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TRANSFORMING OUR LANDSCAPE VIA TECHNOLOGY

Singapore is driving the switch to a digital economy by embracing new innovations and empowering its workforce

IN THIS ISSUE

ED´S NOTE

Dear readers,

One silver lining to the COVID-19 pandemic is the rise of the digital economy. When all of us were sheltering in our homes, we relied on Internet access and the digital economy to meet our daily needs. For many, this drove home the importance of ensuring inclusive digital access for all. But what exactly does a digital economy entail, and what are some policy areas to consider? Our cover story, "The Digital Age" (pages 3 to 5), examines this in greater detail, using the Singapore experience to showcase various stages of a digital economy's adoption, including research and innovation, manpower development and governance, as well as policies and standards.

Making the switch to a digital economy is not always straightforward since each country is at a different stage of this journey. Fortunately, help is at hand for countries to navigate this transition, thanks to organisations like the United Nations Development Programme (UNDP) Global Centre for Technology, Innovation and Sustainable Development. In this edition's Reflections article (pages 6 and 7), the organisation's Director (ad interim) Mr Riad Meddeb shares how Small Island Developing States can tap on global support and cooperation in their quest towards a digital economy.

A key tenet of the digital economy is inclusivity, in every sense of the word. Through various schemes and programmes, Singapore strives to ensure that no business or resident is excluded from the digital economy. Our articles "Keeping Seniors Plugged In" and "Blending Technology and Tradition" (pages 8 and 9, respectively) explore two initiatives that help the country's ageing population connect and small businesses be a part of the digital economy. These two groups of stakeholders can sometimes be left behind as we advance our economies, so we hope their stories will keep you abreast of their unique needs and challenges.

Finally, with a digital economy comes more avenues for collaboration and partnerships. After all, turning to cyberspace effectively reduces barriers and borders, as our interview in this issue's Joining Hands "The United Pursuit of Possibilities" shares on pages 10 and 11. Such partnerships have been nurtured throughout the pandemic and will help us meet shared challenges in the infocommunications media sphere head-on. This firm commitment to collaboration will put us in good stead as the world encounters new challenges spurred by our technology tracks.

Sheryl Shum

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Ministry of Foreign Affairs, Singapore

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THE DIGITAL AGE

Singapore is powering a digital economy for the future, in areas such as 5G and cybersecurity. Learn how the Republic is also pioneering the technology behind, and development of digital utilities to enable businesses to transact seamlessly.

The digital world is moving at breakneck speed, as humans and machines produce more and more data that can be read, analysed and understood. The numbers speak for themselves: global Internet Protocol (IP) traffic — which is a widely-accepted measure of data flows — was at about 100 GB per day in 1992. Just 30 years later, that number is projected to reach 150,000 GB per *second*, according to the World Bank. This growth has been accelerated by more people coming online for the first time, the expansion of the Internet of Things and the COVID-19 pandemic, which has pushed many aspects of our lives online.

This data is the backbone of a digital economy, which will come to define the exchange of goods and services in the 21st century. But powering a digital economy doesn't happen by chance. Indeed, it requires careful planning and meticulous execution, as the experience of Singapore proves. Doing so has numerous benefits: from a more efficient workforce to cities that are smarter and more sustainable.

Several factors ensure the successful transition to a digital economy, namely:

- The provision of critical infrastructure
- Tools and technology that can be used by all businesses regardless of size, industry or jurisdiction
- A highly-skilled and knowledgeable population
- Policies and laws that ensure rigorous standards

FORWARD WITH 5G

The foundation of a digital economy lies in physical and digital infrastructure, which in the 2020s, will be defined by 5G networks. According to American semiconductor giant Qualcomm, 5G networks can connect virtually everyone and everything, including machines, objects and devices.

