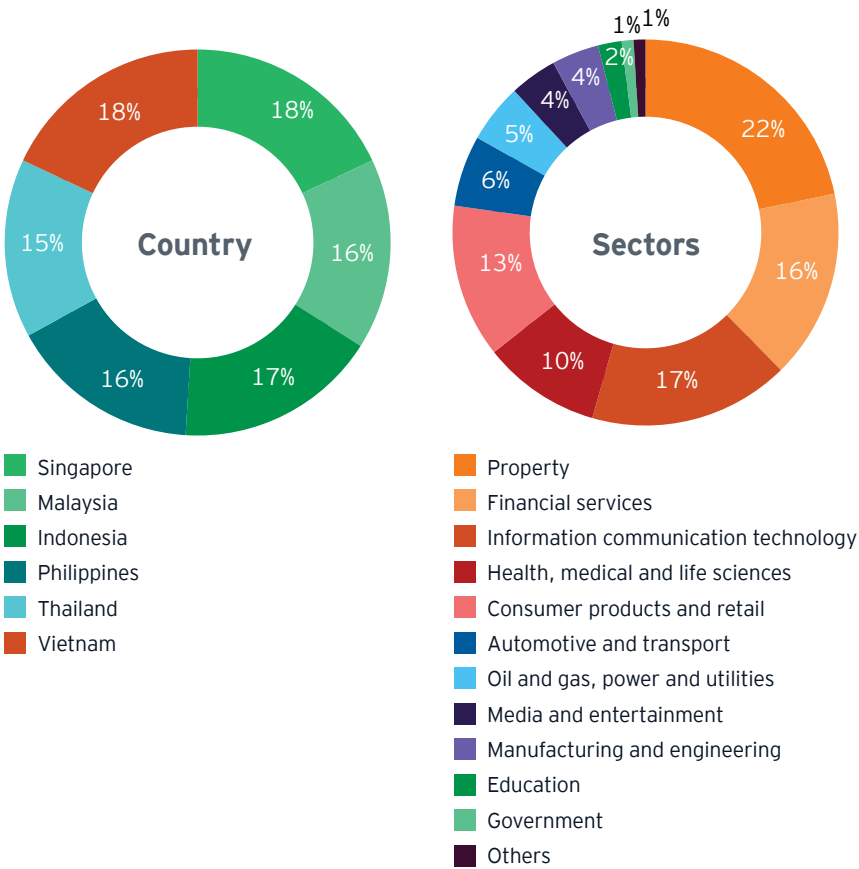
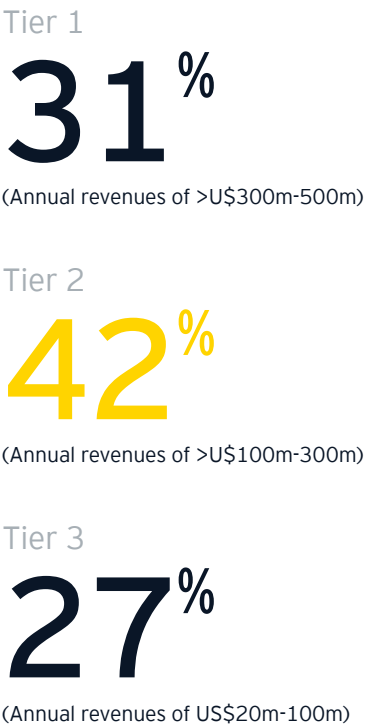


Figure 15
Respondents by organizational size (annual global revenues in FY18)



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