ASIAN MANAGEMENT INSIGHTS

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DEVELOPING CLIMATE-RESILIENT CITIES

We need to be quicker

Agriculture and Sustainable Farming in Vietnam

An interview with Le Minh Hoan, Vietnam's Minister of Agriculture and Rural Development

Reporting and Measuring ESG

Introducing the Impact-Weighted Accounts Framework

Looking Beyond the 'Middle Class'

For the Other Chinas

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FROM THE EDITOR

Sustainability, a priority

The word ‘sustainability’ is thrown around liberally these days. But what does it really mean? At its core, sustainability is a business approach to creating long-term value by considering how an organisation operates not only in the economic but also social and ecological environments. Today, consumers across all generations, from baby boomers to Gen Z, are demanding more sustainable purchasing options and environment, social, and governance (ESG) initiatives from the retailers they patronise, putting pressure on businesses to up their sustainability game if they want to stay competitive.

In this issue, leading academics and seasoned practitioners give us insights into several issues around sustainability. We first turn to Vietnam, where Le Minh Hoan, Vietnam’s Minister of Agriculture and Rural Development, says the country’s economy has made great strides since it joined ASEAN, and is consistently reaffirming its vital role in the regional and global food supply chains and food security. Through the implementation of free trade agreements or FTAs, Vietnam continues to be a critical link between ASEAN and global agricultural trade markets. He believes the Vietnamese agriculture sector will rapidly move to achieve transparency and sustainability, thereby reducing emissions and minimising the effects of climate change.

With increasing pressure to tackle ESG issues through corporate social responsibility (CSR) and socially responsible investment (SRI) initiatives, trillions of dollars have been invested in sustainability-related areas. However, little is known about how to measure ESG impacts in a quantifiable and objective way, and evaluate whether these CSR and SRI initiatives are really leading to positive change. Liang Hao and Chan Kam Chee take us through a more holistic, transparent, and comparable ESG impact reporting framework.

Meanwhile, the world today is witnessing the collision of two burgeoning processes, climate change and urbanisation, and their combined effects can lead to substantial urban climate consequences to the detriment of humanity. However, it is not all doom and gloom, says Winston Chow. There is still time–albeit a small and rapidly shrinking window–to choose a way out of this climate mess.

Low-income countries continue to grapple with waste management, straining under the volume of trash that leads to uncontrolled dumping and overflowing landfills, causing severe pollution and endangering the lives and livelihoods of particularly the poorest and most vulnerable. Asia’s waste crisis is dire, says Havovi Joshi, and there is an urgent need to introduce enforcement and incentive programmes, along with public education and awareness campaigns to manage the challenge.

Continuing on the theme of sustainability, Gibran Huzaifah, founder and CEO of eFishery, shares with us his entrepreneurial journey in the aquaculture space and how to build a sustainable end-to-end aquaculture solution.

The entrepreneurship mindset can be cultivated as a set of learnable skills, and when it can be mastered and strengthened like a muscle, it is applicable to anybody who is intrinsically motivated to develop it. In his article, Foo Maw Der, offers the BRiSK^3 Mind model, a framework that maps out the key ingredients that can help people develop entrepreneurial skills and the necessary mindset.

According to Kanyaporn Skutalakul, our world needs both kinds of entrepreneurship, social and business, to collaboratively stimulate growth in a way that includes economic and social impact, so that we progress in a more balanced manner. However, we need social entrepreneurship efforts to become more successful. She shows us how to accelerate social entrepreneurial creation.

The book, *The Last Fools: The Eight Immortals of Lee Kuan Yew*, showcases the accomplishments of eight lesser-known pioneer senior civil servants in Singapore who supported Lee Kuan Yew, the country’s first prime minister, and his band of Old Guard leaders who transformed the country and built its national institutions into what they are today. Yeo Whee Jim, a former public servant, gleans leadership lessons from them whose accomplishments, he says, are a masterclass in leadership and management.

By 2021, Singapore had one of the most rapidly ageing populations among developed nations. In our featured case, Ma Kheng Min, Jovina Ang, and Sheetal Bhardwaj discuss what else the government can do to enable more seniors to age successfully.

Given their rising disposable income, China’s middle class is studied by businesses with great interest. However, Qian Forrest Zhang argues that the ‘middle class’ as an idea provides at best a partial understanding of the Chinese consumer population. Instead, he proposes the notion of ‘three Chinas’ as an alternative way to make sense of consumers in China. ‘First China’ comprises residents in medium and large-sized cities, ‘Second China’ consists of those living in small cities and towns, and ‘Third China’ refers to those in rural areas.

Since the onset of the COVID-19 pandemic, fast food businesses have had little choice but to rework their priorities across all facets of their business model, including resource allocation and operations. Going digital is no longer a good-to-have, but a must-have, according to Xuesong Geng, Andrew Chin, and Andrew Chen, who propose a 3S (Synchronised, Smart, and Systemic) model with recommendations on how it can guide fast food players on their digital transformation journey.

As the world enters an era where inflation, geopolitical strife, climate change and pandemics are just some of the elements contributing to an overall air of pessimism about the future, there is an added urgency for sustainability initiatives to take centre stage as a priority for not only governments, businesses, and other organisations, but each and every individual. Let’s all play our part to enable sustainability.

DR HAVOVI JOSHI
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Agriculture and Sustainable Farming in Vietnam

Le Minh Hoan, Minister of Agriculture and Rural Development of Vietnam, talks about the future of sustainable agriculture in ASEAN.

What do you see as the future of agriculture in the Association of Southeast Asian Nations (ASEAN) region?

Southeast Asia has favourable natural conditions and ecosystems for the development of a rich, diverse, and adaptive agricultural sector. In addition, its abundant human resources provide strong drivers for agricultural development. The region plays a key role in the global food supply. ASEAN countries produce 25 percent of rice, coffee, and cassava, 15 percent of bananas and mangoes, and as high as 40 percent of citrus fruits for the world. In terms of global exports, the region contributes more than 30 percent of coconut oil, as well as 25 percent of palm oil, and 20 percent of shrimp. Besides, many kinds of perennial crops and fruits come from the region. In 2021 alone, the total value of ASEAN's exports of agricultural, forestry, and fishery products reached over US$210 billion, representing more than 10 percent of the global export value.

However, ASEAN's agricultural sector has not realised its full potential yet. It still faces technological constraints, lacks connectivity among member states, and the value chains within each member state remain fragmented, unsustainable, and vulnerable to climate change and global market fluctuations.

Agriculture will continue to play an important role for ASEAN countries in ensuring regional and global food security, supporting livelihoods of rural communities, especially the poor and marginalised, and securing a clean and sustainable environment. Therefore, ASEAN agri-food systems will have to become greener, more transparent, and more environmentally and socially responsible.

In due course, I believe ASEAN's agricultural sector will create its own brand names for many globally recognised commodities, turning the region into a key hub for global agricultural logistics and trading. It is also expected that many smart, high-tech models will be widely applied to ASEAN's agricultural sector. ASEAN could become a region of food innovation centres, and there might also be more enhanced public-private partnerships and an enabling business environment for agri-food investors.

What will be the role of Vietnam's agricultural sector in ASEAN?

Vietnam's economy has made great strides since it joined ASEAN, and the country's agricultural sector has reaffirmed its vital role in the food supply chains and security for the region and the world. Through the implementation of free trade agreements (FTAs), Vietnam continues to be a critical link between ASEAN and global agricultural markets, and plans to rapidly develop an agri-food system characterised by transparency, responsibility, low carbon emissions, and sustainability.

Vietnam will work with ASEAN member states to develop capabilities in agri-food production, processing, and logistics to serve global demand. We are also trying to strengthen our agricultural research and development (R&D) capacity. That's why Vietnam is proactively collaborating with the World Economic Forum (WEF) and the One CGIAR, the Consultative Group on International Agricultural Research, which is a consortium of agricultural research centres worldwide, to build the Food Innovation Hub in Vietnam as a prototype for ASEAN member states.

We are committed to implementing the Strategic Plan of ASEAN Cooperation on Food, Agriculture and Forestry (SP-FAF), the ASEAN Action Plan for Food Security during the 2021-2025 period, as well as the strategic cooperation plans specific to each sub-sector, including livestock, crop, forestry, and fishery.

In response to the global targets for carbon emission reduction, Vietnam is leading the development of the ASEAN Strategy on Biomass Energy for Agriculture and Rural Development during the 2020-2030 timeframe. We are also committed to playing a more important role in ASEAN to develop and implement initiatives for sustainable agriculture, climate change response, and regional and global food security.

Vietnam will work with ASEAN member states to develop capabilities in agri-food production, processing, and logistics to serve global demand.

What are the major challenges that Vietnam's agricultural sector is facing today?

Despite its many achievements in recent years, Vietnam's agricultural sector faces many challenges. The COVID-19 pandemic, climate change, supply chain disruptions, decline in natural ecosystems and biodiversity, crop and livestock diseases, and the shift towards responsible green consumption all contribute to the volatile, uncertain, complex, and ambiguous global situation that also influences Vietnam's agricultural sector.

Another major challenge is the increasing competitive pressure both in the domestic and international markets. Industrialisation and urbanisation within the country create strong competition for resources from agriculture. Such competition, together with climate change, poses significant challenges to national and global food security. Meanwhile, there are several challenges that Vietnam's agricultural sector still needs to overcome, including fragmented small-scale production, poor connectivity, and the limited capacity of farmers and farming organisations.

What do you think is the role of technology in the future of agriculture?

Technology plays an important and critical role for further agricultural development, especially when resources such as land, water, and labour are becoming scarcer. Technology is the key driver of agricultural growth and development, and a fundamental factor to increase productivity, lower costs, ensure food supply, and improve access to food.

Technology can bring about positive changes in breeding, farming methods, as well as the supply chain and distribution system. It helps to improve connectivity between producers and markets, thus breaking the conventional barriers of physical distance. It also helps to develop agricultural suppliers without land, transportation companies without vehicles, and retailers without shops. Besides, technology facilitates the transformation of primary agricultural products to serve the demand not only for food, but also other products such as medicine and cosmetics. It further contributes to the conversion of agricultural by-products into valuable products, giving agricultural products a greater value.

Technology is a key measure of national competitiveness. It is also a fundamental tool for establishing a more efficient, effective, and precise form of agricultural value chain governance. It assists in connecting people, and creating networks, ecosystems, and communities that are inextricably

Technology plays an important and critical role for further agricultural development, especially when resources such as land, water, and labour are becoming scarcer.

linked despite being physically apart. It is therefore important that we improve our capacity to absorb and apply technology in the best way, in order to optimally serve producers and consumers, as well as protect the global environment. This is true not only for Vietnam but also for ASEAN in general. Member states need to cooperate better, so as to improve our collective capacity in agricultural technology, thereby proactively building and operating a system of agricultural innovation.

At the same time, technology is rapidly changing along with the Fourth Industrial Revolution, including digital transformation, which leads to the emergence of advanced developments, such as smart and circular agriculture, and blockchains. These new technologies are extremely important to improve efficiency and productivity, but also pose significant challenges that require the improved capacity of government officials, businesses, and farmers to adapt to and adopt them.

How would all the bilateral trade agreements that Vietnam has signed impact the country's agricultural sector?

The implementation of FTAs will have a great impact on Vietnam's agricultural sector. FTAs will improve our access to export markets. Vietnam also has the opportunity to strengthen trade and investment cooperation, as well as acquire scientific and technological know-how from other countries. In addition, FTAs will help promote the consolidation of the ongoing institutional and policy reforms in our country.

However, the opening up of the domestic market during FTA implementation will increase competition and pressure on production, especially for less competitive sectors. Trade disputes will emerge while our capacity for resolution remains limited. Enterprises also lack the experience to apply the technical standards for quality, environment, labour, and branding requested by importing countries. Also, there are very few geographical indications associated with Vietnamese agricultural products. For example, it was only after we had signed the Vietnam-European Union (EU) FTA that the EU was committed to protecting 31 geographical indications for Vietnam's agricultural products.

To better take advantage of the various FTAs, our Ministry is developing programmes to promote agri-food exports to key markets that Vietnam has signed FTAs with, such as the US, the EU, China, and Japan. In the near future, through engagement with the business community, cooperatives, and farmers, sustainable approaches to agriculture will be implemented more synchronously and effectively. As a result, our agri-food exports can gradually meet the demand for quality and standards while our competitiveness and reputation in the global market will improve.

How can Vietnam better integrate into the food supply chain?

One of the key developments outlined in Vietnam's Strategy for Sustainable Agriculture and Rural Development for the 2021-2030 period and Vision to 2050 is the strong innovation in the governance of agricultural value chains that connect farmers, farmer groups, and businesses across various localities in a more systematic manner.

To implement this strategy, Vietnam's agricultural sector in the next phase will need to focus on consolidating its agricultural value chains by improving infrastructure, ensuring food safety and biosecurity, and applying technical standards for sustainable production, such as VietGAP and GlobalGAP, to serve the demands of different market segments. We also need to apply digital technologies to codify production areas, farmers, and businesses in the agricultural value chains. This helps to improve our capacity to manage the quantity and quality of agricultural inputs, which contributes to building Vietnam's branding for its key agricultural commodities in international markets.