The Infocomm Media Development Authority (IMDA) is spearheading the rollout of 5G in Singapore and aims to do so in a timely, cost-effective and robust manner nationwide before 2025. Singapore is well on its way to achieving this: major telcos have stated that by the start of 2022, they had achieved 50 per cent nationwide outdoor coverage, well ahead of their target of end-2022. This puts the island state in good stead to enjoy nationwide standalone coverage by 2025. These factors allow Singapore to unlock the full potential of 5G, such as network visualisation, intelligence at network edges and dynamic provisioning of differentiated services for various uses. In view of this, IMDA opted to deploy standalone 5G networks, instead of merely building over existing 4G networks, which would only offer the benefit of faster surfing speeds. Building standalone networks is costly and will take more time, admitted Singapore's Minister for Communications and Information Mrs Josephine Teo. "But our people and businesses will enjoy far better innovations," she explained.

The implications of an expeditious and comprehensive 5G rollout are numerous, Mrs Teo added. "5G is not just for fun and recreation. For example, in telemedicine today, we can consult a doctor anywhere in the world through a video call over the Internet. But the connection is still not good enough for that doctor to perform surgery remotely. 5G will likely change that." She continued, "Soon, 5G-enabled robots or drones would also be able to deliver packages to customers by communicating with sensors in smart streets and lifts."

TOOLS AND TECHNOLOGY

Beyond providing the infrastructure for a vibrant digital economy, Singapore also strives to build a lively technology ecosystem that links technology companies with innovative solutions to businesses with digitalisation needs. That is the ambit of the Open Innovation Platform (OIP). Companies, both in Singapore and from the region, can bring their business problems to the OIP and call for
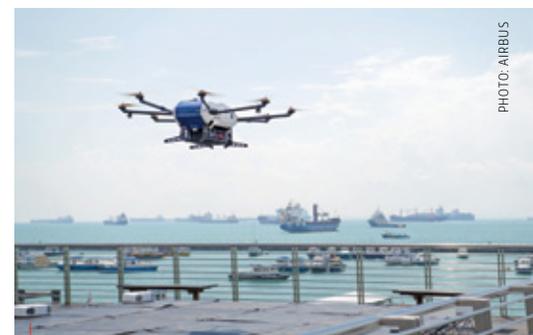
PHOTO: AIRBUS

IMDA, AIRBUS AND M1 5G TRIAL TO ENSURE UNMANNED AERIAL VEHICLES CAN OPERATE SAFELY AND EFFICIENTLY DURING ALL PHASES OF THEIR FLIGHTS.

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> ## 5G is a critical digital infrastructure that will further strengthen Singapore's position and promote more digital innovations to keep us competitive as a global business hub.
>
> **Mrs Josephine Teo, Minister for Communications and Information**

● IMDA, ALONGSIDE TELCOS M1 AND SINGTEL AND PORT STAKEHOLDERS PSA AND THE MARITIME & PORT AUTHORITY OF SINGAPORE, TESTING 5G TECHNOLOGIES IN A LIVE SMART PORT.

innovative solutions from more than 11,000 tech solvers on the platform as part of an innovation challenge call. To date, the platform has hosted more than 300 challenges worth more than S$8.5 million in prize monies.

IMDA is also developing baseline technologies. For instance, the InvoiceNow network is based on the global Peppol business standard and transmits invoices between companies over the Peppol network. More than 50,000 Singaporean businesses have adopted InvoiceNow since its launch in 2019, translating to about 20% of Singaporean businesses.

Given its dependence on cross-border trade and exchanges, Singapore is also keenly aware of the need for digital ecosystems that are integrated and interconnected. In this vein, the country launched TradeTrust in 2019 aimed at allowing the exchange of digital trade documents globally. TradeTrust was designed to address the challenges of paper-based cross-border trade using a set of international standards and frameworks, utilising blockchain-powered technology to digitalise the end-to-end processing of trade documents to ensure that documents issued can be verified in terms of their source and authenticity. This strategic initiative is led by IMDA and supported by global partners from the public and private sectors including the International Chamber of Commerce (ICC), SWIFT, banks, carriers, shippers and more. Mr Alain Raes,

Chief Business Development Officer, SWIFT, said: "The trade ecosystem faces digital disruption and requires open standards, legal harmonisation and coming together as a community to address fragmentation, friction and risks. Our collaboration with Singapore's global TradeTrust initiative allows us to play a central role in this effort, and we look forward to working together towards a shared vision of a frictionless, dynamic, global trade ecosystem."

