TECH FOR GOOD INSTITUTE

Report

Leveraging Digital Platforms for Public Benefit

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About This Study

While the impact of digital platforms on economic growth in Southeast Asia is widely recognised, studies exploring its positive influence on social, developmental, and environmental progress are limited. Building on the Tech for Good Institute's 2021 Platform Economy Report, this report explores how digital platforms are leveraging its unique features, not only to facilitate broad-based digital transformation, but also to promote sustainable behaviours among different stakeholders.

For this report, digital platforms from a range of sectors were considered, including e-commerce, hospitality, experience, mobility, and food delivery platforms. Industry and civil society representatives were consulted through a roundtable discussion where use cases and challenges in utilising platforms for public benefit were discussed.

The selected examples are meant to be illustrative rather than exhaustive. The aim of this report is to serve as a conversation starter on how the unique features of digital platforms may be leveraged for public good, and to provide a reference for governments, the private sector, and civil society to explore ways in which digital platforms may maximise its potential to contribute to Sustainable Development Goals in Southeast Asia.

Disclaimer

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Ant International

About the Tech for Good Institute

The Tech for Good Institute is a non-profit organisation working to advance the promise of technology and the digital economy for inclusive, equitable and sustainable growth in Southeast Asia.

With a population twice the size of the US and strong demographics, Southeast Asia's digital economy is evolving rapidly. At the same time, the region's trajectory is unique, shaped by its diverse cultural, social, political and economic contexts. The Tech for Good Institute serves as a platform for research, conversations and collaborations focused on Southeast Asia while staying connected to the rest of the world. Our work is centred on issues at the intersection of technology, society and the economy, and is intrinsically linked to the region's development. We seek to understand and inform policy with rigour, balance and perspective by using research, effective outreach and evidence-based recommendations.

The Institute was founded by Grab to advance the vision of a thriving and innovative Southeast Asia for all. We welcome opportunities for partnership and support, financial or in-kind, from organisations and individuals committed to fostering responsible innovation and digital progress for sustainable growth in the region.

More information about the Institute can be accessed at www.techforgoodinstitute.org.

About Ant International

Headquartered in Singapore, Ant International powers the future of global commerce with digital innovation for everyone and every business to thrive. We collaborate with partners to support merchants of all sizes worldwide achieve growth through a comprehensive range of tech-driven digital payment and financial services solutions.

More information about the organisation can be accessed at www.antglobal.com.

Executive Summary

Digital platforms have unique features that have changed the way we work, live and transact.

Digital platforms are intermediary services between multiple sets of users, typically buyers and sellers. These services existed prior to the digital age, such as banks and television networks. By digitalising interactions and transactions between users, however, digital platforms have enabled multi-sided marketplaces that are unique in its **efficiency, accessibility, scale and agility.** The business infrastructure for digital-first platforms can accommodate even more transactions with less marginal cost, thus allowing for rapid scalability. In fact, these business models often require scale to succeed, relying on the network effect of becoming more relevant and valuable to its growing user base. Without a physical footprint, digital platforms can transcend geographies and time zones, operating continuously and extending beyond metropolitan cities. In its drive to demonstrate value to users, digital platforms have also focused on lowering barriers to entry through seamless and frictionless user journeys. Its accessibility increases as digitalised business processes and automation becomes more efficient by reducing operational costs, thereby driving down cost to users. Digital platforms collect and process large amounts of data in real time. Not only does this boost efficiency, it also underpins agility in decision-making and product development, such as dynamic pricing or mapping an efficient route. Finally, as digital platforms work hard for user loyalty within non-exclusive relationships, digital platforms innovate constantly across strategy, operations, technology, product and marketing to grow.

With these capabilities, digital platforms have contributed to digital economy growth in Southeast Asia by enabling sellers and merchants to digitalise their businesses for relatively low investments in technology and talent. This is particularly relevant in the region, in which micro, small and medium-sized enterprises (MSMEs) account for nearly 99.9% of all enterprises.[1] With its scale, digital platforms are also able to invest in cybersecurity, data protection and other measures to establish user trust, which may be difficult for individual merchants. As an intermediary, digital platforms are able to de-risk transactions for both buyers and sellers in multiple ways, from managing personal and payment data to holding funds in escrow for payment certainty to product verification and user safety.

Digital platforms can deliver social benefits and foster community well-being.

Leveraging its scale, accessibility, efficiency and agility, digital platforms can support social and environmental goals. During the COVID-19 pandemic, for example, digital platforms connected MSMEs directly with customers online, enabling them to operate and sustain their livelihoods. Additionally, digital financial services platforms were tapped by governments to identify enterprises needing support and to distribute cash assistance to eligible social protection beneficiaries.

The efficiency, user-friendliness and "always-on" nature of digital platforms have also supported social initiatives, such as facilitating charitable giving and community support initiatives. The agility and personalisation capabilities of some digital platforms have also facilitated accessible travel and mobility to underserved customer segments, while others have used their scale to engage hard-to-reach audiences for upskilling initiatives, such as MSMEs and drivers.

Digital platforms can contribute to environmental sustainability.

The digital economy's environmental footprint is growing rapidly, with the sector set to increase its global energy and water use significantly due to accelerating digital transformation and the implementation of artificial intelligence (AI) technologies into solutions.[2] While a "Say-Do-Act" gap does exist between intention and action, there is an opportunity for larger digital platforms to work on and integrate efforts towards reducing environmental costs across operations, products and service offerings. In operations, these range from data centre energy efficiency standards to optimising logistics in supply chains. In products, this includes simplifying choices and highlighting lower-impact options, such as building confidence in the circular economy or the use of electric vehicles or alternative fuels. Finally, service offerings might be informed with data, such as efficient routing systems.

The scale and data-driven approach of digital platforms can also support user groups, such as merchants in their own sustainability journeys. For example, digital platforms can support MSME sustainability reporting, waste reduction, recycling and sustainable packaging initiatives.

Digital platforms can uniquely nudge users toward more sustainable practices.

Digital platforms can effectively raise awareness about sustainable practices. It can also steer users toward environmentally-friendly choices by simplifying decision-making processes and promoting data-driven insights. For example, food delivery platforms have reduced single-use plastic waste through the default option of not including plastic cutlery with deliveries. As an intermediary, digital platforms can develop value propositions for better environmental practices for users, such as showcasing environmentally-friendly merchants to consumers, or sharing data on the consumer trends and preferences to merchants. Digital platforms have also used the same techniques to encourage user loyalty, such as gamification or incentive systems, to encourage sustainable practices. Digital platforms may offer reward points or discounts for making sustainable choices, effectively nudging users toward more environmentally conscious actions through positive reinforcement.

Governments, digital platforms and the impact sector should work together to enable the twin transition approach of sustainability and digital transformation.

Digital technology and the new business models it enables drive more than economic growth - together with governments and the impact sector, these digital platforms can drive the equally important transition to a low-carbon, inclusive and circular economy.

For governments, sustainability and digital transformation plans should be integrated rather than independently developed. Singapore's Green Data Centre Roadmap is an example of planning for sustainable digitalisation, as continued investments in digital infrastructure are needed for digital inclusion. Continued investments in physical and supporting infrastructure would also allow digital platforms to maximise its impact through the unique characteristics of efficiency, accessibility, scale and agility. Governments can co-create a trusted data sharing environment with digital platforms to leverage the data-driven nature of digital platforms. Instead of sharing raw data, which may compromise business processes or personally identifiable information, sharing data insights may help governments formulate effective policies. Moreover, enabling an innovative environment, such as a framework supporting cross-border data flows with the necessary safeguards against unintended consequences, would further support digital platforms to deliver public benefit. And finally, governments could also consider adopting platform approaches in the digitalisation of public services.

For digital platforms, sustainable and responsible operations are baseline requirements. This sets the basis for sound corporate citizenship that builds trust among stakeholders. Platforms can also align with national priorities for sustainable growth, working with governments to find areas of collaboration, such as the digital transformation of MSMEs and public services. This may require a local or regional approach, even as the commercial impetus to scale often requires standardisation of approach, product and service. Where applicable, digital platforms can be a source of alternative data to quantify sustainable choices and support MSMEs in their sustainability journey.