Special priority will be given to promoting cooperation among the value chain stakeholders based on the principles of transparency, responsibility, risk-sharing, and mutual benefit for key agricultural commodities. In this process, the private sector will play the lead role to promote collective action among farmers, develop markets, and connect farmer groups to the markets.

We will promote targeted scientific research closely through technology transfer and digital transformation in the agricultural sector. Priority will be given to R&D for smart agriculture that will be responsive to climate change, efficient for resource use, and friendly to the environment.

Finally, we will also promote market development for agriculture. The focus will be on establishing wholesale markets associated with logistics centres in key production areas, and using FTAs to expand our export markets and join the global agricultural value chains, including the retail distribution networks in international markets.

Le Minh Hoan

is Minister of Agriculture and Rural Development of Vietnam

DEVELOPING CLIMATE-RESILIENT CITIES

We need to be quicker.

by Winston Chow

A family of four enjoys their picnic on a gently sloping, grassy riverbank. One of the children skips down to the gurgling stream, places her paper boat on it and watches in fascination as the water slowly carries it away. Nearby, two other children jump from one flat rock to another that lay across the water. It's a beautiful sight and no, it's not from a movie–it is taking place in the 62-hectare Bishan-Ang Mo Kio (AMK) Park, complete with a naturalised stream, right in the middle of one of Singapore's most popular urban heartland areas. The park is a shining example of what is possible when efforts are put in place to ensure cities become more climate-resilient. However, initiatives like this need to be carried out faster. This is because we are witnessing first-hand the collision of two burgeoning processes: climate change and urbanisation.

While the two are separate processes, their combined effects, when they occur concurrently, can lead to substantial urban climate consequences affecting every aspect of our lives. Climate change–or, as some would call climate disruption and a climate emergency–is caused by the worrying combination of increasing greenhouse gas (GHG) emissions like carbon dioxide and methane, and the growing loss of vegetation cover due to deforestation. Add urbanisation to the mix, which involves the population shift from rural to urban areas, and we see highly concentrated groups, representing nearly 57 percent of the global population, settling in cities that cover only three percent of the world's surface area. As a result, the world is faced with a seemingly inexhaustible demand for energy and resources that is fast outpacing how our physical environment copes.

In this article, I shall explain the two processes and how their coming together signifies an unprecedented urgency for us to do more in double-quick time. I will also point out how cities can become more climate-resilient by applying nature-based solutions and implementing planning and social policies, all of which have proven to be more effective than our existing approaches. Finally, I turn to Singapore and another Southeast Asian city, Semarang in Indonesia, to show the promise of the two approaches.

CLIMATE CHANGE—IMPENDING DOOM OR AVOIDABLE DISASTER?

Much of the data we have on climate change focuses on global temperature changes over the last 150 years, or from the beginning of the pre-industrial era around 1850. Since then, average global temperatures have increased by nearly 1.1°C, driven up by the effects from GHG emissions and the loss of forested land area.[1]

To stem the seemingly unstoppable rise in average global temperatures, representatives from 195 United Nations (UN) member states convened in 2015 and signed the Paris Agreement, pledging to cut down on GHG emissions within their territories. The Agreement states the importance of restricting global average temperature increases to 2°C above pre-industrial levels, and preferably no higher than 1.5°C, "recognizing that this would significantly reduce the risks and impacts of climate change".[2]

Forecasts, however, are not optimistic. At the current rate of human-induced global warming, temperatures will likely breach the 1.5°C limit by 2035. By 2100, even with current Paris Agreement pledges, there will likely be an overall increase of 2.7°C based on expected GHG emissions. It seems more and more unlikely that our children and their children will ever see a world cooler than when we were born.

THE URBANISATION STORY

As of 2022, nearly 4.4 billion people–or more than half the world's population–live in settlements and it is projected that by 2050, this proportion will grow to 70 percent. The world has seen a large uptick in urbanisation since the 1950s. In fact, 2007 was a landmark year as half of humanity was living in urban instead of rural areas. The biggest and fastest-growing cities have also progressively moved away from North America and Europe, toward the Global South–South America, Africa, and Asia.

If we look to the not-too-distant future, it is projected that 'new' urbanisation will mostly occur in two continents: Africa and Asia. These regions will house some of the largest megacities in the world, as well as some of the fastest growing settlements. If we zoom in, we see that Southeast Asia's urban population is estimated to effectively double by 2050. Delving even deeper into these projections, while the major primary cities and engines of growth in Southeast Asia–Bangkok, Jakarta, and Metro Manila–will continue to expand in size and population, it is the secondary cities such as Chiang Mai, Da Nang, and Surabaya that will see much more rapid growth. These areas will become the foci for economic growth via industrialisation and tourism, which will attract migrants to develop and maintain the critical infrastructure supporting these economic growth engines in the decades to come.

THE URBANISATION AND CLIMATE CHANGE COLLISION

The drastic rural-to-urban population shift since the 20th century has had severe repercussions on not only causing climate change, but also magnifying its impacts to the detriment of humanity.

Ascertaining how bad these impacts are is something that the Intragovernmental Panel on Climate Change (IPCC), has been tasked to do by the UN. As part of the author team for the Sixth Assessment Report cycle that concluded in early 2022, we have assessed several resulting key climate risks that will affect cities, including floods and droughts, air pollution, rising sea levels, and tropical cyclones.

The ubiquitous effects are warmer urban temperatures caused by climate change and the urban heat island effect. The latter occurs when city infrastructure such as buildings, pavements, and other heat-absorbing surfaces replace environmental flora and drive local temperatures in cities–especially at night–to be higher than those of their 'rural' surroundings. Consequently, there is greater exposure to higher temperatures that significantly increases the likelihood of heat-related injuries in cities, especially in humid climates. In fact, one of the scenarios that the IPCC is examining is a world where temperatures have risen by 2°C above pre-industrial levels. In that situation, people in cities located in parts of South and Southeast Asia, the Arabian Peninsula, West Africa, and South America will face more frequent conditions where heat exposure will lead to potentially fatal consequences if no additional preventative measures are put in place. Furthermore, we should be worried about certain demographic groups that are most at risk when faced with increased heat conditions. The elderly and very young, the disabled, and outdoor workers, such as those in the construction sector, are particularly susceptible to heat stress and stroke.

The IPCC has also assessed that it is not just people's physical health that is most at risk from extreme heat. The impacts of prolonged and extreme heat conditions could also cascade onto the healthcare infrastructure in cities. For instance, how would burdened medical facilities cope with more vulnerable populations demanding medical care, while hospitals and clinics are also at risk from potential power outages as the grid struggles to handle high air conditioning demand from other parts of the city? This cascading heat disaster was precisely what happened in Chicago in 1995, and most of Western Europe in 2003, when scores of people perished from heatwaves. During the summer of 2022, we also saw record-breaking scorching heat waves in Europe. The fear is that we may see history repeat itself in the near future.

COMMITTING TO PATHWAYS THAT REDUCE CLIMATE RISK

It is not all doom and gloom though. We must realise that there is still time–albeit a small and rapidly shrinking window–to choose another way out of this climate mess to breach the 1.5°C limit. We must ask ourselves as a society–what are the pathways we can take to reduce climate risk in the most efficient and effective manner, while encouraging regeneration and development?

While it may appear an impossible task to achieve in a relatively short period of time, there are viable paths forward that are both science-based and policy-relevant. Based on our IPCC assessment, four things can be done simultaneously.

First, we need to reduce or mitigate GHG emissions through measures like burning less fossil fuels or switching to renewable energy generation. Second, we need to reduce climate risks by utilising approaches that protect society from a warming climate. Third, we need to reduce and eventually halt biodiversity loss on this planet from deforestation on land and under water. Fourth, we need to improve peoples' well-being by reducing poverty and hunger, improving health and livelihoods, and providing more people with clean energy and water, all of which accord with the UN Sustainable Development Goals that all nations agreed upon in 2015.

This integrative approach, whereby policymakers implement science-based policies to reduce climate risks, is what the IPCC terms as Climate Resilient Development (CRD).

SO WHICH CRD APPROACHES ARE MOST EFFECTIVE?

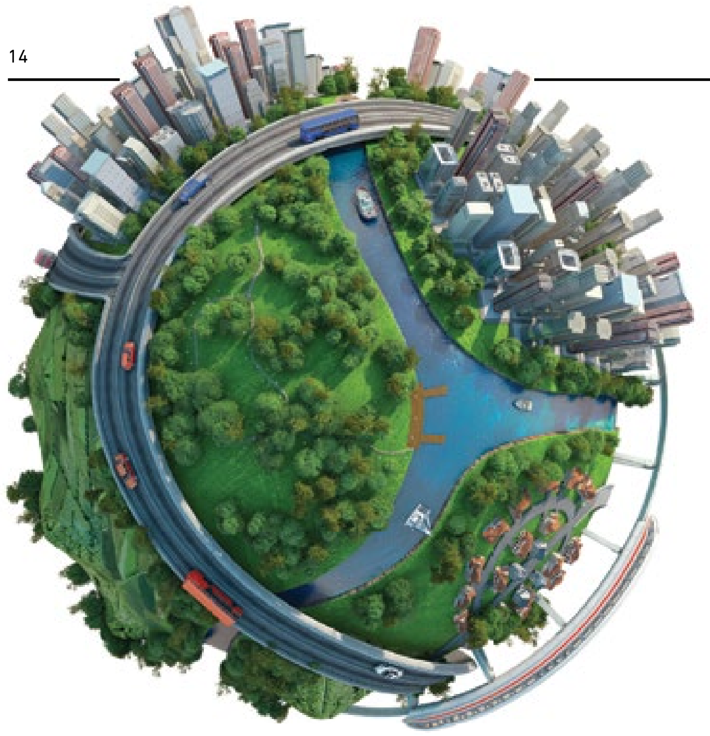
In our IPCC report, we looked at 21 different approaches that enabled CRD based on evidence from numerous cities exposed to climate impacts and risks.[3] What we found was that most cities had a major and disproportionate focus on physical infrastructure–such as sea walls, increased air conditioning, and enhanced water, transport, and sanitation infrastructure–as a protective remedy for climate risk.

While popular, these options are not necessarily the best approach for CRD. Instead, we found two particularly effective approaches in enhancing resilience: nature-based solutions, and planning and social policies.

Nature-based solutions, such as designing urban green spaces, community gardens, and managed floodplains (like the Bishan-AMK Park), were found to be just as effective for enhancing resilience as comparative physical infrastructure. For example, most coastal regions face the problem of flooding due to coastal erosion and tidal surges. The most common solution to this is to build physical infrastructure such as dikes and sea walls. However, the evidence is that building and maintaining such infrastructure is likely to be expensive, while being destructive to the surrounding environment. Instead, an alternative solution to the flooding problem would be to plant trees that are native to coastal areas, such as mangroves. This not only reduces the impact of flooding and prevents coastal erosion, but also acts as a natural barrier against tidal surges, encourages the area's biodiversity, and provides a potential recreational space for urban residents.[4]

Planning and social policies also need to come into play to ensure that all pillars of society are taken care of and included in CRD efforts. This includes land-use planning to minimise exposure to climate impacts, climate

We need to reduce or mitigate GHG emissions through measures like burning less fossil fuels or switching to renewable energy generation.



education and information-sharing with key stakeholders in business and policy communities, creating enhanced social safety nets for the climate-vulnerable to reduce exposure to hazards like heat and floods, and efficient relocation and protection strategies based on early warning systems. Such strategies were assessed to have strong, if not stronger, potential to enable CRD for cities, especially in the Global South.

CRD IN THE CITY: FOUR PRINCIPLES

These approaches which enable CRD are underpinned by four key science-based principles that drive and enhance resilience to climate impacts. Understanding these can yield insights into why they are effective, especially in urban contexts.

1. Implementing nature-based and planned social urban adaptation approaches

As stated above, climate risks are reduced by exploring not just physical infrastructure implementation, but also nature-based solutions in combination with planning and social policies. This can be done in multiple ways by policymakers, such as providing the security of land tenure to vulnerable groups residing in informal settlements, or by mandating or encouraging green standards for new or retrofitted buildings, which are more efficient in energy use, or utilising low carbon intensity means of building construction such as substituting concrete with mass engineered timber (as was done with the new Connexion building at Singapore Management University, which has been recognised as a certified Net-Zero Energy Building–the first located within Singapore's urban core[5]).

2. Reducing carbon-intensive behaviour from the demand side

While implementing new technologies and mandating CRD-friendly policies are effective, they can be augmented with demand-side changes like moving towards a low-carbon lifestyle. These can be put in place by communities and organisations to bring about significant carbon emission reductions (of between 40 and 80 percent of global sectoral GHG emissions in a recent study) when done *en masse* across the globe.[6] One example can be found in Singapore, where major policy shifts in the transportation sector are aimed at encouraging public transportation use in combination with car-lite policies in controlling the country's vehicle population, whilst phasing out cars powered by petrol and diesel in favour of electric vehicles, and installing charging infrastructure for private vehicle use.