Building on the success of TradeTrust, IMDA also launched the Singapore Trade Data Exchange last year. Also known as SGTraDex, this is a neutral and open digital platform that will support ecosystem-wide digital transformation and connect supply chain ecosystems both locally and globally.

POWERING OUR PEOPLE

These tools and technology would not be beneficial without a skilled and knowledgeable population

that can tap on them. To this end, IMDA offers programmes that support the upgrading of both tech and non-tech professionals. Central to these efforts is the national TechSkills Accelerator (TeSA), a tripartite initiative by the Government, industry and National Trades Union Congress, which aims to develop a skilled Information and Communications Technology (ICT) workforce to power Singapore's digital economy.

TeSA is aligned closely to the needs of employers, so that participants of its various programmes develop skills that are in demand. Since 2016, the initiative has placed around 12,000 locals into good tech jobs and trained over 120,000 individuals through ICT courses and industry-recognised certifications to keep pace with changing skill demands. For instance, fintech company PayPal offered 150 vacancies in product development to those who had participated under the TeSA Company-Led

● THE LAUNCH OF THE SINGAPORE 5G AND TELECOMS ACADEMY PORTAL AND THE 5G & ARTIFICIAL INTELLIGENCE OF THINGS CENTRE IN NOVEMBER 2021. TOGETHER, THESE FACILITIES WILL DEVELOP THE 5G SECTOR FURTHER.

IBM, SAMSUNG, M1 AND IMDA LAUNCHED SINGAPORE'S FIRST 5G INDUSTRY 4.0 STUDIO, WHICH WILL COMBINE ADVANCED 5G CONNECTIVITY WITH ARTIFICIAL INTELLIGENCE, HYBRID CLOUD AND EDGE COMPUTING CAPABILITIES FOR ENTERPRISES IN SINGAPORE AND ACROSS THE REGION.

training programme. These vacancies would expand PayPal Singapore's workforce by 25 per cent, according to *The Straits Times*.

One of TeSA's beneficiaries is 27-year-old software engineer Ms Chantal Neo. She shared with *The Straits Times* that the programme had helped to facilitate her switch to fintech, which was a new tech domain for her. "Although I was switching domains and there were some difficulties in understanding fintech, the training really helped to gear us for the things we need to do here," she said.

GOOD GOVERNANCE

Having the technology, talent and infrastructure in place is not enough. It's also important to set robust cybersecurity and data protection frameworks to ensure that the digital economy is safeguarded and protected. Given the high value of data, data protection is something that the Singapore Government is deeply concerned about. It set up the Personal Data Protection Commission (PDPC) in 2013 to promote and enforce personal data protection so as to foster an environment of trust among businesses and consumers.

RESPONSIBLE AI, BETTER SOCIETIES

The Model AI Governance Framework specifies that:

• Decisions made by AI should be explainable, transparent and fair

• The systems that power AI technologies should be human-centric

One of its key initiatives is the Data Protection Trustmark certification, which recognises organisations with responsible data protection practices and is interoperable with the APEC Cross-Border Privacy Rules System (read more about this on page 10). To be accredited with the certification, organisations are required to pass a set of robust and comprehensive criteria and have in place good data protection practices, such as hiring a trained data protection officer to oversee data protection practices and the personal data that an organisation handles. As of 2021, more than 70 organisations across diverse sectors have been certified with Data Protection Trustmark, covering over 66 million personal data records and 34,000 employees.

"Securing data in IT systems is critical as more businesses go digital. Businesses must make this a key priority, and data protection measures must be constantly checked and updated," announced Mrs Teo. "If and when data breaches occur, the Government takes this very seriously. Hence, we strengthened the protections in the PDPA (Personal Data Protection Act) and made it mandatory for businesses to inform affected individuals and the PDPC of significant data breaches. We will also conduct thorough investigations."