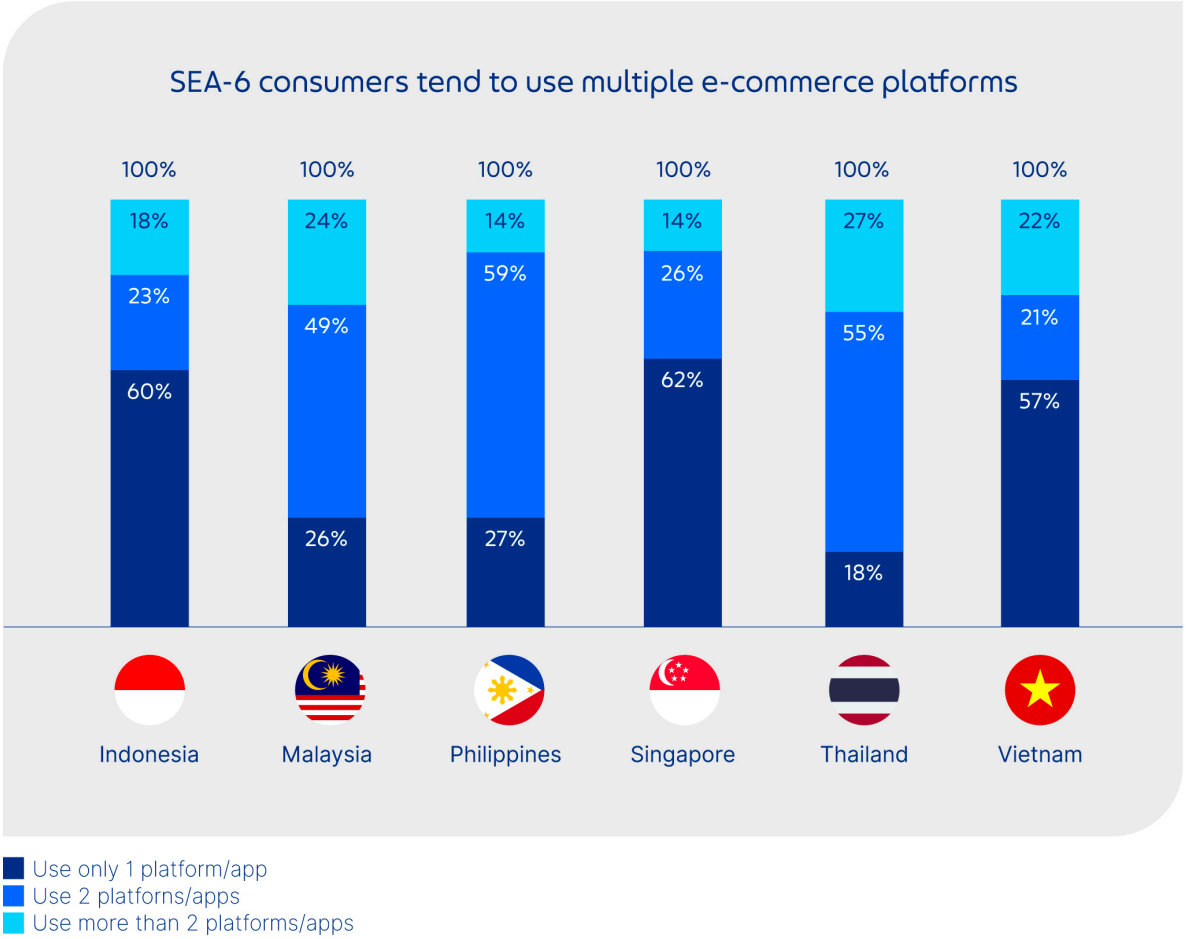
Lastly, digital platforms can be partners in research, public outreach, fundraising, programme delivery or evaluation for impact sector stakeholders, such as non-profit organisations, social enterprises, think tanks, academia and other developmental partners. While digital platforms can bring scale, a ready audience, technology and technical capability, the impact sector brings subject matter expertise, credibility and grassroots, or community networks. This approach complements their focus on service delivery, while utilising the speed, accessibility, scale and agility of digital platforms, rather than focusing to build their own infrastructure.

1. Digital Platforms in Southeast Asia

Digitalisation is transforming the economies of Southeast Asia (SEA), with the region's digital economy expected to achieve a gross merchandise value of USD 1 trillion by 2030.[3] This growth is underpinned by the ongoing digital transformation accelerated by the COVID-19 pandemic, ongoing investments in digital infrastructure, and a thriving startup ecosystem.[4] As relatively recent adopters of digital technology, users across SEA are increasingly mobile-first with online activity intermediated by digital platforms. The number of smartphone users in the region is predicted to reach 359.4 million by 2026 and the smartphone penetration rate among internet users ranges from a low of 81.7 percent (Philippines) to a high of 98.8 percent (Thailand).[5]

Digital platforms are intermediary services between multiple sets of users, most typically buyers and sellers. These platforms vary in size and scope while operating in diverse sectors, including commerce, hospitality, transportation, health and financial services. Consumers across Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam (SEA-6) are avid digital platform users.[6]

Figure 1. Adoption of digital platforms in Southeast Asia-6, 2021



Source: Tech for Good Institute, 2021

Typologies of Digital Platfotrms

There are many types of digital platforms. Below are four ways to classify digital platforms, by function, end-user, operating space, and business models.[7]

Function: platforms may be classified by the types of specific services they offer, such as:

Transaction platforms facilitate commercial transactions between different sets of users (e.g. merchants and buyers, riders and driver-partners, property owners and guests) who would otherwise have difficulty coordinating independently with one another. Transaction platforms include Grab, which connects riders with driver partners, Lazada and Shopee, which connects online sellers with buyers, and Alipay, which connects merchants and consumers.

Innovation or development platforms refer to online operating ecosystems with tools that allow developers to launch apps, products and services to run in these platforms, such as ioS and Android for mobile phones, or macOS and Windows for computers.

Information platforms facilitate the transfer of information between users, such as Linkedin for business/career profiles, and Zillow and Compass for property listings.

End-user: platforms may be classified according to the end users being covered by the online transactions.

Business-to-consumer Platforms facilitate interactions among businesses and individual consumers of various digital and physical products and services.

Business-to-business platforms facilitate transactions among businesses for its operating needs.

Peer-to-peer platforms allow individuals to directly interact with one another for a variety of transactions, such as property rentals or personal services.

Government-to-business platforms facilitate interactions between governments and organisations, including businesses and non-profits to expedite regulatory processes and licensing requirements.

Government-to-citizen platforms facilitate the provision of basic services through digital platforms from governments to citizens.

Other platforms include platforms used by end users for non-commercial transactions, including non-profits and online public forums.

Operating space: platforms may operate across digital and/or physical spaces.

Online-only platforms facilitate transactions of purely digital goods and services and therefore do not facilitate physical operations. These include all subscription services, as well as online services for government requirements including licensing, verification and payment of taxes.

Online-to-offline platforms facilitate transactions that crossover from the digital space to physical interactions. E-commerce platforms to broker sales of products online, while facilitating the delivery of the physical product to a specified location. For example, travel sites broker reservations and booking online for vacations in the actual property.

Business structure: platforms may be focused in specific sectors or cover a range of sectors.

Vertically-focused platforms offer services within a specified industry and tailor its business operations around a core area. Some of these industries include platforms solely operating in healthcare or financial services, most often within regulated industries.

Horizontally-focused platforms offer services in a wide range of sectors, crossing over industries and integrating its features for customers in different markets. For instance, some travel platforms bundle services across industries such as reserving flights, managing accommodation properties (hotels, short-term rentals and hostels), restaurant bookings and guided tours.

1.1 Key Sectors

Platforms have shaped and disrupted traditional economic activities by enabling sellers and merchants to digitalise their businesses for relatively low investments in technology and talent. This is particularly relevant across Southeast Asia in which micro, small and medium-sized enterprises (MSMEs) account for nearly 99.9% of all enterprises. Using a platform is generally an MSME's first foray into the digital economy. Whether it's online-only information platforms such as Instagram, or through online-to-offline transactional platforms like e-commerce, MSMEs can access customers, vendors and services directly without investing too much in the basic costs of digital transformation, such as cybersecurity and data protection. As an intermediary, digital platforms can de-risk transactions for both buyers and sellers, from managing personal and payment data to holding funds in escrow for payment certainty, to product verification and user safety.

Digital platforms are transforming key economic sectors by creating new market structures and opportunities for inclusive growth. The section below details key trends in these sectors and the specific impact of platforms in its development. We also provide some examples of the most relevant platforms within each sector. Note that the country in parentheses indicates the headquarters, though some platforms operate across multiple SEA jurisdictions.

Digital Financial Services

With half the population unbanked and 18% underbanked,[8] digital financial services and solutions have filled this gap in Southeast Asia. Examples of digital financial services players include Alipay+ and GrabPay, GCash in the Philippines, TNG Digital in Malaysia, Momo in Vietnam, Ovo in Indonesia, and True Money in Thailand.

In the digital payment space, digital finance platforms link financial institutions, such as banks, credit card companies, and payment transfer services, with businesses and individuals. Southeast Asia is the fastest growing region for digital payments with the number of digital wallet accounts forecasted to grow at more than three-fold to 440 million by 2025.[9] As of 2023, digital payments made up 50% of the region's transactions.[10] The massive adoption of digital wallets enables the accelerated growth of the e-commerce sector discussed in the next part.