3. Improving green employment transition by ensuring no one gets left behind

When the motorcar first appeared in the early 20th century, operators of horse-drawn carriages became obsolete as they could not adapt to these technological advancements. Similarly, with the move toward green technologies, it becomes imperative to retrain or reskill those who have been trained in older, fossil fuel-intensive industries to avoid leaving them behind in this transition towards a new economy. For example, engineers familiar with internal combustion engines and petrol station operators can be retrained to maintain electric vehicles or operate alternative renewable energy technologies in other related economic sectors. Avoiding the displacement of a potentially significant urban workforce is essential towards ensuring the success of this aspect of CRD.

4. Avoiding the siloed thinking trap by applying a multi-functional approach to CRD design

Singapore's picturesque Bishan-AMK Park is an example of how increasing urban green spaces and incorporating water-sensitive urban designs that integrate nature-based principles in an urban setting can provide a multitude of ecosystem services such as temperature regulation, flood reduction, provision of habitats for flora and fauna, and the establishment of shared recreational spaces. This multi-functional approach–which cuts across singular, siloed thinking–is a hallmark of good and resilient climate design.

> Southeast Asian coastal settlements, in particular, have much at stake as they have densely packed populations living in cities that are major drivers of economic growth for their countries.

CRD IN ACTION IN SOUTHEAST ASIA

Coastal cities are especially vulnerable to the damaging effects of intensifying global warming, such as rising sea levels and severe weather like typhoons. Southeast Asian coastal settlements, in particular, have much at stake as they have densely packed populations living in cities that are major drivers of economic growth for their countries. Indeed, these cities contribute to nearly 80 percent of the region's GDP.

The coastal city of Semarang and the island city of Singapore are two concrete examples of Southeast Asian cities which implemented successful CRD strategies that significantly reduced urban climate risks.

Semarang, Indonesia

The coastal city of Semarang, the largest city and capital of Central Java, Indonesia, has long been affected by environmental issues that include floods, landslides, and coastal erosion. Even more worrying is that the city is sinking; scientists estimate that the city sinks nearly 10 centimetres every year. Since 2009, the Indonesian government has implemented several policies that improved the area's CRD.[7] The policies include identifying Semarang's marine wildlife reserves, implementing zoning restrictions along flood-prone shorelines to avoid further coastal development, and considering indigenous knowledge from marginalised communities that are vulnerable and most affected by climate change, during the decision-making process.

To manage these risks, the government completed a city resilience study and vulnerability assessment that identified flooding, coastal erosion, landslides, and droughts as the country's top hazards, and incorporated climate change resilience into its medium-term development plans. It put forth a City Resilience Strategy in May 2016 that comprises initiatives to enable six pillars: sustainable water and energy, new economic opportunities, preparedness for disaster and disease outbreaks, integrated mobility, transparent public information, and governance, as well as competitive human resources. Even before the release of its city resilience strategy document, Semarang had chalked up several achievements including:

- Restoration of mangrove forests: The exercise began in 2002 and resulted in the reclamation of at least 196 hectares of lost fishpond area.
- Reduction of flooding: Semarang's limited water supply led to the unchecked depletion of groundwater, which sped up the city's subsidence. The building of the Jatibarang Dam reduced flooding and provided residents with clean water.
- Reduction in emissions: The city implemented a green procurement policy for government purchases, which included emission reduction goals, and this helped reduce emissions caused by air conditioners by 30 percent. It also launched an initiative to replace 30 percent of street lighting with LED (light-emitting diode) lights to reduce emissions from lighting by 33 percent.

Singapore

Singapore's Prime Minister Lee Hsien Loong has referred to climate change as "one of the gravest challenges facing humankind" and elevated its importance to the same level as that of the country's national defence. In 2019, he discussed the numerous approaches taken by the country to mitigate climate risk.[8] One of these approaches is the Singapore Green Plan 2030, a whole-of-nation movement led by numerous governmental agencies working across their specific domains, which aims to drive sustainability at a national level.[9] It is an ambitious plan; the government aims to invest S$100 billion over 100 years, to tackle rising sea levels and climate change.[10] As part of the plan, the government developed major infrastructural additions such as sea walls to protect the low-lying island and an additional pump house to remove excess water during flooding. Amongst its many targets, the Green Plan is working toward the following:

- City in nature: A green liveable and sustainable home for Singapore, which includes, for instance, planting one million more trees and having every household within a 10-minute walk from a park by 2030.
- Green government: The public sector will lead on sustainability, such as aiming to peak public sector carbon emissions around 2025, ahead of the national target.
- Sustainable living: This would be achieved by strengthening green efforts in school, as well as promoting green commutes, and green citizenry. For instance, at least 20 percent of schools are to be carbon-neutral by 2030, while the cycling path network on the island will be tripled in size by 2030. The waste sent to landfill per capita per day would be reduced by 30 percent by 2030.
- Energy reset: There will be a drive to switch to green energy and cleaner-energy vehicles, and increase solar power deployment five-fold by 2030. In addition, there will be greater efforts to develop greener infrastructure and buildings, as well as build sustainable towns and districts.
- Green economy: Sustainability would be the new engine of economy growth and new investments that are carbon- and energy-efficient would be sought.
- Resilient future: Singapore's coastlines will be safeguarded against rising sea levels, and initiatives will be introduced to ensure food security, and keep the country cool, with S$5 billion being dedicated to improving coastal and drainage flood protection measures.

DO WE SINK OR SWIM?

Despite the bleak state of climate affairs at this moment, we still have time–albeit very limited–to change our future trajectory. Nations everywhere are making concentrated and tangible efforts to reduce emissions and make their cities more climate-resistant and sustainable in order to encourage the regeneration of natural resources per the tenets of CRD.

However, it would be a mistake to think that the buck stops at governments around the world. Society, including communities and organisations in the public and private sectors, plays a critical part too. Climate resilience works best when all stakeholders understand what is at stake and align themselves towards walking this path together with much-needed haste.

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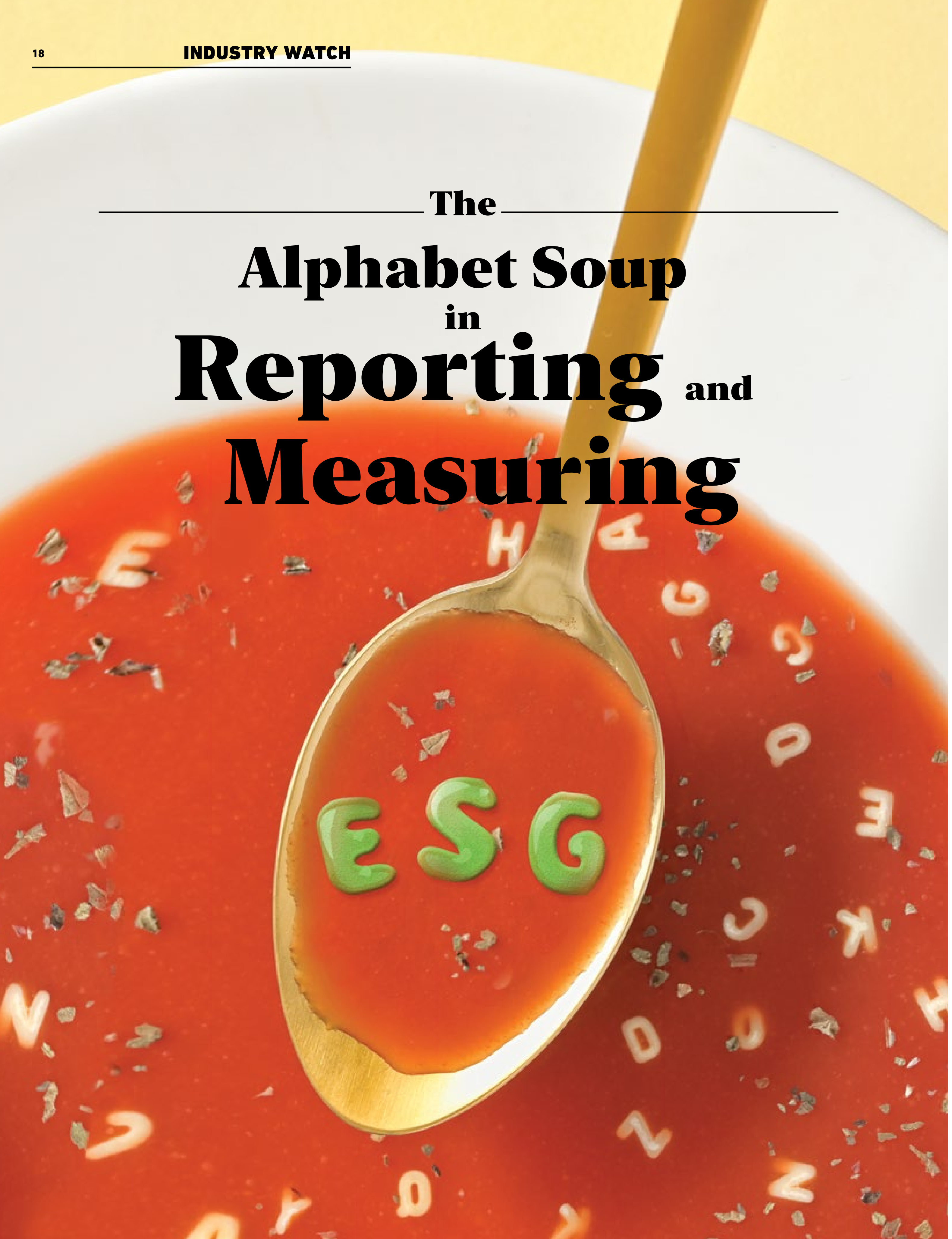
The Alphabet Soup in Reporting and Measuring



Harmonising frameworks with the Impact-Weighted Accounts Framework.

by Liang Hao and Chan Kam Chee

"How dare you!" These were the words Swedish climate activist Greta Thunberg had for world leaders at the 2019 United Nations (UN) Climate Action Summit in New York, admonishing them for their failure to take stronger actions to tackle climate change.

In 2015, all UN members had adopted the Sustainable Development Goals (SDGs)[1]—a set of objectives aimed at providing a blueprint for nations to address various societal issues and protect the planet. With that, environmental, social and governance (ESG) issues came to the forefront, capturing the attention of civil society and the business community. Corporations and investors could no longer ignore the ESG impact that businesses have on society and nature, given the rising social activism for such issues.

On the environmental side, global warming has made it impossible for people to avoid or mitigate adequately the effects of extreme climate conditions. Heatwaves and forest fires in Europe and the US, as well as floods in China, India, and Japan—these extreme climate events are now an annual affair for people living in many parts of the world. Climate change is something we cannot ignore today and there is tremendous pressure on both governments and businesses to curb the emission of greenhouse gases (GHG). Since the UN Climate Change Conference 2015 adopted the Conference of the Parties (COP) 21 Paris Climate Agreement, global leaders have pledged to keep global warming to 2°C below pre-industrial levels and have announced ambitious plans to cut GHG emissions to attain net-zero carbon emission within the next few decades. Other environmental issues such as pollution, deforestation, and the loss of biodiversity have also attracted the attention of climate activists, who demand stronger actions from governments and corporations to address the negative impact of these activities.

There is also rising awareness of social issues, especially gender inequality, poverty, and child labour. A report by the World Inequality Lab in 2021 revealed that the richest 10 percent of the world's population owns 76 percent of global wealth, while the poorest half owns just two percent of all wealth.[2] The COVID-19 pandemic has only exacerbated such social issues. For example, when nations were locked down and people were forced to work from home, many working women were compelled to take on additional childcare and family responsibilities at the expense of their jobs, which worsened the gender inequality of the workforce.

In terms of corporate governance, the same issues have been hampering the development of an efficient marketplace despite repeated efforts by regulators to curb such malpractices. Despite the fall of Enron in the early 2000s, accounting scandals continue to plague the market. For example, in June 2020, Luckin Coffee from China was delisted from the Nasdaq and Wirecard from Germany filed for bankruptcy. Both companies fell due to accounting frauds, highlighting the difficulty organisations face when adopting good corporate governance practices despite decades of implementing regulatory reforms.

> Climate change is something we cannot ignore today and there is tremendous pressure on both governments and businesses to curb the emission of greenhouse gases.

With increasing pressure to tackle these ESG issues through corporate social responsibility (CSR) and socially responsible investment (SRI) initiatives, trillions of dollars have been invested in sustainability-related areas. However, it appears that little is known about how to measure ESG impact in a quantifiable and objective way, and whether these CSR and SRI initiatives are really leading to positive changes. Many have argued that several CSR and SRI initiatives are simply greenwashing–a practice where companies provide false or misleading information to make the company look more environmentally-friendly than it actually is. In fact, Bloomberg Intelligence has reported that the managers of almost a third of global total assets under management (estimated to be US$40 trillion) in the ESG industry have inflated their ESG claims.[3]

Such ESG measurement challenges are largely due to the lack of a standardised framework in measuring ESG impact. There has been increasing consensus about the need to standardise measurement, disclosure, and reporting frameworks to help policymakers, investors, and managers better gauge the true 'ESG-ness' of a company.