Principles for good governance are often laid out well before the technology they support enter the mainstream. Such an approach led IMDA to release the Model AI Governance Framework in 2019. Aimed at the private sector, the framework provided detailed and readily-implementable guidance to address key ethical and governance issues when deploying AI solutions. By explaining how AI systems work, building good data accountability practices, and creating open and transparent communication, the framework aims to promote public understanding and trust in technologies. The second edition of the framework, together with a self-assessment guide and cases for organisations, were released a year later.

THE NEXT FRONTIER

The rapid adoption of AI is powering the next chapter of global economic growth and transformation. It is no different in Singapore, whose National AI strategy creates and sustains a progressive and trusted environment that benefits both businesses and consumers. This environment will be nurtured through five key nationwide AI projects:

● Intelligent freight planning

● Seamless and efficient municipal services

● Chronic disease prediction and management

● Personalised education through adaptive learning and assessment

● Border clearance operations

Singapore's approach to AI governance is a practical one that addresses the twin goals of enabling innovation and building public trust in AI. The key planks of its approach are:

● **Soft-regulation** in the form of guidance to encourage innovation and build public trust in AI, such as the Model AI Governance Framework

● **Industry voluntary adoption** of responsible AI development and deployment, with participation from international big tech, local law enforcement agencies, start-ups and academia.

PAYMENT SERVICES ARE DIGITISED WITH SUPPORT FROM THE UNDP.

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reflections

BRIDGING THE DIVIDE

How the United Nations Development Programme (UNDP) Global Centre for Technology, Innovation and Sustainable Development is aiding nations, including Small Island Developing States, in their quest towards a digital economy.

A DIGITAL ECONOMY is highly complex, with many components to consider, such as cybersecurity, data, technology governance and artificial intelligence. These aspects — as well as the fast-changing nature of technology — make it tricky to navigate this arena. Enter the UNDP Global Centre for Technology, Innovation and Sustainable Development (UNDP Global Centre for short), which guides countries on their journeys to embrace digitalisation and the new economy.

It is a purpose that the organisation's Director (ad interim) Mr Riad Meddeb keenly believes in. As he tells *Experience Singapore*, "The digital economy is a key component of a country's national development, from leveraging innovation, to shaping the rights and protections to safeguard citizens and consumers." The UNDP Global Centre, which is a collaboration between the UNDP and the Government of Singapore, does this by providing applied and technical advice on digitalisation. It also deepens countries' skills and knowledge through training and capacity-building, while fostering partnerships to ensure that digital economies are inclusive and sustainable. "An area of our work that I find particularly important is ensuring that discussions around the technical standards, policies and technologies of the digital economy are not just owned, led, or concentrated in the

Global North," adds Mr Meddeb. "We have to ensure that these aspects are a truly global discussion, to ensure that no one — or any country — is left behind."

To him, adopting such a global approach is important as no one country has a complete digital economy yet. "We are all very much on this journey together, if at different stages," he shares, adding that the UNDP Digital Readiness Assessment helps determine which stage each country is at. The assessment provides an overview of strengths, gaps and opportunities for digital development in five areas: people, government, infrastructure, regulation and business.

SIDS: UNIQUE CHALLENGES AND OPPORTUNITIES

While all countries face their own challenges on the path to a technology-centric economy,

DRONES USED TO PROMOTE REFORESTATION IN CAPE VERDE.

Small Island Developing States (SIDS) share common vulnerabilities by virtue of their geography. According to Mr Meddeb, "This is a very diverse group of countries, but they face common challenges: they are more vulnerable to external shocks and experience a disproportionate impact of climate change."

These challenges extend to the cybersphere as well. "These states often share a high level of vulnerability when it comes to their telecommunications infrastructure. Many islands have just a single submarine cable connecting them. As we have seen recently in Tonga, critical services

MR RIAD MEDDEB, DIRECTOR (AD INTERIM), UNDP GLOBAL CENTRE.

PHOTOS: UNDP

can be interrupted for several weeks when a submarine cable is severed by a natural disaster or other accidents."