Beyond digital payments, digital financial services include products previously out of reach to many, such as lending, insurance and investment.[11] Digital financial services platforms serve MSMEs through a combination of efficiency and innovative use of data. Reaching customers through digital apps, instead of brick and mortar facilities, makes services to rural and underserved communities more cost efficient. Horizontal digital platforms can also address many MSMEs' problem of lack of collateral for loans - instead these digital platforms utilise non-traditional datasets, consisting of data points such as MSMEs' past earnings and transaction history to develop credit risk models so that they may secure financing. The Tech for Good Institute, for example, found that over 70% of digital lending users had previously been unable to secure financing from traditional banks and other lenders.[12]

E-Commerce

E-commerce has been a significant driver of growth for SEA's digital economy. Online-to-offline (O2O) e-commerce platforms connect big and small businesses to consumers and logistics service providers, providing a seamless and often borderless shopping experience.

Consumer demand for integrated e-commerce services is steadily increasing and is forecast to reach 402 million consumers across SEA-6 by 2027. This accounts for 88% of the total population above 15 years old across the region.[13] Scale enables e-commerce platforms to meet this growing demand. The top five largest e-commerce platforms in the region by market share include Bachhoaxanh (Vietnam), Blibli (Indonesia), Lazada (Singapore), Shopee (Singapore), and Tokopedia (Indonesia).[14] The e-commerce ecosystem also includes smaller startups that cater to localised markets underserved by the larger platforms, such as Ekkbaz (Singapore), iMotorbike (Malaysia), and Sirclo (Indonesia).[15] Social media platforms also manage online marketplaces where individuals can sell to one another and smaller businesses to specific groups.

Through these platforms, the gross merchandise value of e-commerce in Southeast Asia grew to an estimated $200 billion in 2022, employing 160,000 skilled workers while indirectly supporting 30 million jobs. It has also allowed over 20 million merchants and 6 million restaurants to sell their products online.[16] The pandemic, moreover, increased the volume of e-commerce regional trade as businesses sought to diversify their supply chains.[17]

Healthcare

Health infrastructure is weaker in rural and peri-urban communities throughout the region - this is where digital health platforms play a role in bridging the healthcare divide. Vertically-focused telehealth platforms link community health workers and health service providers such as clinics, infirmaries and hospitals with pharmacies so that patients can receive both consultations and the necessary treatment. These online channels provide avenues to deliver medical services when physical facilities are lacking. In SEA countries, the telehealth ecosystem ranges from diagnostic assessments, checkups, psychological counselling and pharmacy services. Telemedicine platforms connecting users with both general physicians and specialists include Doctor Anywhere (Singapore), Halodoc (Indonesia), and Speedoc (Singapore), while others are focused on specific disciplines such as psychological counselling and behavioural coaching, like Intellect (Singapore). Additionally, digital platforms offer a range of O2O ancillary services including booking for lab tests and delivery of medical products such as Jiohealth (Vietnam). Digital platforms also offer elderly care such as AID by Konsulta MD (Philippines), Homage (Singapore), and Jaga-Me (Singapore). These services are salient especially for countries with ageing populations.

Tourism and Hospitality

Digital platforms have been instrumental in promoting growth in the tourism sector by providing economic opportunities for restaurants, hotels and resorts, vacation rental properties, and shopkeepers catering to tourists. These increasingly-horizontal platforms facilitate transactions for businesses across many tourism industries, offering a one-stop solution for tourists. They also feature cross-platform integrations with digital wallets to access in-destination merchant campaigns and offers. By 2025, the online travel and tourism industry in SEA is estimated to reach US$44 billion, up from US$17 billion in 2022. Apart from the largest global platforms such as Agoda, Booking.com, and Expedia, SEA platforms include RedDoorz (Singapore), Traveloka (Indonesia), VNTRIP (Vietnam), and Wego (Singapore). There are also some notable SEA ticketing platforms for live events such as Peatix (Singapore and Malaysia), Sistic (Singapore), and Ticketmelon (Thailand). Due to its agility, these platforms switched to live-streaming events at the height of the COVID-19 pandemic.

Transportation

Ride-hailing platforms provide services that supplement existing modes of transportation and increase mobility for users. The SEA ride-hailing sector is predicted to be worth over US$20 billion by 2025. The kinds of transport provided by these platforms are more diverse than in developed markets. Aside from cars, SEA has a high proportion of motorcycles, tricycles and bicycles to navigate through the dense urban streets that consist in many of the region's cities. The key players in the region include Gojek (Indonesia), Grab (Singapore), and Line Man (Thailand). Many ride-hailing platforms are also growing horizontally across sectors, offering food delivery and logistics services.

Logistics

Logistics platforms in SEA play a critical role in economic growth by providing the backbone for robust and efficient supply chains. At the height of the COVID-19 pandemic, bottlenecks in shipping and logistics caused significant delays in deliveries, which increased costs to consumers and slowed down business operations. Technology has enabled many platforms to streamline logistics even further through real-time data tracking, better fraud detection, and enhanced automation. Some logistics platforms have a business-to-business model while others facilitate business-to-consumer deliveries. Some prominent examples of logistics platforms in the region include Freightify (Singapore), J&T Express (Indonesia), Kargo (Indonesia), Logivan (Vietnam) and Ninja Van (Singapore).

Education

Online-only digital platforms are bridging the educational divide by increasing access and personalisation. Some platforms such as Cakap (Indonesia), ConicleX (Thailand) and Ruangguru (Indonesia) provide courses and online modules for remote learning, whereas innovation and development-type platforms offer collaborative online spaces for co-learning and monitoring of group tasks, such as Classruum (Malaysia) and Taamkru (Thailand). Other platforms offer tutoring services and for learning new languages, such as Quippy (Thailand) and Skillane (Thailand). Furthermore, educational platforms are supporting the need for continuous learning in the changing global economy. Competencies in IT, cybersecurity, innovation, etc., are much more accessible for individuals willing to learn. The top digital education platforms in SEA include EasyUni (Malaysia), HarukaEdu (Indonesia), Xseed Education (Singapore), and Zenius (Indonesia).

Restaurants, Food and Beverage

Restaurant and delivery platforms have transformed the dining sector, giving consumers access to endless restaurant reservations, takeaways and food couriers. These O2O platforms provide increased economic opportunities for restaurants to expand their reach while supplementing income for delivery drivers. Some notable platforms in this space include Chope (Singapore) for restaurant reservations, Oddle (Singapore) for takeaway service, foodpanda (Singapore) and GrabFood (Singapore) for food deliveries. In 2023, the combined gross merchandise value of the top six food delivery platforms in SEA was estimated to be at US$17.1 billion growing by 5% for the second year in a row.[20] Business model innovations such as cloud kitchens or shared food preparation facilities purposely built for online food deliveries have enabled this growth.

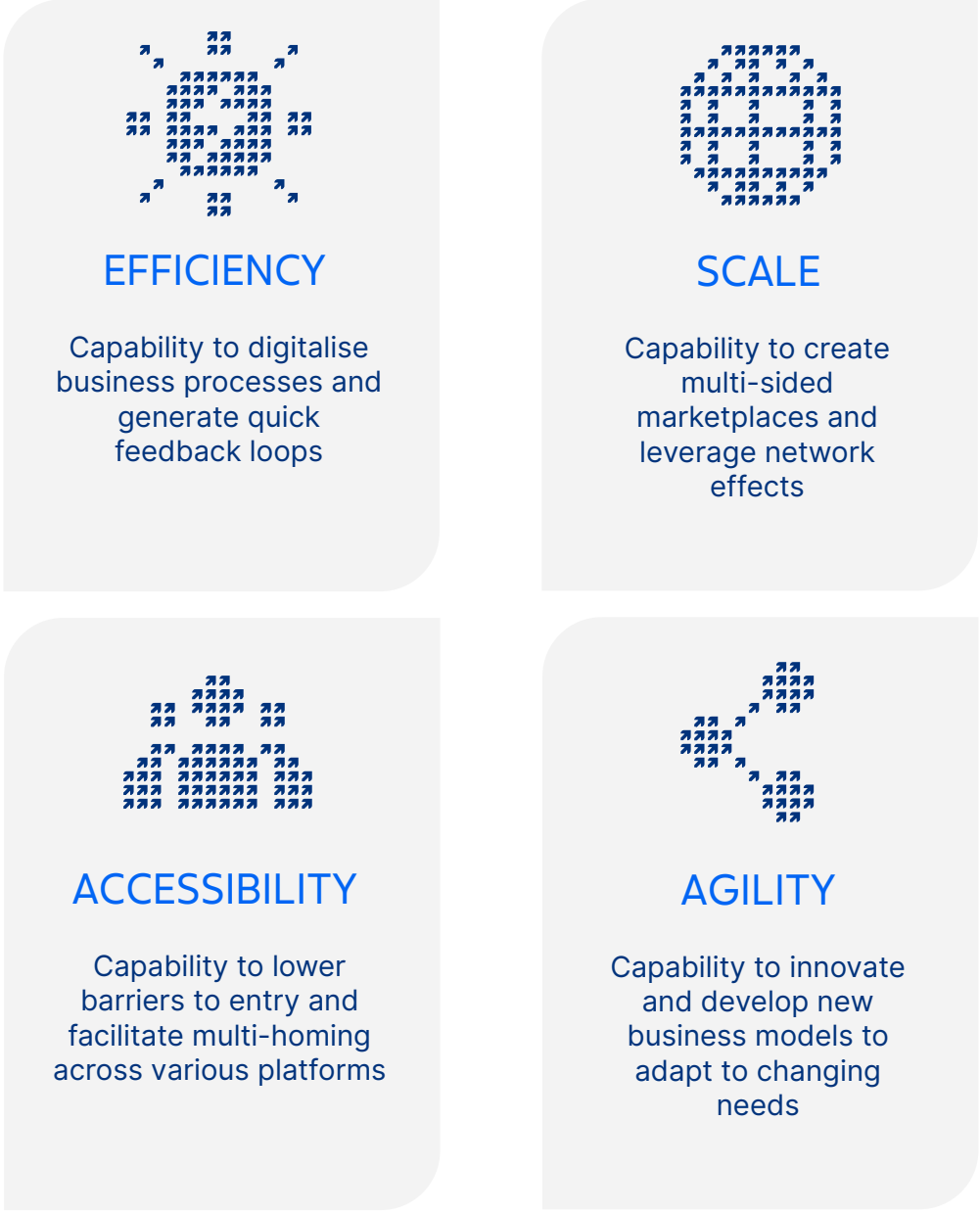
Figure 2. Southeast Asia's Digital Platform Landscape