THE RISE OF ESG REPORTING FRAMEWORKS

Globally, numerous non-profit and inter-governmental organisations have provided recommendations and frameworks for ESG reporting. However, these frameworks differ significantly in terms of the breadth and depth in the disclosure required. For example, some ask for broad ESG and sustainability disclosure; others narrow their requirements to specific reporting parameters, such as GHG emissions. Moreover, some are mandatory disclosures while others remain voluntary.

Some major ESG reporting frameworks include Global Reporting Initiative (GRI), which is one of the most widely used standards for sustainability reporting, Integrated Reporting Framework (also known as <IR>), and Sustainability Accounting Standards Board (SASB) Standards. Other more specific ESG reporting frameworks include the Financial Stability Board's Task Force on Climate-Related Financial Disclosures (TCFD), as well as the GHG Protocol initiated by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), which develop recommendations on the types of information that companies should disclose to help governments and businesses respond to climate change.

Many of these reporting frameworks are non-mandatory and aim to provide users a basis to measure the ESG impact their businesses have on society. Some other frameworks might be more outward/inward-looking depending on how they were developed. While the myriad of options has made it difficult for investors and companies to select the appropriate framework to use, some of these framework providers have started to come together to harmonise their standards to promote a wider adoption of such frameworks. For example, the Value Reporting Foundation was formed in June 2021 following the merger of the International Integrated Reporting Council (IIRC) and the SASB.[4] In November 2021, the International Financial Reporting Standards (IFRS) Foundation Trustees launched the International Sustainability Standards Board or ISSB, a new standard-setting board to provide a comprehensive global baseline for sustainability reporting, as an alternative to the GRI framework. This move was meant to consolidate the Climate Disclosure Standards Board (CDSB)–an initiative of CDP, formerly known as the Climate Disclosure Project–and the Value Reporting Foundation (VRF). Figure 1 illustrates how some of the highlighted standards have converged over the years.

Increasingly, national regulators are mandating companies to publish ESG reports, in addition to the typical annual financial reports, and getting them to be more accountable for their actions on society and nature. This is in part a response to the significant concerns about measuring ESG and greenwashing. As a result, besides the non-mandatory ESG frameworks introduced by the global non-profit and inter-governmental organisations, individual national regulators have also implemented different ESG reporting requirements for companies operating in their country. For example, the EU has been one of the forebearers in imposing mandated ESG reporting regimes on companies operating in the region. The EU Taxonomy is an EU classification system that aims to help companies, investors, and policymakers with appropriate definitions for which economic activities can be considered environmentally sustainable. It is also accompanied by the EU Sustainable Finance Disclosure Regulation and the Corporate Sustainability Reporting Directive to ensure that companies adopt the same definition of sustainability.

> Many have argued that several CSR and SRI initiatives are simply greenwashing–a practice where companies provide false or misleading information to make the company look more environmentally-friendly than it actually is.

CONVERGENCE OF DISCLOSURE STANDARDS

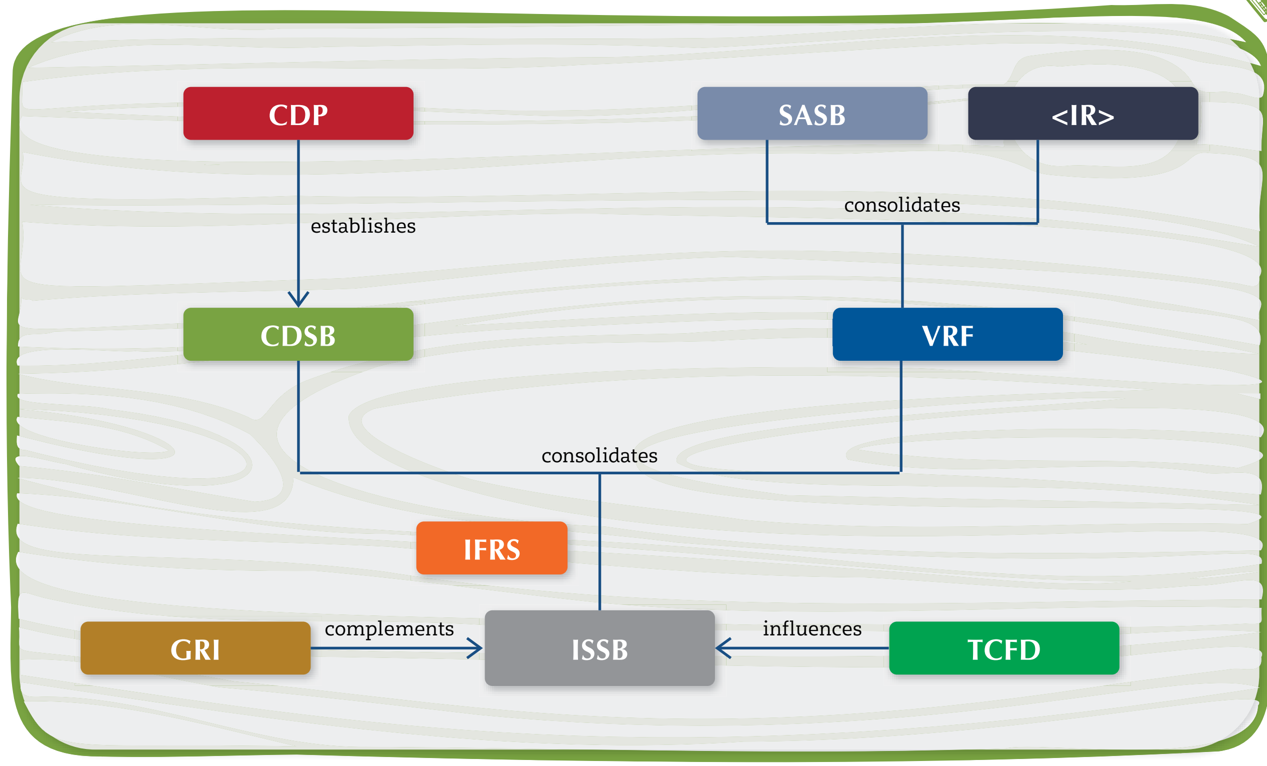


FIGURE 1

Adapted from CETAB Titan

In Singapore, companies listed on the Singapore Exchange (SGX) are required to publish climate reporting and report carbon emissions using the TCFD recommendation from the financial year commencing 2023. SGX Regulation and the Accounting and Corporate Regulatory Authority also announced plans in June 2022 to jointly set up a committee to advise local companies on a sustainability reporting roadmap.[5] These regulatory actions highlight the importance that regulators are placing on the climate disclosure of companies to ensure that appropriate disclosures are made to investors.

TOO MANY COOKS SPOIL THE (ESG STANDARDS) BROTH?

Nonetheless, the lack of a standardised ESG reporting framework has led to many issues, and stakeholders like investors and scholars are increasingly scrutinising the effectiveness and accuracy of the wide range of ESG reporting standards available in the market today. Meanwhile, more and more people are looking into ESG ratings provided by third-party rating agencies to evaluate the 'ESG-ness' of companies.

According to a study by professional services firm EY, there are about 100 different ESG rating providers in the market as of October 2021,[6] which is double that for the year before. This no doubt raises questions about which agency an investor should rely on. Besides, the opaque research methodologies employed by the various rating agencies do not make the decision any easier for users. Research has shown that there was a major divergence in

ESG ratings for the same company when these ratings were obtained from different providers, due to the range of methodologies adopted by the various agencies, with the correlation of ESG ratings for the same company ranging from as low as 38 percent to as high as 71 percent.[7] In addition, there might be biases in such ESG ratings where larger companies tend to have higher ratings as they have more resources to support ESG disclosure requirements.[8] This led scholars to introduce the term 'aggregate confusion' because investors will likely get conflicting information as the same company can have very different ESG ratings from various rating agencies, making it difficult for them to make informed investment decisions.

In another study, researchers compared the differences in ESG scores from Refinitiv, a subsidiary of the London Stock Exchange Group, over two different periods and found that some ESG ratings were dramatically different for the same firm over the two periods.[9] Although potential reasons for the re-ratings may be due to the addition or removal of disclosure and time-varying traits of firms, the authors were unable to access the ESG provider's research methodology to arrive at an accurate explanation for the deviation. Given the opaque methodologies used by different ESG rating agencies, it is not surprising that critics complain that the agencies are trying to change the narrative of a company's past actions–or what the researchers call 'rewriting history'–without providing an objective explanation for such changes. It leads them to question the reliability of some ratings, given that most ESG providers do not publish their methodology due to issues like intellectual property and commercial sensitivity. This non-transparent nature of many ESG rating providers does not bode well for the development of ESG ratings, as trust is essential to promote the use of such ratings when guiding corporations and investors in their actions.

At the same time, the dramatic rise of the ESG reporting industry over the past few years will no doubt attract more interest and scrutiny from investors and financial regulators, and regulators globally have already taken action to investigate suspicious practices. In June 2022, a unit of Deutsche Bank, DWS, was raided by the German regulator over claims of exaggerating its ESG reporting capabilities.[10] Within the same month, the US Securities and Exchange Commission (SEC) announced that it was investigating some of the ESG rating products offered by Goldman Sachs, and planning to tighten its ESG disclosure requirements to ensure companies are truly committed to such claims.[11,12] In another instance, the Development Bank of Japan announced plans to scrutinise the use of its funds to ensure that companies are not greenwashing when making investment decisions.[13]

INTRODUCING THE IMPACT-WEIGHTED ACCOUNTS FRAMEWORK

To play its part in tackling the issues mentioned above, the Singapore Green Finance Centre (SGFC) at the Singapore Management University (SMU) has been working on a more holistic, transparent, and comparable ESG impact reporting framework. Together with partners from the Harvard Business School, the Rotterdam School of Management, the Impact Institute, and the Impact Economy Foundation, the SGFC has been working on developing the Impact-Weighted Accounts Framework (IWAF).

The premise is that sustainable value can be measured through impacts, which show how activities affect societal welfare and the natural environment. Impact-Weighted Accounts (IWAs) supplement traditional financial accounts and are a way for organisations to quantify their impacts. The IWAF aims to expand the traditional performance measurement from financial capital (i.e., profits) to the other five capitals in a firm's financial statements: manufactured capital (e.g., client value of products), intellectual capital (e.g., creation of intellectual property), social capital (e.g., contribution to the community), human capital (e.g., the wellbeing of employees), and natural capital (e.g., contribution to climate change). With these six capitals, organisations can compile their Integrated Profit & Loss (IP&L) accounts and Integrated Balance Sheet (IBaS). The IBaS can also be expanded to include the stakeholder value created over a longer or pre-determined period.

By expanding the impact produced by a firm beyond the financial profits it generates, the IWAF aims to provide investors and other stakeholders with an alternative framework to evaluate the impact a firm has on society and the environment. It shows the value creation or reduction for all the stakeholders of an organisation: employees, customers, the environment, and the broader society. With this in mind, the IWAF has been adopted by some companies such as Dutch bank ABN AMRO.

The IWAF thus aims to fill the gap of a missing international standard by ensuring complete and consistent IWAs. Under the framework, five common topics of non-financial impact assessment have been identified, and they are addressed using 10 principles to ensure that IWAs inform impact decisions (refer to Table 1).

IMPACT-WEIGHTED ACCOUNTS FRAMEWORK

TOPICS	PRINCIPLES
Identification Which impacts are my responsibility?	**Multi-dimensional** Impacts can reflect different forms of value and value for different stakeholders
	Materiality based An impact is material if it affects future earnings or if it affects welfare of stakeholders
	Welfare based IWAF includes at least two welfare categories: wellbeing and the respect of rights
	Value chain responsibility Organisations have a responsibility for the impact of their value chain partners
Measurement How do I measure societal impacts?	**Impact-pathway based** Impact is about outcomes–how the welfare of stakeholders is affected
	Complete reference view Impact is defined with respect to a specific reference scenario
Comparability What are the relative sizes of impacts?	**Valued in commensurable unit** Monetary valuation allows impacts to be compared
Aggregation How to make sense of many impacts?	**Only within welfare categories** Negative impacts (of the rights dimension) shall not be netted against positive impacts
	Conservation of impact Impact contribution ensures total impact is counted exactly once
Presentation How to comprehensively present impacts?	**Statements of IWAs** Integrated Profit & Loss, Integrated Balance Sheet, and derived Statements

TABLE 1 Source: Impact Economy Foundation

The IWAF was designed after considering existing reporting frameworks like GRI, SASB and ‹IR›. Furthermore, given that many ESG reporting frameworks are formulated with a Western perspective, Asian industry partners have been consulted to customise and adapt the IWAF to suit the unique needs of Asian organisations.

Even before the promulgation of the IWAF framework, Asian organisations have begun exploring how to better measure ESG impact and improve their sustainability practices. One such organisation is DBS, a multinational bank headquartered in Singapore. It conducted an impact study in partnership with SMU and the Impact Institute to evaluate the ESG impact of its lending on the automotive and palm oil industries.[14] After reviewing the results from both studies, DBS has adopted the No Deforestation, No Peat, and No Exploitation (NDPE) policies, which are expected to reduce the negative impacts by up to 49 percent when it lends to the palm oil industry. The review also gave the bank a strong motivation to increase its lending to the electric vehicle industry to better manage the environmental risks associated with combustion engine vehicles. Over the past few years, the SGFC has also completed a few pilot schemes with its industry partners to incorporate the IWAF into their ESG disclosure. From these studies, we can see tangible outcomes where the IWAF has nudged an organisation to review and adopt practices that have positive impacts on society.