The people factor might also pose a unique challenge to SIDS, continues Mr Meddeb. "Their small size and fragmented economies can make it difficult for start-ups to go to scale to reach profitability," he says. "And due to their small populations, the fast pace of change in IT, brain drain and, in some cases, insufficient access to advanced IT education, there are a limited number of people in SIDS with the knowledge and skills to address the transformation to digital government and the digital economy." But he stresses that despite these challenges, some SIDS have raced ahead in their quest to adopt a digital economy. For instance, certain Caribbean states have been among the first in the world to adopt digital currencies, such as the Sand Dollar in the Bahamas and the Eastern Caribbean DCash. Some SIDS are also embracing the metaverse, which is a nascent network of 3D virtual worlds.

MOBILE MONEY APPS ARE SOME OF THE INNOVATIONS SUPPORTED BY UNDP AND OTHER ORGANISATIONS.

"The Republic of Palau is launching the world's first digital residency initiative using blockchain. Barbados will have the first Embassy in the metaverse," Mr Meddeb elaborates.

Still, the UNDP Global Centre says that more can be done to promote digitalisation. In this vein, it is launching a new course catered specially for SIDS. Titled "Inclusive Digital Transformation for the Achievement of the SDGs and the SAMOA Pathway in SIDS", it targets civil servants and stakeholders to help build capacity and raise awareness of available tools and resources to support governments in leading the digital transformation journey. "We are delighted to offer the course in four languages: English, French, Spanish and Portuguese," shares Mr Meddeb. "It is an excellent complement to prepare governments to undertake the UNDP Digital Readiness Assessment, which is often the first step to collaborating on a digital transformation strategy. Additional learning opportunities are also being curated to support more in-depth training around the various topics introduced in the course."

Participants interested in Inclusive Digital Transformation for the Achievement of the SDGs and the SAMOA Pathway in SIDS can visit https://itu.int/go/SIDSCourse for more information.

OBSTACLES TO OVERCOME

According to Mr Meddeb, there are three major roadblocks that countries would face on their digitalisation journey:

FOUNDATIONS MATTER
This is not limited to physical infrastructure, which is crucial. Intangibles like digital literacy, entrepreneurship and innovation ecosystems are also important.

GETTING A MANDATE
Pursuing a digital economy is complex, and can be costly and time-intensive. Leaders must be committed to making it happen over the longer term, and tackle challenges as they arise.

BEHAVIOUR CHANGE
Technology can be the comparatively simpler component. Building trust in digital, and building it into processes, workflows and organisations, can be an even bigger challenge.

DECODING DIGITAL IDENTITIES

A national digital identity system is a crucial foundation and catalyst for the digital economy, as it provides and safeguards access to public services and reduces societal inequalities. **Singapore's Government Technology Agency (GovTech)**, which spearheads the Republic's national digital identity programme, shared lessons from its journey at a recent masterclass organised by the UNDP Global Centre.

At the session, global participants engaged GovTech in a lively forum to understand how the agency has navigated challenges. These included questions on ensuring the inclusion of people with disabilities. One takeaway from the forum was the need for inclusive design, which can be achieved by co-designing solutions with users of all needs and abilities. Added a GovTech rep, "We also need to think broadly: this includes ensuring that such communities have access to digital devices to access digital ID in the first place, sufficient digital literacy to use these devices and services, and that their digital safety and security are assured at all times."

The masterclass was also a chance for GovTech to explore different models to connect SingPass with digital identity systems around the world, with the aim of eventual mutual recognition. It was the first in a new series, with later editions looking to dive deeper into other parts of Singapore's digital transformation journey.

Watch the masterclass with GovTech here:

KEEPING SENIORS PLUGGED IN

How this Singaporean is helping the elderly become social media stars.

"Let's try creating a flat lay," a young man says, as he shows Mdm Sally Png how to artfully arrange a tub of eye cream amid other cosmetics to create a photo that would become popular on social media. It is an important lesson for Mdm Png, who at the age of 72, is learning how to become a social media influencer.

Influencers — who are users with large social media followings — have shaken up the marketing world. The *Financial Times* estimates that the industry was worth US$8 billion before the pandemic. Their influence is just as vast in Singapore, where they market everything from pet care products to wireless earphones. But while they appeal to a wide audience, the influencers themselves are overwhelmingly young. "During my previous stint as a content strategist at a media company, I would hear a lot from clients who wanted to connect to elderly influencers," says Mr Zavier Chan, 27. "But there weren't that many around, mostly because seniors were just not that familiar with the concept of influencers."