Source: Tech for Good Institute, 2024
Note: List not exhaustive

1.2 Unique Features of Digital Platforms

The intermediary function of digital platforms is not new; banks and television networks played similar roles prior to the digital age. However, by digitalising interactions and transactions between users, digital platforms have enabled multi-sided marketplaces that are unique in its **efficiency**, **accessibility**, **scale and agility**. Regardless of its typologies or industries, digital platforms share unique features that disrupt its sectors. This report explores how these features support sustainable development.

Figure 3. Unique Characteristics of Digital Platforms



Efficiency

Platforms automate processes and generate quick feedback loops from users by leveraging technology and data, resulting in high efficiency. Digitalised business processes and automation reduces operational costs and drives down cost to users. For example, ride-hailing and food delivery platforms use automated processes to reduce waiting times and streamline several stages of the delivery process. This same feedback loop allows platforms to optimise supply to meet dynamic demand. For smaller businesses and partners, this speed of transaction facilitation allows them to conduct businesses more efficiently, especially with real-time monitoring tools for transactions and sales. In times of crises, this rapid transaction capability and swift coordinated action enables digital platforms to deliver greater impact.

Accessibility

The borderless nature of digital platforms bridges social and geographical divide, transcending time zones and distance. Its efficiency and business infrastructure also reduces transaction cost, making it commercially feasible to serve traditionally underserved groups. This has allowed digital platforms to broaden and deepen its user groups, including consumers, merchants and partners.

Digital platforms are generally open, allowing user groups to access similar services on competing platforms. This “multi-homing” feature drives platforms to continually demonstrate value to users, lowering barriers to entry through seamless and frictionless user journeys. Intuitive user interfaces make it easy for first-time users, even those with little education or digital experience. For example, e-commerce, digital financial services, ride-hailing and food delivery platforms can onboard merchants and workers quickly and remotely, through simplified and expedited online registration.

Scale

The business models behind multi-sided digital platforms often need scale to succeed, relying on the network effect of increased relevance, utility and value to multiple groups of users as the numbers and engagement increase. Rapid scalability is possible because the business infrastructure required to support digital-first platforms can accommodate increasing transactions with less marginal cost.

Agility

As digital platforms work hard for user loyalty within non-exclusive relationships, staying ahead in the market requires them to innovate constantly at various levels to meet user expectations. This effort is enabled by the platforms' ability to collect and process large amounts of data in real time, which informs decision-making at every level, including:

Strategy: Innovation can occur in resource allocation, business models, market strategies, acquisitions or partnerships, guided by market trends and the company's long-term goals.

Operations: Innovation in internal processes and workflows, implementation of new technologies or changes in supply chain management can improve efficiency and effectiveness. Such operational decisions can have significant impact as digital platforms build ecosystems involving multiple stakeholder groups.

Technology: Technology decisions - from infrastructure, software, tools, data storage and management, and security – are assessed on factors like security, speed, scalability, reliability, interoperability, compliance and cost. These decisions have operational and lifecycle implications, from water and electricity consumption to e-waste management.

Product: Digital products (typically apps) are consistently reviewed and refined for optimal performance. It has a deep knowledge and understanding of user preferences, motivations and behaviours, which develop simple and meaningful user journeys optimised for the platform's goals, such as purchases, engagement or sharing. Based on user action analyses, feedback and other competitor platforms changes may include altering existing features, adding new features and discontinuing underperforming services.

Marketing and stakeholder engagement: As market share is a significant indication and driver of commercial success, digital platforms invest heavily in marketing for brand awareness, positioning, user acquisition and retention, and converting attention to action for revenue generation. Sophisticated marketing strategies and execution frequently involve significant market research, A/B testing and data analytics.

1.3 The Digital Platform as an Intermediary

Digital platforms primarily perform a matchmaking function, relying on the capacities of partners, merchants, consumers and users that trust and opt into these platforms. Hence, platforms work hard to build trust, both institutionally as an intermediary, and among user groups with no formal ties or existing relationships.

Trust is not directly observable and difficult to measure, but companies design their processes, services and user interfaces to reinforce norms of trust, encourage users towards trustworthy behaviours and minimise non-compliance between parties. For example, peer-to-peer selling platforms might hold payments in escrow to reduce the risk of payment defaults. Service platforms, like ride-hailing and healthcare, provide security and qualification checks of service providers. Tourism and hospitality platforms offer insurance protection and guarantees for rental properties from possible damage, while travellers rely on verified candid information from those who have booked and stayed at the same property. Similarly, e-commerce platforms encourage buyers to rate products, report defective items and flag the delivery of goods that may have been misrepresented on their platforms. Across various service platforms, identity verifications are a crucial step for merchant or partner onboarding. Consistent communication, such as real-time tracking of rides or deliveries, builds a sense of transparency to foster assurance.

Moreover, digital platforms are data intermediaries that collect, process, analyse and distribute data of multiple stakeholder groups. As regulatory compliance and user expectations grow, digital platforms take on the responsibility of data protection and security on behalf of multiple stakeholders from consumers to MSMEs, to business partners, offering a safe and secure space to operate.

2. Beyond Economic Growth

Beyond driving economic growth, digital platforms have great potential to advance sustainable development goals.[21] By building more resilient communities, supporting social initiatives and mitigating environmental risks, these outcomes contribute toward shaping a more sustainable, inclusive and equitable future for the region.

This section showcases how digital platforms have harnessed its efficiency, accessibility, scale and agility to bridge gaps, drive innovation and deliver positive impact.

2.1 Building Resilience

The COVID-19 pandemic and recurring natural disasters have highlighted Southeast Asia's vulnerability as a global disaster hotspot, causing multiple disruptions of environmental damage and loss of life, livelihoods and property.[22] Digital platforms have demonstrated its capacity to support and empower communities during crises and time-sensitive situations. Operating off of smartphones, the accessibility and scale of digital platforms enables communities to meet escalating and changing needs, deploy resources rapidly and disseminate information quickly. Perhaps most importantly, digital platforms can swiftly adapt its services to meet evolving needs as disasters progress. Facebook, for example, has a Crisis Response feature that allows users to mark themselves as safe in times of public emergencies, check on their friends, stay updated, and give or find help.[23]

Furthermore, digital platforms supports resilience by enabling individuals, communities and systems to anticipate, withstand and bounce back from such events. Resilience is crucial as crises tend to disproportionately affect vulnerable communities, hindering their ability to cope and recover.[24]

Grab — Building pandemic-resilient communities

Grab, a ride-hailing, delivery and digital financial services platform in Southeast Asia, played a prominent role during COVID-19. The superapp supported national responses to the severe economic impact of the pandemic.

As businesses struggled to survive and many individuals suddenly became financially vulnerable, Grab's user-friendly platform and streamlined onboarding processes allowed individuals to quickly sign up as driver, rider and merchant-partners so that they can start earning quickly, while allowing for flexibility. To further support the more vulnerable merchant-partners, Grab launched the Small Business Booster Programme to help these businesses adapt.[25] The programme included the GrabMerchant platform, the Offline to Online (O2O) Merchant Support programme, the Merchant Discovery feature and a "Homegrown Heroes" initiative, as part of which Grab committed US$3.5 million in free ads for Southeast Asia small businesses.

By enabling businesses and individuals to diversify their income streams, Grab in turn provided essential services to the public, delivering food, medication and other essentials to communities during lockdown.