Apart from the traditional industries like agriculture and manufacturing, the impact of Asia's real estate industry on society is often overlooked. With building and construction contributing nearly 40 percent of global carbon emissions,[15] this is an industry that the SGFC is hoping to partner with to apply the IWAF.

CONCLUSION

Issues like climate change and social inequality have elevated ESG reporting from a good-to-have report to an important social 'licence' if businesses want to maintain their legitimacy and continue thriving in the current business climate. Apart from the mounting public pressure, financial regulators globally are also making such ESG disclosure mandatory for companies so that investors can make informed choices, leading to the emergence of different ESG reporting and measurement frameworks that can sometimes confuse and even possibly mislead stakeholders.

Nonetheless, reaching a consensus on a standardised sustainability reporting and measurement framework is no mean feat. It requires stakeholders with differing interests and agendas to come together and agree on an acceptable framework for the industry to adopt in order to provide a true and fair representation of a firm's ESG efforts. A framework that is too onerous would disincentivise corporations from adopting it, while one that is too lax could lead to issues like greenwashing and render the framework ineffective.

Finding that sweet spot to balance the efficiency and effectiveness of such frameworks would require more hard work in the years to come. If successful, it would be a robust response to Thunberg's call for businesses and organisations to act faster and stronger together to fight climate change.

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Endnotes

1 The UN SDGs are a collection of 17 global goals to be achieved by 2030, which were adopted by the UN General Assembly in 2015. Each SDG has a separate list of targets to achieve–there are 169 in total–covering social and economic development issues such as poverty, hunger, health, education, global warming, gender equality, water, energy, urbanisation, environment, and social justice.

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How the Fast Food Industry can Protect Its Lunch (And Eat It Too)

The digital transformation of the industry.

by Xuesong Geng, Andrew Chin, and Andrew Chen

Fast food restaurants, as we know them, are ideal for grab-and-go customers. Industry players compete fiercely when it comes to providing consumer convenience, so they pick outlet locations where foot traffic is strong, such as shopping malls, community centres, airports, railway stations, or attractions like amusement and theme parks. The COVID-19 pandemic, however, has affected the fast food business dramatically as consumers switched from grab-and-go to getting their orders delivered to their homes. More and more restaurants, including those selling fast food, have adapted to this new norm by offering food delivery through online delivery portals like Grubhub, Zomato, Deliveroo, and Foodpanda, or the fast food provider's own app.

Providing a delivery option may not appear to be a notable change for fast food restaurants and chains. After all, preparing extra portions for non-dine-in customers or setting up a delivery portal seems simple enough. But online delivery has a catch. Outlets serving fast food are designed to rapidly deliver hot food bags to customers waiting in queues, so they manage their staffing and operations accordingly, based on periods of high peak and low peak consumer traffic. However, during the pandemic, online delivery became a survival necessity as considerable consumer traffic migrated online. For example, home delivery accounted for 32 percent of total sales for KFC and Pizza Hut in China in 2021, a 60-percent jump from pre-COVID days in 2019.[1] So this seemingly innocuous change is fundamentally changing the industry's operating model. For one thing, fast food restaurants are turning from consumption centres into fulfilment centres. Fast food businesses have had little choice but to rework their priorities across all facets of their business model, including resource allocation and operations, as going digital is no longer a good-to-have, but a must-have.

In this article, by using examples from China's fast food sector, we look at the digital transformation happening in the fast food industry and analyse changes in practices and mindset shifts that have taken place. We explain how digital transformation efforts are profoundly reshaping business models, and propose a 3S model–Synchronised, Smart, and Systemic–with recommendations on how it can guide fast food players on their digital transformation journey.

THE TRADITIONAL FAST FOOD BUSINESS MODEL

The fast food business is a sizeable segment of most economies. In 2021, the global fast food market size was estimated to be approximately US$648 billion and forecast to surpass US$998 billion by 2028 at a compound growth rate of 4.6 percent annually.[2] Take China for instance. In 2022, this sector generated an estimated US$184 billion in revenue, and provided employment to over 11 million people.[3] Although the industry boasts many big players, the market is quite fragmented. Major international brands like McDonald's, KFC, and Burger King are the top choices in China. McDonald's, for instance, sold 50 million Big Macs burgers in China in 2017, with Beijing boasting the highest sales in the country.[4] Local Chinese fast food brands like Daniang Dumpling, Real Kung Fu, and Malan Ramen also enjoy considerable popularity,[5] and several local brands like Dicos and Wallace have expanded to the second- and third-tier cities in China.[6] In fact, fast food penetration into the Chinese market has been remarkably high and eating fast food has become part of daily life for many Chinese.

The business model of most fast food providers is similar, with standardised food menus featuring burgers, fries, chicken wings, nuggets, ice creams, desserts, and beverages. The standardised menu and food preparation processes, along with the generally shorter time required to consume fast food, enables efficiency, quicker delivery and turnaround, and cheaper prices. While the paraphernalia of a typical full-service restaurant is missing, consumers generally do not mind self-service given the convenience and price. Additionally, economies of scale and outlet traffic are key requisites for fast food restaurants, as they guarantee higher revenues while keeping average costs low by spreading thin overheads. Traditionally, fast food restaurants are located in accessible and popular places to ensure high foot traffic, and the bigger the outlet, the better the economies of scale. However, landlords for such places tend to demand high rentals, which can erode profit margins. At the same time, fast food providers need to balance between high peak and low peak traffic in resource allocation across outlet locations.

Therefore, the choice of outlet location is a critical decision for any fast food business. The winning formula for traditional fast food businesses is simply to have more profitable outlets at the right locations. Accessible locations are an integral component of the value proposition for fast food consumers. However, if the fast food business generates more traffic online than at its physical outlets, the value propositions of physical outlets and their geographical attractiveness are diminished. Hence the new business model must focus on creating new value propositions to attract more online traffic and monetise it.

DIGITAL TRANSFORMATION OF FAST FOOD BUSINESSES

Digital transformation efforts are fundamentally reshaping the fast food sector's business models in the following three key ways: the shift from being outlet-centric to consumer-centric, the seamless integration of both offline and online models, and the use of data analytics as a new driver for competitive advantage.

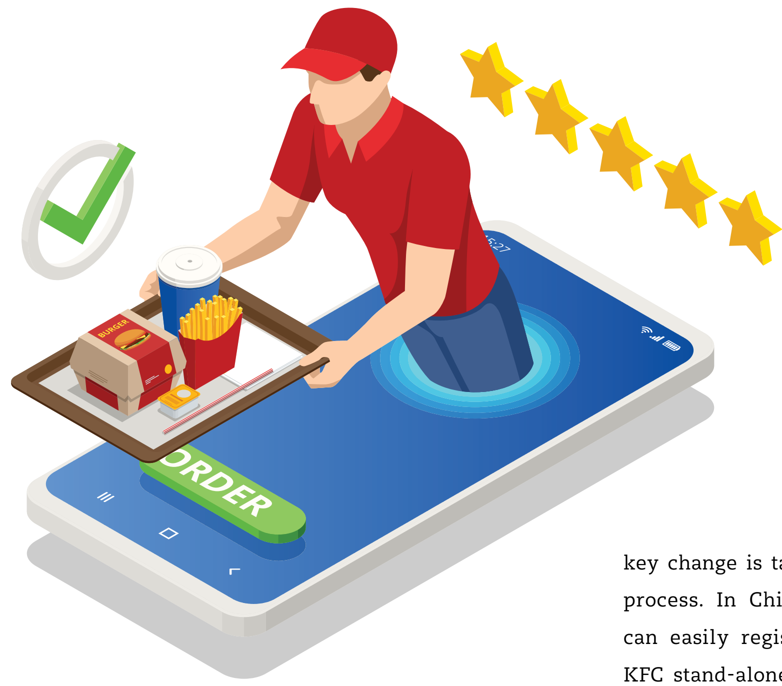
Not just store-centric, but customer-centric

While the traditional offline fast food business model revolves around brick-and-mortar outlets and attracting customers to these outlets, the online model revolves around the individual customer, hence it requires a mindset shift. To begin with, the traditional model captures purchase and other business-related data by outlets, rather than by individual customers. This is because the identity of consumers is unknown to the fast food providers. As such, the unit of analysis for the traditional offline model is at the outlet level, that is, total revenue is determined by the number of outlets multiplied by the average revenue or profitability of each outlet. On the other hand, an online home delivery model allows the tracking of business data at the customer level, where total revenue can now be calculated as the number of consumers times the average revenue of each consumer. This data granularity at the consumer level allows food businesses to design more efficient and customised strategies for their customers.

Traditional marketing strategies aim to 'pull' consumers when they are in the vicinity of the outlet premises, whereas the online option allows for more 'push' promotions to alert consumers to product offerings regardless of where they are. With the consumer as the starting point, there are now many more scenarios under which consumption can happen, and the business logic becomes more about leveraging such scenarios to convert visiting consumers to regular patrons.

By focusing on different scenarios, fast food businesses can now customise their offerings for different consumer needs. An example would be how KFC China has developed new ways to cater to the gym-going crowd. The traditional solution would have most likely been to locate an outlet close to a gym, and the outlet would promote diet-friendly and healthier food like grilled chicken and salad. The new scenario-based digital approach enables KFC to develop new offerings and delivery options specifically tailored to this health-conscious profile. So in one scenario, those working out at gyms can order microwave-ready grilled chicken and enjoy a huge discount because the food can be delivered directly from the central kitchen, bypassing the need for physical outlets as the sites for purchase and consumption. In another scenario, several people working out in the same gym may have a similar need, so they may opt for a group purchase through social commerce, thereby enjoying even bigger discounts.

The new business model must focus on creating new value propositions to attract more online traffic and monetise it.



Put in place hybrid online-offline processes

Fast food chains across the world are finding that their customers are increasingly shifting online. For example, more than a quarter of McDonald's sales in its six biggest markets come from digital channels. Yum! Brands generated more than US$22 billion in revenue from digital channels in 2021, while Taco Bell generated more than 20 percent of its revenue from its digital channels.[7] There has also been a considerable push towards gaining new customers through online channels. McDonald's, for instance, introduced a rewards loyalty programme in 2021 and attracted 21 million active users in just a year. Such trends indicate that customers are keen to go online, and this is especially true in growing markets like China, where companies like KFC and Starbucks reported obtaining 46 percent and 38 percent of their orders respectively from digital channels.[8] It has thus become imperative for fast food businesses to integrate both online and offline models, which are two very different operation models that can sometimes come into conflict, and develop processes that can serve both online and offline customers efficiently. One such key change is taking place during the customer acquisition process. In China, a KFC customer at a physical outlet can easily register for the loyalty programme using the KFC stand-alone app or the KFC mini-program in popular apps like WeChat or Alipay. This helps convert offline traffic to online traffic. Members then receive promotional offerings pushed by KFC, which can draw them to the physical outlet, so the online traffic converts back to offline traffic and real consumption. Such strategies can nudge customers to try new products (similar to how Apple aficionados are repeat visitors to the brand's flagship stores) and help dilute the geographic limitations of physical outlets in attracting consumer traffic.

Under the traditional model, the customer acquisition cost (CAC) is estimated through costs incurred on building and maintaining physical outlets. With the new digital business, the cost of online channels has to be factored in when calculating the CAC. For example, fast food providers in China can readily go online using third-party food delivery platforms like Ele.me (owned by Alibaba)

While the traditional offline fast food business model revolves around brick-and-mortar outlets and attracting customers to these outlets, the online model revolves around the individual customer.

or Meituan. But the dynamics across these intensely competitive platforms often lead to a 'winner-takes-all' situation, leaving only one or two players dominating the entire market. Their dominant market position means the cost of online delivery platforms becomes much more expensive than that for offline channels.

Another factor to consider is that with the online option, business processes will shift from being product-oriented to being service-oriented. With the knowledge on consumers, customer lifetime value (CLTV), rather than the value of each meal, becomes the focus of analysis and insights. This revised business logic also means branding becomes even more important for digital businesses in the fast food industry, and is the reason why popular fast food brands continue to develop new products to keep their offerings fresh and invigorate their brand. These efforts build trust with customer members, resulting in higher CLTV. They also help to retain flagship outlets at premium locations and boost branding efforts.

With more consumers migrating online, and orders streaming in from both online and offline channels, the process complexity invariably increases exponentially. One challenge is fulfilment both on the spot at restaurants and through delivery. The delivery of fast food is very time-sensitive–fries can taste stale and soda drinks can taste 'flat' when they are served or delivered late. It also does not help that consumers have lofty expectations of the consistency for fast food items. Another challenge in the process is that the spike in orders during peak times can be multiple times higher. With the online option, the challenge becomes even more acute. Therefore, the capacity of information systems and predictive capabilities need to be scaled up and improved substantially.