Mr Chan is trying to change that through SampleLah!. The initiative he spearheaded in 2021 gives seniors a platform to connect with brands, so that they too can become influencers in their own way. "It's an untapped market because seniors are definitely active on social media and have networks that other influencers may struggle to reach," says Mr Chan, who is also an influencer in Singapore.

But Mr Chan admits that having a platform alone is not enough. Like Mdm Png, the hundreds of seniors who use SampleLah! need to be guided on writing engaging social captions for different platforms and taking aesthetically-pleasing photos. SampleLah! coaches them on these important digital skills and also provides simple backdrops and photography equipment that they can use to take photos that look professional. With these skills in place, Mr Chan and his team of 10 have attracted brands that specialise in everything from Traditional Chinese Medicine to skincare.

The Government and large companies in Singapore actively support initiatives like SampleLah! that champion digital inclusivity. It has received close to S$60,000 in funding from Enterprise Singapore, the Singapore University of Social Sciences and DBS Bank. Commenting on this, Mr Chan says, "It

HELPING SENIORS GO DIGITAL

Singapore's Seniors Go Digital programme is spearheaded by the Infocomm Media Development Authority (IMDA). Its bevy of programmes equips elder Singaporeans with digital skills to live in an increasingly digital world and has benefited more than 100,000 seniors so far.

shows that there is widespread support for seniors to be part of the tech wave, and not left out of it." He adds that his company, Strongsilvers, is always on the lookout for ways to include seniors in the digital economy. "It stems from my own close relationship with my grandparents and wanting them to be plugged into this tech world." And if seniors like Mdm Png are anything to go by, they are certainly grateful for the opportunity. "I always hear about people receiving free products simply by sharing about them on their Facebook and Instagram," she shares. "So I'm very grateful for this opportunity to get those rewards while also being able to spend my golden years meaningfully."

Find out more about SampleLah! at **www.samplelah.com**

OTHER 'GRANFLUENCERS' THE WORLD-OVER

United Kingdom
His youthful garb and stylish blend of hoodies, emblazoned tees and headgear have earned 61-year-old **Lance Walsh** (@dinneranddance) nearly 50,000 followers.

South Africa
Yasmin Furmie (@yasminfurmie on Instagram), is a true-blue fashionista after having caught the eye of South African designer Jamal Nxedlana when she was in her early 50s. Now 58, she has gone on to start a fashion line, which she shares glimpses of with her 23,000 followers.

India
Dancing queen **Ravi Bala Sharma** (@ravi.bala.sharma on Instagram) regularly enthrals her 189,000 followers with clips of her dazzling moves. At 63, she shows no sign of slowing down.

BLENDING TECHNOLOGY AND TRADITION

The story of Jeya Spices shows that even the most traditional of businesses can succeed in cyberspace.

Nestled within the northern Singaporean housing estate of Yishun is a shop that looks like it came straight out of the *souks* of the Middle East. At its entrance sit mounds and mounds of coloured spices that, when mixed together, add warming flavours to all kinds of dishes, from chicken tikka masala to Thai green curry. The master of spices at this stall is Mr Jeya Seelan, 33, who is thought to be the youngest owner of a traditional spice stall in Singapore.

You could say that an affinity for spice runs in his blood. After all, his father has run his own spice stall for as long as Mr Jeya can remember. But operating such a business through the early days of COVID-19 showed Mr Jeya that the traditional model needed an update in the new millennium. "When the Government first raised the alarm about COVID-19 in early 2020, masses of people came in unprecedented numbers to snap up things they probably didn't need," he recalls. "My shop — where I also sell other groceries — was swept clean. It took us two long days to restock."

But that surge in sales did not last. When Singapore entered a "circuit-breaker" to cope with its first wave of infections, sales plummeted. "My spice mixes are reliant on showmanship and visibility, both of which were gone because of the lockdown. I worked 16 hours a day, up from 12, but my sales dropped by 70 per cent at one point," Mr Jeya shares. That was when he resolved to bring his business online, knowing that there was still a healthy demand for his products, just that it was difficult for the buyers to access them.