Grab's agility enables it to pivot swiftly to provide other needed services. For example, Grab launched a new product, GrabCare, a 24-hour on-demand transport service for frontline healthcare workers in Singapore, as they faced challenges of using reliable transport due to the public's fear of virus transmission at the height of the pandemic in 2020. Grab educated its extensive network of driver partners on safety measures, with over 15,000 driver-partners indicating support for the initiative. Over the course of the pandemic, Grab successfully provided over 300,000 GrabCare rides in Singapore.[26]

GCash — Enhancing disaster resilience for vulnerable communities

GCash, a mobile payment platform in the Philippines leveraged its scale, efficiency and versatile payment options to set up a digital donation drive where over 90 million users contributed to the country's disaster relief funds.[27] Through the #GCashGivesBack QR Code and the Pay Bills feature within the app, GCash mobilised to support relief and recovery operations in disaster-affected areas. Collection is immediate and funds are distributed efficiently to ensure timely assistance to disaster-impacted regions. To date, GCash has partnered with non-government organisations (NGOs) including UNICEF, Philippine Red Cross and Ayala Foundation[28] to bring aid for victims of disasters in the country, such as the 2022 Luzon Earthquake,[29] 2021 Typhoon Odette and 2020 Taal Volcano eruption.[30]

During the COVID-19 pandemic, community quarantine measures in the Philippines led to limited access to essential resources like food and money. Additionally, the country faced a critical shortage of personal protective equipment like masks and alcohol-based disinfectant, which were particularly vital for frontline health workers as they were at higher risk of exposure to the virus.[31] In response, GCash harnessed its accessibility, scale and agility to launch the #FightCOVID19 digital fundraising campaign. Users could provide financial support to vulnerable communities by simply tapping on their 'Pay Bills' option on the GCash app. The collected funds, totalling approximately USD$106,000 as of April 2020, were distributed to non-governmental frontliners and hospitals for the purchase of medical gear and equipment, as well as to support eligible social programmes to strengthen community resilience.[32]

2.2. Social Impact

Digital platforms can also support social goals as a trusted intermediary, with its ability to reach key stakeholders in an efficient way and its impetus for continual innovation. The examples below illustrate how digital platforms can act as powerful catalysts in enabling social impact.

Expedia Group — Making travel more accessible and inclusive

Expedia Group, a travel platform company with over 20 travel brands, identified a gap within the travel sector, and is using its scale and reach to expand travel access for underserved and underrepresented groups, thereby championing inclusive travel.[33]

However, as the company worked towards this goal, they encountered challenges in implementing accessibility standards across its digital platforms. Employees at Expedia Group found the Web Content Accessibility Guidelines (WCAG) 2.1 overwhelming and challenging to comprehend, which led to inconsistencies in accessibility across their site and applications and an over-reliance on their internal Accessibility Team for guidance.[34] To this end, Expedia translated the WCAG 2.1 into its own product: the Expedia Accessibility Guidelines (ExAG).[35] These guidelines are hosted publicly to create visibility and provide clear accessibility standards - from customer journeys to design, to structuring code to ensure that products are compatible with assistive technologies.[36]

Moreover, Expedia identified a broader industry challenge and business opportunity - many travel companies tend to overlook the need for including and providing relevant services to disabled and differently-abled travellers.[37] In response, Exepdia has not only prioritised accessibility internally but has also seen the value of partnerships as they support non-profits through traditional corporate philanthropy and partner with startups who are working towards the same goal.[38] One collaboration, for example, is with another online platform called Wheel the World, which specialises in accessible travel for people with disabilities. The collaboration aims to enhance travel accessibility by integrating Expedia's extensive hotel inventory with Wheel the World's detailed property and room accessibility data.[39]

Giving.sg by National Volunteer and Philanthropy Centre (NVPC) — Creating a culture of giving

Giving.sg is a digital platform launched by the National Volunteer and Philanthropy Centre (NVPC) of Singapore to build a giving ecosystem across the country. The NVPC recognised that charitable giving in Singapore has been challenging due to the absence of a centralised and trusted donation platform. Therefore, they created Giving.sg for a one-stop national giving platform that brings together donors, volunteers and NGOs in a single, accessible and trusted digital space.[40]

As a trusted intermediary, Giving.sg streamlines the process of charitable giving and volunteering so that prospective donors and volunteers can engage with vetted charities with confidence. Moreover, the scalability and flexibility of this platform has enabled charities to create and manage their own campaigns easily, benefitting from a level of visibility and discoverability that may not have been possible through search engine optimisation or digital marketing alone. To optimise strategies and impact, charities are given access to detailed analytics and reporting tools that help them monitor the performance of their campaigns in real-time and make data-driven decisions. Givers can also reach out to their own networks by creating their own campaigns for their chosen causes, from corporate challenges to personal appeals.

To date, Giving.sg has enabled over 610,000 users to raise nearly US$100 million and provide over 35,000 volunteers for local charitable causes, fostering a giving culture in the digital age.[41]

2.3. Environmental Impact

Southeast Asia cannot afford to have a digital transition that is not environmentally sustainable. Globally, environmental risks are reaching a critical tipping point, marked by extreme weather events and biodiversity loss.[42] Southeast Asian governments face the dual challenge of responding to the effects of climate change caused by decades of emissions by advanced economies, while pursuing development agendas for some of the fastest growing populations in the world. Today, SEA is highly vulnerable to climate disasters,[43] and still energy-related emissions from Southeast Asia are expected to more than double by 2030.[44] According to the International Energy Agency, around 65 million people across ASEAN do not have access to electricity.[45] Southeast Asia needs to chart new pathways to low carbon, inclusive growth, which can be provided by sustainable electricity suppliers that are grid-based or decentralised.

The environmental footprint of digital platforms is substantial. Overall, the tech sector is responsible for approximately 3-4% of global GHG emissions. Data centres run on large amounts of electricity, accounting for almost half of the sector's total footprint.[46] This demand for electricity, as well as water for cooling, is likely to increase as companies adopt artificial intelligence technologies in their products and operations. Unfortunately, environmental impact is still not front-of-mind for many digital economy companies in Southeast Asia. In the Tech For Good Institute's research of over 400 digital economy companies, only 17% (74 companies) identified any environmental issues as relevant to their company. Issues such as water, climate action, environmental compliance, renewable sources and biodiversity conservation were all among the least-frequently cited topics of relevance.[47] Globally, however, carbon and water intensity are increasingly scrutinised, especially for listed companies. Google, for example, has achieved approximately 64% round-the-clock carbon-free energy across their operations in 2023 despite increased energy demands,[48] and has signed a record number of renewable energy agreements.[49]

On the other hand, some digital platforms have been able to contribute towards promoting sustainable practices among its different stakeholder groups, as illustrated in the following examples:

Ant International – Boosting sustainability for small businesses through Programme Sirius

Ant International, a global digital payment and financial services platform headquartered in Singapore, is leading a collaborative effort to support MSME sustainability reporting, in partnership with the International Finance Corporation (IFC) and Gprnt, an initiative by the Monetary Authority of Singapore (MAS).[50] The collaboration aims to address challenges faced by MSMEs, which often do not have sufficient resources and expertise to meet increasing sustainability reporting requirements from regulators, financial institutions and supply chain partners.

Dubbed Programme Sirius, the initiative brings together 13 Asia-Pacific fintech companies from 11 economies, including AlipayHK, ANEXT Bank, Bigpay, bKash, DANA, GCash, Hipay, Kakao Pay, MPay, TNG Digital, TossPay, TrueMoney and Zalopay to promote MSMEs' resource efficiency and integration of Environmental, Social, and Governance (ESG) criteria into its operations. The aim is to help MSMEs grow by participating in larger companies' supply chains or access sustainable finance options, which enhances resilience and competitiveness among MSMEs while promoting responsible business practices.

Grab – Building an inclusive EV Ecosystem

Electrification of the transport system is vital to a low-carbon transition.[51] As a ride-hailing and delivery company, Grab is supporting the transition to electric vehicles (EVs) across the region.[52] To drive this transition effectively, Grab has leveraged its scale, accessibility, efficiency and agility to develop a comprehensive strategy built on three key pillars: innovation, economic viability and accelerated adoption.

In the innovation sphere, Grab's scale and agility enables the platform to actively seek out and test EV alternatives that meet the needs of its driver-partners. For example, recognising that battery issues were a concern for two-wheel EV drivers, Grab partnered with energy providers like SWAP Energy and motorcycle manufacturer Kymco to address these challenges in charging infrastructure. This partnership resulted in the expansion of Grab's Battery-as-a-Service network to over 1,200 strategically located swap stations across eight Indonesian cities, ensuring convenient access for its driver-partners.[53] Moreover, in Singapore, Grab has used data to help EV charging networks identify optimal charging points, many close to coffee shops and food outlets so that driver-partners can take a break while charging.[54]

Recognising the economic viability is crucial for widespread EV adoption, Grab taps on its scale and accessibility to lower the financial burden of its driver-partners. In Thailand, for example, it launched the 'Grab EV' programme with strategic partners for both two-wheel and four-wheel vehicles. The programme features two support models. The first is "drive-to-own" to lower the financing barrier of EVs with zero down payment required, and daily instalments and loan approval. The second is an "end-to-end EV rental" offer affordable daily rental and support, including vehicle and customer services. This offering is enabled through partnerships with EV manufacturers and operators such as STROM, HSEM Motors, Swap & Go and Auto Drive.[55]

To accelerate adoption, Grab also has a JustGrab Green feature in its consumer app to make it easy for passengers to choose low-emission vehicles. By facilitating the choice for EVs among consumers, drivers see the benefit of increased demand.[56]

3. Achieving Impact at Scale

This section outlines how digital platforms are uniquely equipped to drive large-scale sustainable practices and address pressing social and environmental concerns.