To cope with such increasing complexity, fast food providers must consider business process redesign, including digitising and optimising existing practices. One way is to make visible, digitally tag, and streamline information from all operations. For example, fast food providers are installing IoT (Internet of Things) sensors in warehouses, centralised kitchens, and food preparation stations. This enables information on when supplies arrive and are used, as well as when the food is sold, to be collected, synchronised, and reported in real-time. Outlet managers can use smart devices such as smartwatches or smartphones to receive succinct, real-time information collected from these IoT sensors to make prompt adjustments to match fulfilment demands. Such revamped information systems help manage the increasing complexity of digital transformation.

At the same time, we need to recognise that online channels may also provide the solution for problems that have troubled offline businesses. For instance, it used to be that there was little outlet managers could do when they realised that food had been overprepared 30 minutes before closing time. This can be resolved digitally today. Through apps and social media, managers may be empowered to broadcast to customers within a specified geographical range about huge time-limited discounts for online orders. Inventory waste can thus be reduced significantly through online channels.

Therefore, although the online model imposes unprecedented challenges for the traditional fast food business, it offers tremendous opportunities to unleash new potential in terms of revenue and profitability. Given the ever-increasing rental and labour costs, there has been a decrease in the average revenue and profitability of physical outlets. By integrating the online and offline models seamlessly, the revenue per square foot and per employee can now increase significantly. Hence the number and size of outlets need not be the only factors to focus on in the drive to improve performance.

Build a data-driven business model

As alluded to above, online channels highlight the increasingly significant role of data in digital transformation. This is the last piece of the puzzle to unleash the potential for fast food businesses in the digital era. Let us walk through an example about how a fast food provider sets up new outlets. Under the traditional model, it would start by looking for physical locations with high foot traffic. Given that there is typically only rudimentary and incomplete data to estimate potential foot traffic, it would invariably turn to known areas of high density footfall like shopping malls. Now with the online option, a provider can naturally offer a delivery option for many locations, but the problem comes when the waiting areas for delivery riders become overcrowded at those locations where real estate is premium.

How did some big fast food brands in China tackle this issue? By changing their mindset. For instance, one of the firms opened an online delivery-only outlet first, instead of a full-service outlet with a delivery option. This was a much cheaper option in some less popular locations. This way, it collected data on the location, and the customer consumption patterns around the location. Six months later, the company revised the configuration of outlets in the vicinity based on insights gained from the data analysis. It built full-service outlets at hotspots that were most profitable and kept delivery outlets that fit delivery patterns in the region, significantly lowering search costs for the best locations and ensuring that the decision is based on a more holistic reading of an entire city.

Such a data-driven approach is no longer a pipe dream. Enabled by the availability of granular data, leaders in the fast food business all over the world can now create tens of thousands of labels for individual customers, thus developing a deep and nuanced understanding of their consumption habits like order size and variety, or their demographic profile including gender variances and lifestyle habits.

As more data on consumers become available, fast food providers can use data analytics to provide even greater customisation for individual consumers, such as modifying their offerings through novel combinations or types of food and drinks, or offering new services in new settings like mini fitness stations and medical clinics. This data will also help them make more accurate predictions to cope with the operational complexity brought on by digital transformation. When the granularity of consumer data increases multifold, the total amount of data becomes gigantic. The demand for data capabilities multiplies further when providing customised services. The increased complexity in inventory control, fast-paced operations, resource allocation, and delivery fulfilment–all relies on the new capabilities developed to cope with big data.

As data becomes increasingly important to businesses, the cost of obtaining such information becomes a concern. For example, for fast food providers, third-party platforms may be reluctant to share data, or will only share partial data with them. As a result, they either miss out on valuable data and its associated insights, or acquisition of such data becomes too expensive. Therefore, many start to develop their in-house capability to build, collect, manage, and most importantly, own such data. They also develop the e-commerce, social commerce, and membership management capabilities to provide consumer-centric offerings through their own mobile apps.

THE 3S MODEL

Going digital is not just about creating an additional online channel on top of existing options. It is about transforming a traditional business by taking a fresh look at its value proposition and operational processes. The digital business will only become valuable when it can be combined seamlessly with the offline business. In this regard, it is not that the physical outlet or offline channels are outdated; instead, it is more a matter that the offline business model will have to be different and adapt to new ways to unleash its potential for value creation, together with the digital business.

Based on the analysis above on the importance of data in the digital transformation of the fast food sector, we propose a 3S (Synchronised, Smart, and Systemic) model to guide what a business should do regarding its data capability during its digital transformation. We believe this model can apply not only to fast food businesses, but also many other retail businesses.

First, with the omni-channel business model, data needs to be *synchronised* across every aspect of the business model and operations. At the front end, service for customers has to be seamless in different settings, regardless of whether the order is made online or offline. At the backend, the operational processes have to be automated, efficient, and able to deal with spikes and dips in demand. This normally implies that the data will have to be stored in some centralised place like the cloud. The real-time information will be collected from all aspects of the business through apps, websites, IoT sensors, POS (points of sale), or other physical terminals. The data will also be accessible from multiple points like the smart handheld devices of managers, instruction screens at food preparation stations for employees, and consumers' mobile phones. All the data should be synchronised such that only one source of accurate data will be provided to all users of the system.

Second, the data should enable the business to become a *smart* business. If data can be collected, analysed, and used to understand consumers better, businesses can produce better tailored offerings. A flywheel or virtuous cycle can form where better data translates into better service and helps attract more customers, which in turn generates more data for the business to become even smarter. This is already happening in many other retail businesses. For example, Hema Supermarket in China has developed an integrated system where it can intelligently prepare an online order for delivery under 30 minutes by combining the deliveries of different customers in a single route. E-commerce giant JD.com has developed an integrated system to process orders through robots that can self-adjust according to the situation. The retailers can also use the insights generated from the data to create new scenarios and value propositions for consumers. For instance, Pinduoduo adds different grocery items to its vegetable stores depending on the different demographic profiles of consumers. While businesses are becoming smarter, their business models are becoming more heavily data-driven, so much so that this quality permeates every aspect of their operations, including touch points with their customers. Future businesses will thus become high-touch and hi-tech at the same time.

Third, the business needs to take a *systemic* view.[9] It must be prepared to change its value chain and the way it co-creates value with partners when it builds its digital business. Fast food is only one of the many items the customer needs. There might come a time when different partners need to collaborate to create greater value for their customers. For example, the popular Chinese coffee chain Luckin has used data analytics to determine where to locate its outlets. To achieve this, it collaborated with Baidu Map to obtain location, traffic, and online activities data, which have been collected from the mobile users of Baidu Map services. Moreover, coffee consumption might be related to fast food consumption or shopping activities in a mall. What new products or services can be developed if we can combine these diverse types of data? This is when scenario-oriented and customer-centric data comes in to facilitate the conceptualisation and redesigning of products and processes. At the same time, the business needs to better protect its data, while also figuring out how to share it more efficiently with its partners and other providers (e.g., data marts), so as to monetise the data for revenue and insights.

A fast food provider must be prepared to change its value chain and the way it co-creates value with partners when it builds its digital business.

THE FUTURE OF FAST FOOD BUSINESSES

We hope this article has provided some food for thought on how the fast food industry players can be better prepared for a post-pandemic world. Even when public health restrictions are lifted, food delivery as an option is here to stay. Consumer behaviour has indeed fundamentally changed. Online and offline integration will become the new normal. And fast food providers will need to be guided by a synchronised, smart, and systemic business model to succeed in their digital transformation.

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Encouraging Social Entrepreneurship

It's about taking the first steps.

by Kanyaporn Skutalakul

The ability to address the 'wicked' problems of our world relies on the great rebalancing of natural resources and our behaviour to address issues such as overpopulation, overconsumption, and, of course, climate change. The late eminent physicist Stephen Hawking predicted in 2017 that the human race has only 100 years before we need to colonise another planet. A similar prediction was made by the Malthusians in 1798, yet this world strives on. Such predictions are often made with an ignorance of the potential impact of innovation and technology. Nevertheless, the controversial question of whether the world can avert potential crises has piled pressure on future changemakers. They have been urged to keep in mind both the long-term sustainability of their solutions, as well as the economic imperative, as they craft innovative strategies.

Entrepreneurship has always been an important growth driver of the world economy; however, our world needs both kinds of entrepreneurship, social and business, to collaboratively stimulate growth in a way that includes economic and social impact so that we progress in a more balanced manner.[1] But we need social entrepreneurship efforts to be more successful. According to the 2015 Global Entrepreneurship Monitor (GEM) report, the global rate of commercial entrepreneurs' creation averaged 7.6 percent as compared to the rate of social entrepreneurs' creation at 3.2 percent.[2] The question is how do we accelerate social entrepreneurial creation?

I have been in the field of social entrepreneurship for the past 10 years. Based in Thailand, I work with programme organisers to develop training programmes that would groom new social entrepreneurs and assist them during their journey. I observed that such training investments generated mixed and inconclusive impact, so I conducted a research study to better understand what drives social entrepreneurial intention (SEI) and identify more suitable interventions that could be designed to develop social entrepreneurs and help them succeed.

WHO ART THOU, SOCIAL ENTREPRENEUR?

The term 'social entrepreneur' was first introduced by sociologist Joseph Banks in 1972 to highlight the need to use managerial skills to address social problems and business challenges. Since then, social entrepreneurship has developed its own history in terms of definition and articulation. Essentially, social entrepreneurs are individuals with innovative solutions to tackle society's most pressing social problems. They focus more on the creation of social impact and change. They are seen as enabling a new model of entrepreneurship that provides products and services in support of the United Nations' Sustainable Development Goals.

There is still room to define social entrepreneurship under different contexts and with varying outcomes, but it is important to understand the fundamental differences between social entrepreneurs and commercial entrepreneurs (who are more commonly studied). First, social entrepreneurs are driven by a motivation to discover and exploit a distinct category of opportunities that contribute to social change. Second, the way they pursue opportunities might diverge from typical business approaches, considering the diversity of their stakeholders. And third, the outcomes they aim for involve both social and economic aspects.[3]

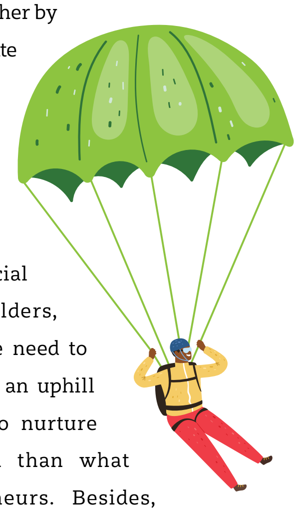
While the need to contribute to social change has served as an impetus for social entrepreneurship, its success rate has not been particularly encouraging, even with generous government subsidies and non-governmental organisation (NGO) support. More alarmingly, the success rate has not been improving. This triggered my concern that perhaps there has been wholesale adoption of for-profit entrepreneurship practices in social entrepreneurial creation; hence, they may overlook, or even de-emphasise, the very engine that drives SEI and commitment. Have we created a procrustean bed of sorts for this emerging field? In other words, rather than adapting the bed, will we have to chop off the travellers' legs to fit the furniture? If we extend the analogy, in the context of this article, using profit as a catalyst may actually have limited the SEI of a potential entrepreneur.

WHAT IS THE PROBLEM?

Despite its diverse definitions, social entrepreneurship is an important field of study that is rapidly undergoing a period of renewed intellectual, pragmatic, and managerial scrutiny as it develops, especially in terms of measurement. In a social entrepreneurial venture, social value is the primary objective while economic value is the by-product. Although it is possible to measure the effort spent by social entrepreneurs, the social value creation and social impact resulting from their actions are too complex to be tracked using a simple profit and loss statement that follows clearly defined Generally Accepted Accounting Principles. Since there is no uniform measure of success, it is not surprising that social impact measures vary from one social venture to another.

For aspiring social entrepreneurs, the path towards success is still unclear and guidance is limited since it is a new and emerging area of practice when compared to commercial entrepreneurship. Moreover, often due to size, sophistication, and the localised nature of the problems these ventures are tackling, success stories of social entrepreneurs are few and far between. Hence, without a significant payoff in the future, some of these entrepreneurs give up when confronted by problems in the process of starting and operating these ventures.

The 2015 GEM report on social entrepreneurship had studied 167,793 adults in 58 economies and found that the global average creation rate of commercial start-ups was 7.6 percent, which was more than twice that of social start-ups at 3.2 percent. After digging deeper, we found that the global average creation rate of social start-ups in the operational phase had been reduced further by two-thirds to only 1.1 percent. These figures indicate that the course of social entrepreneurship may not be straightforward for social entrepreneurs at the nascent stage.



The path for social entrepreneurs is complex, difficult, and tiring, because the process requires the identification of a social mission, communication with stakeholders, the bridging of institutional voids, and the need to educate target groups to get on board. It is an uphill battle since the support infrastructure to nurture social entrepreneurs is less developed than what is available to commercial entrepreneurs. Besides, for commercial entrepreneurs, it is profit that drives behaviours, while for social entrepreneurs, it is more the intention that drives behaviour. To increase the likelihood of success for developing social entrepreneurs, we need to understand the antecedents that drive them to fight this uphill battle.