> "
>
> I think of the Internet as another shopfront. You can 'build' these stores in various 'neighbourhoods' and reach niche audiences with the support of your community.

Mr Jeya Seelan, a small business owner who successfully pivoted his business online during the pandemic

GOING ONLINE HAS ALLOWED MR JEYA SEELAN'S SPICE BUSINESS TO QUICKLY GET BACK ON TRACK AFTER THE EARLY DAYS OF THE PANDEMIC. HE NOW OPERATES TWO STORES, INCLUDING ONE WITHIN A SUPERMARKET (ABOVE).

ONLINE AND ONWARD

Mr Jeya's initial foray online did not involve a grand digital transformation plan. Instead, it started with a simple Facebook post from the heart. "I shared a childhood memory of me seeing my father's passion at work along with a photo of spices, and was pleasantly surprised that it went viral. We received over 1,000 enquiries within three days, and my family members rallied together to respond to all of them," explains the graduate in Mass Communications from Nanyang Technological University. "My passion for writing and expression helped me to quickly pivot the business to the digital front, including launching a new website and a Facebook page which by now has almost 5,000 followers."

Going online has had its merits and Mr Jeya's business quickly got back on track. As interest in his blend of spices and showmanship grew, he decided to venture into another physical store; this time in a supermarket in eastern Singapore. "There is no experience like smelling the market, taking in the colour of the spices, or hearing the juxtaposition of Cantonese and Malay spoken by the stallholders. When you go online, you can only see chilli powder. When you come to my shop, you can feel its heat, see its scorching red colour, and take in its exuberant earthiness. There is simply nothing else like it."

Still, he is not letting go of his newly-acquired digital following. "My business has managed to weather the crisis by adapting to the times," he shares. "We will be tapping on the Government's support to expand our e-commerce store and revamp it. It's not a replacement for the visual appeal of a brick-and-mortar store, but it will give us a wider reach."

HELPING BUSINESSES MAKE THE LEAP

The Infocomm Media Development Authority, through its SMEs Go Digital Programme, drives digital adoption among Small and Medium Enterprises (SMEs) that power the Singapore economy. More than 78,000 SMEs have benefitted from the programme, which provides resources such as a Chief Technology Officer-as-a-Service (CTO-as-a-Service) and recommendations on digital solutions they can adopt, based on their company profile, and information on Government support.

JEYA SPICES' FIRST STORE AT A WET MARKET.

THE UNITED PURSUIT OF POSSIBILITIES

Why global partnerships are especially important when dealing with new and emerging technologies.

If you want to get a sense of how quickly the world is becoming digitalised, consider this: even before the global rollout of 5G is complete, policymakers are already grappling with the rise of 6G. One body that is exploring global partnerships in this area is Singapore's Infocomm Media Development Authority (IMDA). Its Director (International Relations & International Policy & Strategy) Ms Evelyn Goh tells *Experience Singapore* that such collaborations are crucial to improving business connectivity and access to the digital economy. "The digital economy transcends borders, but it is still subject to national laws," she explains. "Seeking commonalities or convergence where possible helps us all operate on the same playing field, with the same rules, and makes these processes, transactions, relationships — and even research exchanges — much faster and richer."

This approach has benefits for businesses and governments alike. For instance, Singapore is a strong supporter of the Asia-Pacific Economic Cooperation Cross-Border Privacy Rules, which is a government-backed data privacy certification that companies can join to demonstrate compliance with internationally-recognised data privacy protections. "These help businesses seamlessly exchange personal data across APEC member economies while respecting privacy and security," says Ms Goh. She points to the Singapore - Australia Digital Economy Agreement, which will allow both countries to develop compatible and interoperable data transfer mechanisms for personal data.

PARTNERSHIPS FOR PROSPERITY

To Ms Goh, these projects are an important way of building a conducive and pro-enterprise environment for digital companies to participate in the global digital economy. "The global digital landscape is changing rapidly, and building a strong network of partnerships enables all of us to find practical and effective ways to work together," she shares. "This is especially important for small countries, which in fact make up a majority of Member States at the United Nations."