3.1. Raising Awareness

Digital platforms have changed the way we live, work, interact and transact with its services embedded into our everyday lives. Southeast Asians spend over half of their waking hours online (8.4 hours per day), almost 30% more than the global average (6.53 hours per day).[57] Across the region, online and social media are the main sources of information.[58] The constant "always-on" engagement, intimacy afforded by a "phone in every pocket" and ability to personalise content to each user makes digital platforms particularly suited to raise awareness of varying issues among its different user groups. Platforms can efficiently personalise and disseminate educational content in diverse formats — articles, videos, infographics — to educate its stakeholders with targeted calls to action.

Lazada — Empowering merchants through training

Lazada is an e-commerce platform serving six SEA countries (Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam) through technology, digital payments and logistics. In 2023, Lazada launched its Lazada Sustainability Program (LSA) to empower SMEs to operate and grow sustainably within the digital ecosystem. The programme includes online academy Lazada University, offering e-learning courses for topics such as sustainable packaging practices, energy-efficient operations, product traceability, and employee and health safety. The programme also includes a six-month "Seller Acceleration Camp," first piloted in Bali, Indonesia, in partnership with a non-profit organisation called Kopernik, a digital financing platform Modalku and the International Trade Centre. The bite-sized learning was jointly designed with the Singapore Environment Council, and knowledge partners from academia, civil society and the private sector contributing their time during the 'Ask the Experts' interview series.[59]

Google — Raising awareness for disaster mitigation and response

Google has supported disaster mitigation and response efforts with its Crisis Response Hub — an AI-powered database of natural disaster information accessible to both victims and responders of natural catastrophes. It provides various data tracking systems including early warning systems, flood forecasting and heat mapping as a basis for concrete action on the ground.

To mitigate the impact of disasters, the Hub raises safety awareness by using emergency location services and readily available protocols for individuals. In times of crises, timely and accurate information helps effective coordination and strategic allocation of resources. Disaster-prone communities need real-time information on highest risk areas and available channels of aid so that individuals trapped in a disaster area can use the Hub to seek help through their smartphones.

Since 2017, the Hub has amassed over 3.9 billion in crisis alert views spanning over 30 countries and is working with over 25 civic and government partners.

3.2. Simplifying Choices

In today's fast-paced world, consumers are bombarded with numerous daily choices.[60] Digital platforms can support sustainable actions by removing uncertainty and simplifying choices, such as making them the default option. Single-click actions or saved preferences reduces friction for the target audience.

Digital Platform Industry Association (Singapore) — Making green options easier

The Digital Platforms Industry Association (DPIA) is an industry association jointly launched in Singapore in 2022 by food delivery businesses foodpanda, Grab and Deliveroo. Recognising that its partners and merchants are crucial to digital platforms, the association aims to strengthen the industry's frameworks, guidelines and policies to further support this community.[61]

Committed to the Plastic ACTion initiative by the World Wide Fund for Nature, DPIA members made "no-cutlery" the default option for food deliveries as a first step towards eliminating unsustainable plastic packaging.[62]

Additionally, these companies leveraged their scale to create demand from their merchants to promote sustainable packaging solutions. Deliveroo, in collaboration with BioPak, now offers its merchants plant-based or paper packaging at competitive prices. Meanwhile, GrabFood partners with beverage brands to replace plastic straws with compostable, plant-based bubble tea straws.

These changes at the operational and product level could be implemented quickly, consistently and at scale by digital platforms. In 2020, for example, Deliveroo, Foodpanda and Grab collectively saved 1.3 million pieces of cutlery every week - a 30% increase from the previous year.[63]

Finally, DPIA members highlighted sustainable merchants to raise users' awareness of the environmental implications of their consumption habits.. For example, Foodpanda developed the Green Label Initiative, a restaurant certification programme in which the certification label is displayed prominently in-app, which nudges and enables customers to make environmentally-sound choices.

Carousell — Using data to build confidence in the circular economy

Carousell is a digital platform that links individuals and businesses to buy and sell pre-owned and second-hand goods. Its distinction as an e-commerce platform is an emphasis on advancing the circular economy.

Selling items online as an individual can be a complex process that involves critical decisions, such as accurate item description, correct categorisation and, most importantly, appropriate pricing. Pricing can be challenging and daunting for many, especially those who are new to online selling, as setting the price too high might deter potential buyers, while a low price could lead to a loss.

To address these challenges and streamline the online selling process, Carousell has simplified these multiple decision points with AI. The platform applies image recognition to streamline the listing process, automatically categorise items for easier discovery, personalise listing for prospective buyers and optimise search results.

Pricing assistance also provides sellers insights from past transactions, suggesting prices based on similar listings and current market trends. This empowers sellers to set competitive and fair prices, increasing the likelihood of sales.

Carousell's user-friendly and accessible platform serves as a nudge towards a circular economy by making it easier for everyone to participate in the sustainable practice ofselling and buying pre-owned and second-hand items. Based on the Carousell Group's Circular Economy Impact Report, the platform has diverted approximately 116,577 tonnes of carbon dioxide equivalents in four goods categories in 2022, which is equivalent to 5.3 million trees absorbing CO2 per year.[64]

3.3. Incentivising Public Benefit Activities

Digital platforms are generally open by nature, which means that users can easily find similar services offered by competing platforms. This "multi-homing" feature drives platforms to continually work hard for user retention and growth. Therefore, a key metric for digital platforms is "monthly transacting users," used both internally by management as well as externally by investors to track platform performance. As a result, platforms use targeted incentivisation to retain and grow their user base, earn loyalty and encourage promotions, which can lead to further acquisition of new users.

Incentives can range from financial rewards like discounts, cash back and credits to non-financial benefits, such as gated content, boosted status or premium features. Gamification is a common technique to enrich user experience. These include leaderboards or rankings to stimulate competition and promote more frequent usage, or micro-awards such as points or badges to reward behaviour, demonstrate appreciation or foster a sense of achievement.

Incentivisation is not the purview of digital platforms alone. Many businesses, from grocery stores to credit cards, employ similar techniques to promote active usage and desired behaviours. However, digital platforms optimise these techniques by using data to understand user behaviour and design its campaigns. Campaigns can be personalised at scale and efficiently tested for performance (e.g. A/B testing for timing, intervals and messaging) to be quickly improved upon.

Digital platforms can, and have, deployed this capability to achieve public benefit. Gamification, for example, has helped improve attitudes towards environmental actions and drive practical actions by making sustainable choices fun and rewarding.[65] Various digital platforms have also created virtual networks where individuals can collaborate, share achievements and support each other's efforts. This builds a sense of community, generating a collective momentum towards achieving sustainability goals.

Amazon — Sustainability Data Initiative

Businesses, innovators and researchers all need datasets for their work. Amazon's Sustainability Data Initiative (ASDI) provides access to comprehensive datasets that are crucial for various sustainability challenges while offering Amazon Warehouse Services (AWS) Cloud Credits for Research.[66] This helps researchers to access the data equitably and opens the doors for collaboration, while drawing meaningful conclusions that advance sustainability efforts and enhance resilience. ASDI, with technical support for effective cloud implementation, leverages AWS' scalability, efficiency and agility to significantly lower costs, time and technical barriers in analysing datasets for sustainability research. This empowers small businesses, researchers and innovators to actively contribute to sustainability goals, irrespective of their scale or computing capabilities.[67]

Another example of AWS' computing infrastructure for public good is AI SIngapore's (AISG) partnership with AWS to build large language models (LLMs) that are culturally accurate, localised and tailored to SEA. Dubbed Southeast Asian Languages in One Network (SEA-LION), the effort uses AWS' scalable infrastructure to produce a family of LLMs for languages commonly used in the region including Malay, Thai, Vietnamese, Burmese and Lao.[68] Building these nuanced models requires the use of localised data, which better reflects cultural expressions, habits and common language verbiage among the region's population.[69] A publicly available version is set to launch in 2024, increasing accessibility to all demographics.

Ant Forest – Carbon reduction effect via gamification

Ant Forest, launched in 2016, mobilised Ant Group's extensive user base to support environmental causes. The Ant Forest app supports broader environmental initiatives led by governments and non-state actors to encourage individuals to adopt green lifestyles.[70]

The initiative incentivises users to incorporate low-carbon activities into their daily routines, such as paying utility bills online or taking public transportation. Each activity accrues 'green energy' points that accumulate overtime and develop into a full fledged "virtual tree". Once a user's virtual tree has fully grown, Alipay and its non-profit partners plant a real tree where users can track via satellite imagery, or commit to preserving specific conservation areas.