RESEARCH STUDY ON SEI

Based on the research I conducted to investigate the effects of different interventions on the relationships between SEI and its antecedents through a selected training programme in Thailand, several new antecedents of SEI were proposed. Two studies were conducted. Study 1 was a series of semi-structured interviews with past

participants and programme organisers. Findings from these interviews led to the proposed SEI formation model, which consisted of perceived desirability, perceived feasibility, overcoming of early-stage problems, and the experience factor. Study 2 was a confirmatory study that tested the refined SEI model through surveys conducted prior to and after a Thai social entrepreneurship training programme with three types of interventions as treatments in the field experiment (skills-based learning, community-based learning, and a hybrid of the two) on the intentions of aspiring social entrepreneurs.

Three insightful findings from this research were put forth. First, overcoming the problems during the early stage of a social entrepreneurial venture is crucial in increasing the SEI of aspiring social entrepreneurs. Second, risk-taking capability is the most important predictor of SEI. When aspiring social entrepreneurs feel confident in their ability to take and overcome risk, they are much more likely to start ventures. And third, relationships with communities play a significant role in potentially accelerating the risk-taking ability of aspiring social entrepreneurs to actually engage in a social venture. In contrast, greater awareness of the problems and solutions reduced risk-taking intentions, thereby reducing SEI as well.

TAKING THE FIRST STEP

Based on my research on the formative early stage of social entrepreneurship, where SEI is the most important driver to fight this uphill battle, the following four points can be emphasised in training programmes to help aspiring social entrepreneurs as they start their journey.

1. Empathy isn't enough. Embrace risk-taking through community-based learning

Social entrepreneurship usually seems more desirable to those with a higher level of empathy. Empathy is the sensitivity to others' needs and feelings that can motivate SEI; nevertheless, not every individual is a social entrepreneur. Empathy is a necessary yet not sufficient condition to trigger the intention to become social entrepreneurs.

> It is their risk-taking ability that eventually encourages them to take the first step towards becoming social entrepreneurs.

While participants of social entrepreneurship training programmes are often empathic in nature, it is their risk-taking ability that eventually encourages them to take the first step towards becoming social entrepreneurs. Such risk-taking ability could be enhanced through community-based learning. That is, despite the considerable risk of failure, aspiring social entrepreneurs may be willing to persevere when they experience support from the networks of communities to help them progress towards creating social impact for the greater good of the communities. Learning with the communities could also be a learning journey of what it means to become social entrepreneurs. It could be the first step of discovering a shared purpose for starting a social venture that often portrays the realisation of potential rewards beyond just the self.

Programme participants with such individual realisations mostly agreed with the research survey statement that 'the interpretations of their own social entrepreneurial value have shifted and become more personal to them as their worthwhile life mission'.

2. Find role models. If they can, then I can

Engagement of a role model could influence the intention of participants. It strengthens the confidence of aspiring social entrepreneurs to make a future career choice. Programme participants see their role models as possessors of attributes that illustrate the capabilities that are practical for them to follow, hence making it more feasible for them.

Almost every participant I interviewed during my research mentioned that having a role model was important for social entrepreneurs. Some participants stressed that His Majesty King Rama IV was their ultimate role model of a Thai social entrepreneur. Others saw their programme trainers as role models. Thus having a clearer picture of a role model in this field could help strengthen their intention, since the said role model would represent the practicality of being able to achieve what had to be done for them to become successful social entrepreneurs. In summary, the feeling was that if my role model could do it, perhaps I could do it as well; that was the common insight from the interviews.

3. I don't have to do it alone. Seek comrades and depend on them along this journey

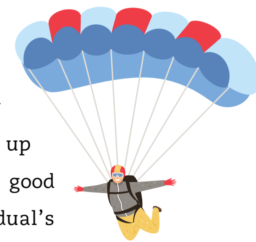
During the social entrepreneurship journey, the notion of a heroic entrepreneur who could conquer all by oneself is a myth. Success is more likely when there is companionship. Designing a training programme with an element of camaraderie at the nascent stage is beneficial for improving SEI. When there is camaraderie, interpersonal relationships in the organisation are characterised by friendship, team spirit, and mutual concern.[4] It is not surprising that camaraderie is mentioned extensively in military studies. Soldiers are not just companions in combat; they refer to one another as comrades. Recent studies have expanded the concept of camaraderie beyond military applications to organisational and corporate settings. Leaders could also foster camaraderie among their teams by creating a culture that promotes teamwork, collaboration, and friendship.

Many programme participants and organisers have indicated that what got them through the early stages of their entrepreneurial journey was reuniting with the comrades from their cohorts. There appeared to be continuous communication and relationship-building among their peers in the form of site visits, event organising, joint initiatives, and in-kind/in-cash support of each another's ventures. As the protagonists of the epic romance film *Titanic* said to each other, "You jump! I jump!", they have become more than friends and are now comrades who face hardships and join hands to overcome challenges together in their social ventures.

4. Less is more. Avoid intervening too much

My research suggests that designing too many interventions, especially at the nascent stage of social entrepreneurship, may do more harm than good. Aspiring social entrepreneurs require different nurturing processes that speak to the various stages of their entrepreneurial journey. For example, at an early stage, community-based learning has a greater effect on participants' intention, while skills-based learning has been found to have hindered their risk-taking intention to become social entrepreneurs. Trainers should be wary of treatments that may have a diminishing effect. Whether these intense focused efforts may have triggered confusion at an early stage, or more simply, wore out the participants is not known, but could be an area of future study.

AFFINITY TRUMPS FEASIBILITY



During the early stage of social entrepreneurship, perhaps affinity proceeds feasibility. The drive to set up social ventures to benefit the greater good depends considerably on the individual's ability to go beyond oneself first, and relationships with others could deepen that resolve to believe in a social mission that is meaningful to the person.

Given the goal to raise the success level of social entrepreneurial creation worldwide, this article suggests that in addition to continuous effort, different interventions can and should be designed to further develop their efficacy to accelerate the creation of social entrepreneurs. For instance, this experimental study on a trial batch could help future programme organisers design more effective, cost-efficient, and impactful solutions to enhance the incidence of social entrepreneurship. The impact evaluation of training programmes in various parts of the world is encouraged as it could help improve optimal resource allocation to support the potential recruits at various stages of their social entrepreneurial journey. AMI

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Ageing Strong

Making the best of the third age.

by Ma Kheng Min, Jovina Ang, and Sheetal Bhardwaj

By 2021, Singapore had one of the most rapidly ageing populations among developed nations. One in four Singaporeans would be at least 65 years old by 2030,[1] and this would increase to one in two by 2050.[2] Not only had life expectancy increased to 81.3 years for men and 86.1 years for women, but it was also a growing concern that about a decade of their sunset years might be spent in poor health.[3,4]

The Singapore government has been trying to address this issue since the 1980s when it started developing plans and policies to help seniors, defined as people who are 60 years old and above, "to not just add years to life but add life to years".[5]

In 2015, the government launched the Action Plan for Successful Ageing, laying down what it would consider successful ageing in Singapore:

- Opportunities for all ages: This was to help all residents including seniors to continually learn and grow. The National Silver Academy was set up specifically to provide a wide range of learning opportunities for seniors to stay active while learning and growing at the same time. Meanwhile, the National Seniors' Health Programme provided healthy lifestyle education and preventive health services.
- 'Kampong'[6] or a community for all ages: This was an initiative centred on inter-generational harmony. One outcome led to the provision of eldercare and childcare services within the same location in new Housing and Development Board (HDB) projects to facilitate multi-generational interactions.
- City for all ages: A revised transportation plan that focused on being senior-friendly was introduced to address the needs of seniors on the MRT (Mass Rapid Transit), buses, and roads.

The government proposed to invest S$3 billion in this comprehensive plan, comprising over 60 initiatives across 12 areas that included health and wellness, learning, and employment, to help seniors lead healthy and active lives.[7]

Furthermore, S$14.1 billion was set aside to address the healthcare needs of the 'Pioneer Generation' (people born before 1949) and the 'Merdeka Generation' (people born between 1950 and 1959).[8] A total of 280 eldercare centres was also set up to serve this segment of people in need.[9]

However, despite the government's efforts, research conducted in 2019 showed that only a quarter of the seniors demonstrated 'successful ageing' or were shown to be healthy enough to lead active and engaging lives.[10] Ethnicity also affected the odds of successful ageing. Malay and Indian Singaporeans experienced less successful ageing compared to their Chinese counterparts. The rate of successful ageing was also lower for those who received fewer years of education.[11]

Given the imminent 'silver tsunami' with one in four Singaporeans turning 65 years or more by 2030, what else could the government do to help seniors age successfully?

The rate of successful ageing was lower for those who had received fewer years of education.

SUCCESSFUL AND ACTIVE AGEING

The concept of successful ageing is based on five indicators, which include no major diseases, no disability, high cognitive function, being physically fit and mobile, and active engagement with life.[12] Successful ageing coupled with positive experience in turn defines active ageing.

The World Health Organization (WHO) defines active ageing as the process of optimising opportunities in three 'pillars'–health, participation, and security–to enhance the quality of life as people age.[13] Suggestions on how to promote the rate of active ageing are listed in Table 1.

THREE 'PILLARS' FOR ACTIVE AGEING

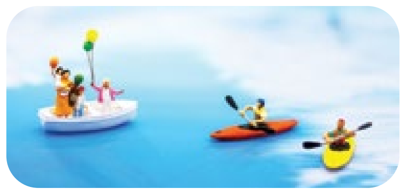		
Health	**Participation**	**Security**
· Implement educational programmes and policies to prevent and minimise occurrences of chronic diseases and functional decline · Support inter-generational contact and provide housing in communities to encourage daily social interaction and inter-dependence among the young and old · Include measures to prevent malnutrition, and ensure food security and safety	· Provide education on health literacy · Expand opportunities for meaningful volunteer activities · Rather than design programmes for seniors, encourage the seniors to design programmes for themselves · Launch programmes to promote social connectedness · Tap further into the lifelong learning opportunities, such as those from the National Silver Academy · Introduce financial literacy programmes as early as primary school to improve planning for the third age and retirement	· Ensure the dignity, safety, and protection of seniors by addressing their social, financial, and physical security needs · Provide consumer protection from unsafe medications and treatments

TABLE 1

Source: World Health Organization

Active ageing comprises the following four elements:[14]

- Autonomy–the ability to make decisions and live according to one's rules and preferences
- Independence–the ability to live independently with minimal help from others
- Quality of life–an individual's perception of his or her position in life in the context of their culture and value systems, and in relation to their goals, expectations, standards, and concerns
- Healthy life expectancy–the ability to live without disabilities

Accompanying the discussion on successful ageing is also the rising acceptance of the 'third age', which is a term often used together with active ageing.[15] The third age is characterised by the pursuit of voluntary, active, and rewarding activities. It is a concept that describes a period of seniors' lives following retirement from work and cessation of responsibilities to children to pursue an active life, before a period of mental or physical decline sets in.[16] The start and duration of the third age varies from individual to individual.

SENIORS IN SINGAPORE

Not all seniors in Singapore were receptive to help from external parties. Ong Siew Chin, the CEO of Blossom Seeds, a charity that focused on caring for seniors and supporting them to care for others, explained that seniors often did not accept help easily and ignored its outreach efforts.

They were also prone to suffering from social disconnection despite living with their families. Some of them did not have anyone whom they could go to for help. Others experienced a sense of being lost when they transitioned to the third age. Mike Goh, who retired at 63, said, "When I was younger, I wanted to retire early to enjoy my retirement. But when you really retire, suddenly you will find that you're lost."

Another issue that confronted most seniors was the prevalence of the ageism mindset in the city-state. For example, when Lien Foundation, a philanthropic organisation that aimed to improve the lives of seniors, first rolled out the 'gym tonic' initiative, which was a strength training programme to help seniors restore, maintain, and improve their physical mobility, it faced considerable pushback. There were ingrained perceptions in the community that strength training was 'dangerous' for the elderly even though it had been demonstrated otherwise in countries like Japan and Finland.

There exists a mindset that certain things are considered not to be okay for seniors–there are things that seniors should and should not do.

Gabriel Lim,
Programme Director,
Lien Foundation

It takes a lot of perseverance and sincerity to build trust with the seniors before they open up and ask for help.

Ong Siew Chin,
CEO, Blossom Seeds

Seniors also tended to get looked at with a deficit mindset. Hence, it was not uncommon for eldercare centres to organise activities for seniors and do most things for them. With a growing population of seniors who worked full-time before their retirement, it was important to not treat them as passive recipients at eldercare centres, but rather look at ways to harness their experiences and interests by involving them more meaningfully as active contributors to the centres and the community.

Third agers in Singapore were found to have declining psychological, physical, and functional health compared to those who continued to be engaged in some form of work or the other. However, to ensure their continued engagement, seniors needed to be reskilled and upskilled as the environment was rapidly and constantly changing. The creation of the National Silver Academy was to fulfil this purpose by offering courses to seniors, so that they were constantly engaged in learning.

Another key challenge lay in the rising living and healthcare costs. Seniors living alone in Singapore needed about S$1,379 per month for their basic needs including the occasional luxury of having a meal with a friend or a short holiday abroad.[19] Even though some might be property owners, they were likely to be cash-poor. Over the 2010-2018 period, Singapore's healthcare budget had doubled from S$10 billion to S$21 billion, and it was expected to further grow to S$59 billion by 2030.