In recent years, Singapore has collaborated with partners in areas like data innovation and protection, artificial intelligence (AI), tools for digital trade such as trade e-documentation and e-invoicing, as well as telecoms policy development and information-sharing. "These are issues where the international landscape is still evolving, and a foundation of global rules, norms and agreements helps businesses and citizens connect across borders seamlessly, pool knowledge and exchange lessons on our experiences." She adds that capacity-building is also important, not only from the perspective of global citizenship and closing the digital divide, but also because the digital economy is an area where helping others helps all of us move forward together. "Naturally, ASEAN is a priority for us, but we also focus efforts on developing countries as well as on fellow small

CHIEF EXECUTIVE OF IMDA MR LEW CHUEN HONG DELIVERING CLOSING REMARKS AT ATXSG 2021.

COMMUNICATIONS AND INFORMATION MINISTER MRS JOSEPHINE TEO WITH THEN-PRESIDENT OF ESTONIA KERSTI KALJULAID AT ATXSG 2021.

states." To this end, IMDA has organised capacity-building programmes in areas such as data protection, cross-border data flows, AI governance and digital trade. IMDA is also exploring other similar programmes in the coming year, especially for fellow small states.

TO THE FUTURE

This global approach will grow in the coming years, as IMDA is looking to widen its network of partners, in tandem with the expansion of the digital economy. Shares Ms Goh, "We are always on the lookout for opportunities to improve business connectivity and access in the digital economy."

"Some of the areas we are looking at include the interoperability of mechanisms for cross-border data flows, emerging technologies such as 6G communications, as well as AI governance and deployment. Our partners quite literally span the globe: from the University of Oulu in Finland, to the Korean Institute of Communications and Information Sciences." The mode of these partnerships also varies, with a good mix of bilateral and multilateral arrangements, as well as active participation in international organisations. For instance, Singapore has launched Digital Economy Agreements with Chile and New Zealand, Australia, South Korea and the United Kingdom. "These help to shape international rules and set global benchmarks for the digital economy," notes Ms Goh. She also describes how together with Japan and Australia as co-convenors, Singapore initiated the World Trade Organization Joint Statement Initiative (WTO-JSI) on E-Commerce. This facilitated discussions on rules and norms for digital trade and cross-border flows.

Singapore will continue to drive conversations among businesses, tech and government leaders to shape our digital future as we continue to forge global partnerships.

PARTNERSHIPS AMID A PANDEMIC

"We have found ways to continue engaging our counterparts virtually in spite of COVID-19, utilising digital platforms and tools to keep up our relationship-building efforts. At the same time, the in-person element of relationship-building is still important. Through events such as ATxSG (asiatechxsg.com), we have found that hybrid in-person/virtual events can facilitate that much-needed physical interaction while still adhering to COVID-19 restrictions."

Ms Evelyn Goh, Director (International Relations & International Policy & Strategy), Infocomm Media Development Authority

IN NUMBERS

Singapore has concluded **four Digital Economy Agreements (DEAs)** with Chile and New Zealand, Australia, South Korea and the United Kingdom. DEAs are complementary to, and build upon, Singapore's network of

26
Free Trade Agreements.

Under **IMDA's TradeTrust framework** which facilitates digital cross-border trade, 12 successful pilots involving 34 organisations have been completed.

12
successful pilots completed

34
organisations involved

More than
50,000
Singapore businesses have joined the **Peppol network** to transact electronically with other connected companies in Singapore and worldwide. This translates to about 20% of Singaporean businesses. The network is a set of artifacts and specifications enabling cross-border eProcurement. Its use is governed by a multilateral agreement structure.

FULL SPEED
AHEAD

Everything's faster with 5G, including the time taken between sending and receiving information. This can be brought down to just 1 millisecond with the new technology.

SOURCE: THALES

joining hands

Singapore has collaborated with partners in areas like data innovation and protection; artificial intelligence; and tools for digital trade such as trade e-documentation and e-invoicing; as well as telecoms policy development and information-sharing.