This gamified approach has proven highly effective in promoting sustainability for individual behavioural change that contributes to reforestation and carbon offsetting efforts, and generates economic benefits for farmers. Over 650 million users has participated with Ant Forest planting over 400 million trees.

4. Recommendations

Digital platforms are here to stay. Its speed, scale, accessibility and agility hold tremendous potential for meeting national priorities, from inclusive digital transformation and driving the digital economy, to being active partners in society towards achieving sustainable development goals. Digital ecosystem stakeholders including governments, digital platforms and impact sector players can work together to tap this potential.

4.1 For governments

Digital transformation plans and sustainability strategies should be aligned.

Digitalisation is a key part of development strategies for the SEA-6 countries as they develop and invest in digital economy plans. However, these plans and roadmaps are not always aligned with the green transition or broader sustainability roadmaps.[71] Typically, digital and sustainability plans are developed separately, with different government agencies leading the design, development and implementation of these roadmaps. Governments may consider closer coordination among various policy offices and industry players in order to optimise impact for sustainable digitalisation. The region has the potential to pioneer a “digital-green” ecosystem where technology is leveraged for inclusive growth.[72] Singapore’s Green Data Centre Roadmap is an example of planning for a sustainable digital economy while developing the digital economy sector.[73] The roadmap aims to accelerate energy efficiency at the hardware and software levels and facilitate the data centre industry’s use of low-carbon energy sources.

Investments in both physical and supporting infrastructures are needed for inclusive digitalisation.

Access is the first step. Digital platforms rely on affordable, high-quality internet access. While the positive correlation between improved internet access, higher productivity of companies and economic outcomes has been extensively researched, such investments also foster access to e-government services and information.[74] Citizens who did not have internet access were isolated during the COVID-19 pandemic as they lacked access to goods and services, including education, healthcare and public information.

Significant gaps remain, especially in non-metro areas. Commercial internet service providers often overlook rural areas due to low population density, household income, and challenging terrain as it typically results in minimal returns on investment.[75]

Of course, connectivity is just the first step. To be inclusive, we must build a confident digital society. Digital literacy and cyber awareness are vital to ensure that the investments in connectivity yield the digital dividends for all.

Trusted data sharing between the public and the private sector can facilitate collective progress.

Digital platforms often serve as repositories of valuable data. Governments may request data from companies for legal, criminal, security or regulatory compliance matters. On the other hand, the private sector partners with governments for evidence-driven policy-making and execution. Data informs decision-making, providing insights into trends, situational analysis and ensures that problems go under investigation. It helps agencies identify areas of need for better resource allocation, foresee policy impacts and track policy progress and effectiveness.

It is crucial that digital platforms need to protect data they hold, both as a source of competitive advantage and out of their responsibility for personal data protection. Clear, transparent and reasonable guidelines are needed to foster trust in data sharing arrangements. For example, data classification, data life cycle and data protection standards should be specific, clear and equally applicable to both the public and the private sector. Data requests should clarify what the intended public purpose is, with commitments that shared data are solely to be used for that purpose only, consistent with global international standards of data protection policies. All parties should fully commit to implement robust cyber resilience measures so that cyber risks are mitigated. This includes encryption standards and information security guidelines. Where applicable, data sharing arrangements should be tested, such as using a regulatory sandbox, to ensure that unintended consequences are checked.

Furthermore, sharing data insights instead of raw data can be effective and efficient. On its own, raw data may lack the necessary context. Whereas data insights are meaningful analysis that reveals developments, trends and explanatory variables for policy development. These insights are provided by the private sector, and would include the business and operating environment of how the analysis was generated, enabling a more nuanced analysis of the data. In this way, digital platforms can provide relevant insights without potentially compromising any personally identifiable or proprietary critical business data.

An enabling regulatory environment encourages continued innovation in the digital economy.

As noted, digital platforms have unique characteristics of speed, scale, accessibility and agility that delivers both economic growth and public benefit. Key regulatory components empower these unique characteristics, including data protection, cybersecurity, intellectual property, e-commerce and taxation, competition and cross-border data flows. While governments operate within national legal traditions and domestic politics, collaboration is critical to create an interoperable digital ecosystem across the region and with the rest of the world. This will bolster digital economy growth and foster cross-border partnerships on urgent sustainability issues.

Governments can consider adopting a platform approach in the digitalisation of public services.

Approximately 100 million of the region's 460 million internet users came online between 2019 to 2022, spurred by the pandemic.[76] For most, internet access was primarily through mobile devices. In Indonesia, for instance, mobile penetration stands at over 125%, but fixed broadband only at 5%.[77] This dominant mobile-first and mobile-only behaviour means fundamentally different user needs, expectations and experiences, which digital platforms have advanced, built upon and are continuing to shape.

The **scale, accessibility, efficiency and agility** of digital platforms, coupled with the ability to match multiple service providers to users, can also be harnessed for public service delivery. Various countries in SEA-6 have implemented these efforts to engage citizens and businesses more efficiently and effectively. For example, the Vietnamese government created a national portal, where it currently offers 31%of public services, including filing official business and individual documents online, making contactless payments and receiving virtual responses from government agencies.[78] In Indonesia, the government plans to release a 'superapp' with nine public services by the end of 2024. This includes services in digital identity, education, health, social assistance and police.[79] Life.sg in Singapore is a mobile app repository for both individual and community public services and provides guidance for state assistance in all major life events, from birth to bereavement.

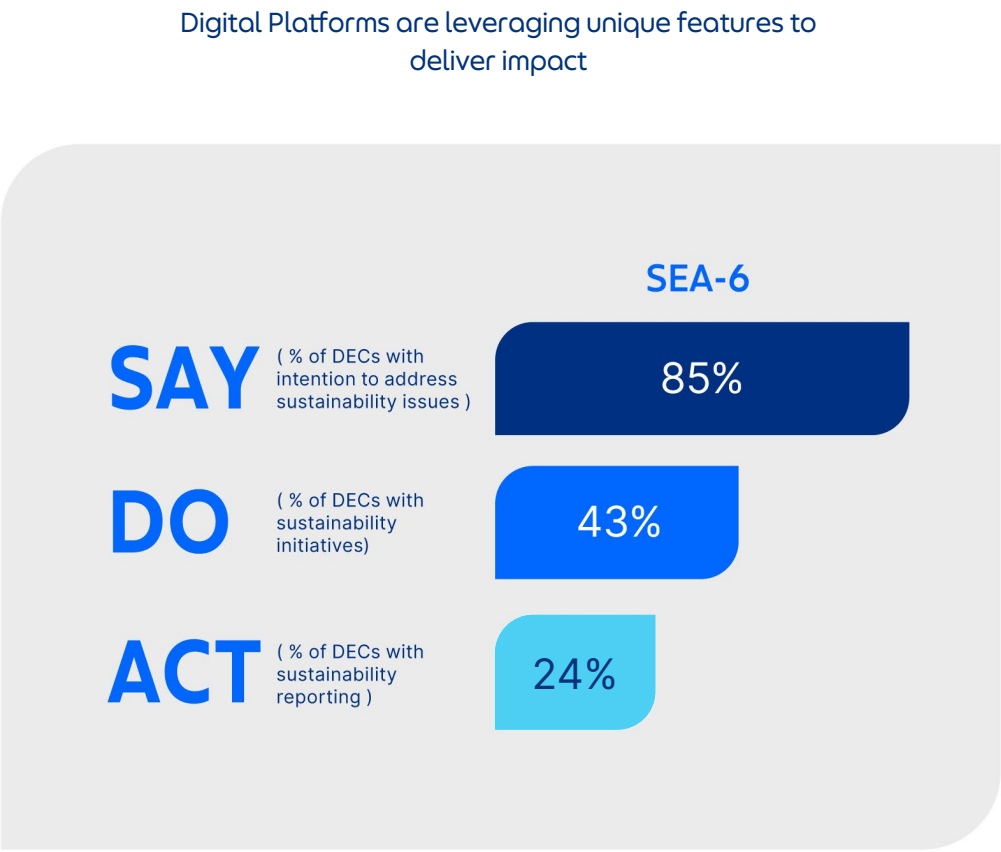
As governments continue their digitalisation journeys, current digital platforms can be active partners. Governments can leverage the lessons learned from the private sector, thereby avoiding the need to start from scratch. Sharing best practices can boost citizen engagement on government platforms. Furthermore, integrating government services and digital platforms offer potential benefits, such as using digital financial platform to facilitate payments for government services or incorporating government digital identity services into the companies' user flows.

4.2. For digital platforms

Digital platforms must recognise that advancing sustainability makes sense from a business perspective. From mitigating risk to meeting user expectations, working for both commercial growth and public benefit contributes to the bottom line.

A study by the Tech for Good Institute and the NUS Centre for Governance and Sustainability in 2023 found a substantial "say-do-act" gap among digital economy companies in Southeast Asia. 85% of companies expressed intention towards sustainability and impact ("say"), largely through websites or other corporate channels. However, fewer than half of the companies have concrete initiatives ("do"), while only a quarter of the companies have institutionalised sustainability practices through annual reports or sustainability reports ("act"). In other words, companies operating in the digital economy are aware they need to address sustainability issues, but most have yet to incorporate sustainability into their business models, products or services.

Figure 4. The Say-Do-Act Funnel



Source: Tech for Good Institute and NUS Centre for Governance and Sustainability, 2023

Digital platforms should not only develop products and services that shape sustainable behaviour but also demonstrate and communicate their efforts to reduce the impact of the core business practices and operations. This may include committing to lower carbon-footprint by choosing renewable sources of energy, utilising green data centres, reviewing the life-cycle of technology products being used in day-to-day operations, and actively working to advance inclusion, diversity and equity in their strategy, technology, operations, products and services, and market activities.

Digital platforms should consider aligning with national priorities as good for business.

Digital platforms have the capability to develop fit-for-purpose products and services that can contribute to the country's national priorities. Such policy momentum can create opportunities for business growth. All SEA-6 governments have two key areas of digital transformation: digitalisation of MSMEs and key sectors, and the digitalisation of government and public services. While digitalisation of MSMEs is an ongoing effort, these platforms have also partnered with governments to digitalise public services. For example, digital financial services platforms in the Philippines are being tapped to distribute government cash transfers to eligible beneficiaries.[80]

Opportunities with both investor interest and policy momentum are many. The United Nations Development Programme's Sustainable Development Goals Investor Maps, for example, have identified key areas in edtech, telemedicine and agritech that are key in Indonesia, Thailand and Vietnam.[81] These areas are ripe for innovation as entrepreneurs and digital platforms develop new products and services.

Digital platforms can proactively partner in developing and implementing policy that is impactful.

For example, ride-hailing data in Indonesia and Thailand has been used to inform policy for traffic nowcasting, road speed profiling and air pollution exposure of specific areas within a city.[82] Another example is the partnership between Expedia and the UN World Tourism Organisation. In 2020, they signed a memorandum of understanding for Expedia to share tourism trends and travel data to inform policies that support the growth and development of the tourism industry.

Digital platforms can support MSMEs' sustainability journeys.

Digital platforms are presently embedded in many MSMEs' business processes. With its scale, data and capability, digital platforms can work with MSMEs to achieve public benefit realisation, from aggregating demand for environmentally friendly packaging to supporting sustainability disclosures. For example, Logivan, a platform matching truckers and shippers in Vietnam, provides shippers such as smallholder farmers to insure every delivery, while supporting better Scope-3 carbon reporting with carbon tracking, calculation and visualisation.

4.3. For the impact sector

Aside from governments and digital platforms, non-profit organisations, international developmental partners, community organisations, think tanks and academia are valuable partners in realising public benefit.

The impact sector typically has domain expertise to design public benefit initiatives.

While digital platforms may have the technical expertise, impact sector organisations often have the domain expertise and grassroots connections to translate data into actionable and practical solutions, and provide platform services with more socially informed issues. Non-profit and community organisations can partner with digital platforms to create bite-sized content to raise awareness on digital safety, security and resilience. Meanwhile, academic institutions can partner with digital platforms to validate upskilling roadmaps for MSMEs and platform partners.

The impact sector can leverage the strength of digital platforms as an intermediary.

Just as governments use digital platforms for public services such as cash aids and transfers to eligible beneficiaries, other developmental platforms such as non-profit organisations can work with digital platforms to enhance their impact. Non-profit organisations can use digital platforms' infrastructure, efficiency and reach, ranging from fundraising to citizen science data collection so that resources are directed towards service delivery rather than creating their own infrastructure.

Impact sector organisations can serve as a neutral partner to foster trust in the digital platforms ecosystem.

These organisations have the credibility to provide tangible feedback on the impact of platform initiatives to the lived experiences of communities, and leverage their expertise to verify data while assessing sustainable practices of digital platforms. B Corp is just one example where certifying sustainable practices help motivate businesses, both big and small, to have more eco-friendly and socially responsible business models.

There is also an opportunity for civil society to work with the government and private sector for an inclusive and sustainable digital economy. For example, think tanks and academia can offer independent policy recommendations, improvement on business operations, evaluate progress of initiatives or facilitate data exchange. They can also serve as a non-adversarial platform for open dialogue between governments and the private sector. These continued conversations can increase confidence among users, platforms and regulators, thereby further promoting trust in the digital ecosystem.

Annex:

More Examples of Digital Platforms for Public Benefit

B Corp Certification — Driving quick recognition with rigorous certification

B Lab is a global non-profit organisation that manages the B Corp Certification, a holistic evaluation of social and environmental performance, accountability and transparency.[83] B Lab manages a network of global, regional and national organisations to achieve global scale with local relevance. Local B Lab offices build communities, ecosystems and partnerships to engage partners and organisations working towards certification, and consumers to shape the behaviour of businesses in their regions. Certified organisations, called B Corps, use B Labs' Impact Assessment to evaluate strengths and weaknesses.[84] Participating businesses can compare themselves with peers to understand their relative performance to continue to strategise for better sustainability. For B Corp organisations, the certification is a simple but trusted way to communicate sustainability commitments to mission-aligned customers, business partners and investors. A survey of over 109,000 online consumers in Asia Pacific revealed that more than half (54.6%) are proactively making sustainable choices when they shop.[85]

Fiuu — Traceable carbon calculator for consumers and businesses

In the current e-commerce landscape, information on carbon offset transactions are not widely available. Additionally, individual offset transactions are not visible to consumers who may want to reduce their own carbon footprint. To help encourage more sustainable practices, Fiuu (formerly known as Razer Fintech) launched Restorify – a one-stop solution for mass product carbon emission that calculates based on a life cycle approach. Restorify aims to provide a life cycle approach for businesses to calculate their carbon footprint and use a traceable carbon ledger to fractionalise carbon credits and complete transactions. This ensures detailed visibility and real-time traceability through a digital registry. On the other hand, Restorify issues certificates to consumers that details their carbon offsets to incentivise more sustainable practices.[86]

GrabForGood — Eco-Friendly Merchants

Grab has implemented a robust initiative to incentivise merchants toward sustainability goals through its Eco-Friendly Merchants[87] programme. This programme was designed to minimise environmental impact across Grab's services by encouraging participating merchants to adhere to sustainability criterias and provide them with exclusive benefits.

Businesses must meet specific requirements for delivery and in-store operations to qualify as an Eco-Friendly Merchant. These include adopting sustainable alternatives for packaging and cutlery, training staff to prioritise environmentally friendly packaging practices and offering incentives to customers who bring their own containers. By setting these standards, Grab aims to reduce waste and promote eco-conscious practices throughout its ecosystem.

In return, Grab offers exclusive benefits to Eco-Friendly Merchants, such as gaining higher visibility within Grab's app and enhancing their exposure to environmentally-conscious consumers. Moreover, they can benefit from exclusive partnerships and deals with eco-friendly suppliers and organisations facilitated by Grab. These partnerships not only support merchants in sourcing sustainable products but also incentivise them to maintain and improve their eco-friendly initiatives over time.

Grab supports long-term sustainability goals across its platform and beyond, contributing positively to the environment.

Digital Platforms Industry Association (DPIA) — Future proofing workers through upskilling

DPIA members are increasingly using their platforms' unique features to provide upskilling and access to education for various industry stakeholders,[88] specifically to partners who are keen to explore different career interests, and enhance their skills and knowledge to future-proof themselves.

For example, Foodpanda launched an eLearning portal in 2021 in partnership with Temasek Polytechnic and Gnowbe for its network of over 10,000 delivery partners. The portal's micro-skilling courses were bite-sized and easily accessible around the clock, suiting the partners' learning preferences and lifestyles.[89]

Similarly, Deliveroo launched Rider Academy in Singapore, in partnership with Lynx Educate, OpenClassrooms and the Open University. Deliveroo employed a user-friendly and customisable learning platform to offer free upskilling courses to self-employed partners. The digital learning platform's ability to scale extends both the initiative's reach and scopeto the partners' families and more than doubled the number of courses available from 600 to over 1,500 courses.[90]

Lastly, GrabAcademy by Grab started as a basic training programme for driver partners to learn road safety, first aid and defensive driving skills,[91] and has since evolved to a comprehensive training e-learning portal. Partnerships with local institutions have ensured quality and context-relevant content, such as the Financial Literacy Programme in Singapore. Co-developed with Ngee Ann Polytechnic, the programme offers six micromodule videos of 10 minutes each, covering topics from basic financial planning to investment and retirement planning, incorporating information about the country's national social security savings schemes, such as the Central Provident Fund (CPF) and Supplementary Retirement Savings (SRS).[92] The programme continues to innovate and expand recently offering onboarding courses specifically for women drivers and rolling out an anti harassment guidebook to provide them more equitable economic opportunities and representation among the driver population.[93]

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