SNAPSHOTS OF CHALLENGES FACED: STORIES OF MADAM HASLINA AND MADAM LEE

Madam Haslina was an example of a senior who did not experience successful ageing before she was referred to Blossom Seeds. She was living all by herself and had no source of income. She was unable to work due to her old age and declining health. And she had no one to turn to when her only son was imprisoned for drug abuse.

The team at Blossom Seeds got to know her through its befriending programme conducted in collaboration with the Council for Third Age (C3A)[17]. However, whenever the volunteers visited Madam Haslina, she would simply ignore them. She would not talk to any of them and declined whatever help that was offered. The breakthrough happened when late one evening, she called the programme coordinator out of the blue. She had run out of money and urgently needed to buy groceries. Even though it was inconvenient for the programme coordinator, he immediately dropped everything and rushed to the supermarket to buy the groceries that she needed, and also gave her some money to tide her over. This incident made Madam Haslina realise that the volunteers were truly committed to people like her, and she started visiting the Blossom Seeds centre.

Madam Lee, who was in her 60s, was also a beneficiary of Blossom Seeds' befriending services. She had just recovered from cancer and was very frail. She also had mobility issues and needed a walking frame or a wheelchair to move around. Her mother, and subsequently, her sister, cared for her before they passed on. Her sister had referred her to Blossom Seeds in September 2019, when it became too difficult for her to care for Madam Lee.

Like Madam Haslina, Madam Lee too was initially reserved and quiet. She did not want to talk to anyone and was not used to having company. She seldom stepped out of her home, had no friends, and had never worked in her life.

It took a while for the team of volunteers from Blossom Seeds to get to know her. They spent time helping her find meaning in life and renew her interest in it. They encouraged her to attend the activities and festivities at the centre. After considerable effort, she eventually agreed to attend the Winter Solstice Festival[18] celebration, and thereafter began to regularly attend the weekly activities at the centre.

Seniors tended to get looked at with a deficit mindset.

ENABLING SUCCESSFUL AGEING

All members of society, from individuals and non-profit organisations to companies and governments, need to grapple with the challenges of an ageing Singapore. One way would be to better understand the pillars that drive successful ageing. What else could be done to enable more seniors to age successfully and address the imminent silver tsunami? What are some concepts and frameworks that can guide governments, businesses, and non-profit organisations in understanding and enabling successful ageing?

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Looking Beyond the 'Middle Class' for the Other Chinas

A new perspective on China's consumer population.

by Qian Forrest Zhang

There are high hopes for China's middle class. Thanks to their rising disposable income, this group of Chinese is expected to unleash a consumer revolution in the domestic market. However, I argue that the 'middle class' as a concept provides at best a partial understanding of the Chinese consumer population; at worst, it can even provide a misleading perspective that brings us to erroneous conclusions about its profile and size. Instead, I propose the notion of 'three Chinas' as an alternative way to make sense of China's consumers. 'First China' comprises residents in medium and large-sized cities, 'Second China' consists of those living in small cities and towns, and 'Third China' refers to those in rural areas.

DESPERATELY SEEKING THE 'MIDDLE'

The middle class is not a new thing, even in China. In any society, there are always some middle strata. Even in Maoist China during the 1960s and 1970s, when the entire urban population was miserably poor, there was still what scholars have called the "Maoist middle class".[1] Of course, the image of this group clad in their blue and grey Maoist suits, riding bicycles to work at state-owned enterprises hardly generated any interest from businesses and marketers then.

The middle class that is of interest today consist of consumers who have attained, to use the official Chinese parlance, at least the level of 'moderate prosperity' (小康 or *xiao kang*). These moderately prosperous consumers have disposable income to spend on all kinds of discretionary goods and services, such as movies, massages, and restaurant meals. They are the 'fantastic beasts' that fascinate businesses all over the world. The challenge is, however, locating them.

Try using income for a start

Let us start with what is often thought to be an obvious yardstick–the income tax collections, on which China's government must have good data. The problem is that while the government does have good data on who pays the tax and how much they pay, the information at best gives us an incomplete picture of the income distribution in the country.

The threshold for paying personal income tax in China is RMB 5,000 a month (after social security deductions). A RMB 5,000-monthly income, thus, may very well be a useful standard to locate the middle class. How big a middle class would this criterion give us? In 2021, only 8.6 percent or 64 million of China's labour force paid any personal income tax. While 64 million is a big number, when juxtaposed against a national population of 1.4 billion, it is a huge disappointment.

A sizeable portion of the Chinese population does not pay personal income tax for three reasons. First, 80 percent of the population earn less than RMB 3,745 a month, and thus are not eligible to pay income tax. Second, nearly all farmers in China–somewhere between 200 and 300 million people–are small proprietors operating their own farms who have been exempt from paying agricultural tax, the equivalent of income tax for agricultural producers, since 2006. Third, an equally large proportion of the rural population, while no longer farming, have gone to live and work in urban settlements, working as delivery riders, construction workers, and restaurant servers in cities, to name a few occupations. In 2021, this population of 290 million people mostly toiled in the informal sector, working as contract workers who

I propose the notion of 'three Chinas' as an alternative way to make sense of China's consumers.

were self-employed, and not on regular payroll. Only a small proportion of them paid income tax. That being said, according to the National Bureau of Statistics, the average monthly income of this group of workers has reached RMB 4,432 in 2021.[2]

Do business analysts have better luck with this?

Apart from the issue that the estimates of China's middle class by business analysts are so much larger than those derived from official statistics, they are also never consistent. For example, McKinsey & Company estimated in 2013 that "by 2022… more than 75 percent of China's urban consumers" would fall into either the "upper middle class" or "mass middle class".[3] However, there is no justification for why 75 percent of the urban population living in cities of all sizes across the country could all be in the middle income bracket. In a more recent report, the income threshold for the middle class was revised upward to an annual household disposable income of RMB 138,000 (in 2018 real RMB terms), and the size of the so-called middle class in 2018 was estimated to be 400 million, comprising nearly half of the urban population.[4]

In fact, no matter whether the label is middle class or moderately prosperous consumers, those attempting to estimate the size of this consumer population in China face two inherent challenges. The first, as we have discussed, is the reliability of income data. And the second is regional disparities in income distribution. I will use the example of two provincial-level regions–Shanghai and Qinghai–to illustrate this issue. Shanghai is a metropolis on the east coast, while Qinghai is a vast province with a large ethnic minority population in the far west. In 2021, the disposable income per capita for residents in Shanghai was RMB 78,027; in Qinghai, it was about a third of that at RMB 25,919. While the income in Qinghai may seem hopelessly low, its residents enjoy a much lower cost of living. For example, the price for housing, which is the largest consumption item for most people, is RMB 9,876 per square metre in Xining, the capital city of Qinghai; in Shanghai, it is more than six times higher at RMB 67,714 per square metre. The level of income that qualifies one for middle class status, therefore, will be much lower in Qinghai than Shanghai. Hence, when results are so divergent as to be 344 million[5] on one end and 707 million[6] on the other end of the spectrum, any given number seems to be as good a guess as another, but none is particularly useful.

The problem is not that the consumer population in China is too small, or that there are too few consumers in the inland provinces. It is that the middle class is the wrong conceptual tool for this purpose. This search for some statistical distribution that yields a middle in fact misses the real target: the growing population of *xiao kang* consumers who straddle multiple income strata and live in all kinds of locations.

For a complex society like China with such a huge population that spans vast geographies, we should try a different approach. Instead of chasing an elusive number that accurately captures the size of the consumer population or nailing down how much individuals earn, it is at least equally important to know where they live.

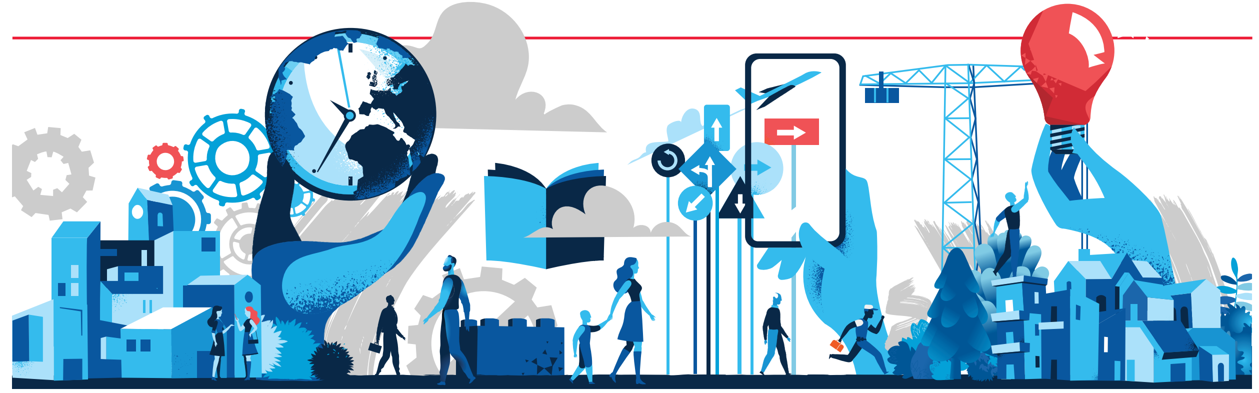
However, there is also a prevailing misconception that they are overwhelmingly concentrated in the largest cities, known in China as the first- and second-tier cities. For example, another recent report from McKinsey claims that "China's 30 largest cities are home to 25 percent of the nation's population, who drive 45 percent of total household consumption".[7] This claim reflects an inadequate understanding of China's system of territorial administration. In a sense, nearly everyone in China 'lives' in a city because almost all settlements are under the administration of city governments. But even in the largest and most developed cities like Beijing and Shanghai, a sizable population can be found in small towns and rural areas that are under their jurisdiction. A city's population, from an administrative point of view, is thus invariably inflated.

Take Chengdu, the capital of Sichuan Province, for example. With a population of 21 million, Chengdu has under its jurisdiction 12 urban districts, three counties, and five county-level cities. However, only five districts constitute the city centre and they account for only 30 percent of its population. The rest largely live in rural areas and small towns outside the city centre. Thus, the real urban population physically residing in the city of Chengdu is actually far smaller than the population that is placed under the administration of the city government.

CONSUMERS IN THE OTHER CHINAS

Subsuming the rural population living within a city's administrative boundaries under its urban population is one mistake that leads to a more egregious one–not noticing that there is an additional and distinct stratum of the

One useful way to understand China is to see it as an aggregation of close to 3,000 county-level administrative units, comprising city districts, county-level cities, and counties.



population that neither lives in the countryside nor is found in medium or large cities; they reside in small cities and towns.

One useful way to understand China is to see it as an aggregation of close to 3,000 county-level administrative units, comprising city districts, county-level cities, and counties.[8] The 948 city districts constitute the core urban built-up areas in medium to large cities. Their residents are what people commonly think of as the urban population in China. The situation in the county-level cities and counties is even more complicated. Under them are more than 38,000 towns and townships, and each in turn has a number of rural villages under their administration. Their population can either be urban residents living in small towns or rural ones residing in villages.

To give a sense of the figures for these groups, in 2020, the rural population numbered 510 million or 36 percent of the total population. The urban residents living in small towns and cities should be close to 400 million, almost 30 percent of the total population. This means that the vast majority resided in small towns and cities, as well as the rural areas. Hence, the rest, which is about 500 million or 35 percent of the total population, lived in medium to large cities.

I have therefore proposed segmenting the consumer population into three Chinas. First China comprises residents in medium and large cities, while Second China are those living in small cities and towns, and Third China refers to those in rural areas. When thinking about consumers, most observers focus on First China. For example, in a recent analysis of new consumer trends which identified 'young free spenders' as today's growth engine, the scope was still limited to medium and large cities across Tiers 2, 3, and 4,[9] ignoring the development that the consumer population has also been growing in the Other Chinas found in the small towns and rural areas.

Let me first elaborate on the most neglected group that has contributed to the expansion of the consumer population in the other two Chinas in recent years–the rural population in Third China.

Third China

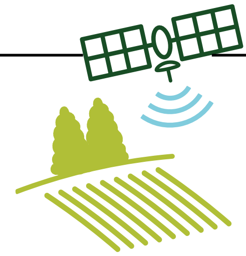
The rural population has been largely under-represented in consumer research on China. Many observers still equate this group with smallholding family farmers, who are struggling to make ends meet with meagre incomes from their harvests. This imagery is in urgent need of updating.

First, there is the rapid growth of large-scale farmers stemming from a series of fundamental changes that have taken place in China's agricultural sector.[10] It should be noted that, by 2020, over four million farmer households across the country have officially registered as 'family farms', which in the Chinese context requires them to be of a certain scale.[11] During my field work in rural China, I visited a farmer who had consolidated rice paddies over 700 hectares (close to the size of 1,000 soccer fields) in the outskirts of Chengdu, a dairy cow farm owner in Ningxia with a stock of 500 cows, and a vegetable farmer in

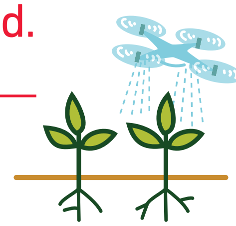
Jilin Province who exported a large quantity of asparagus to South Korea. Entrepreneurial farmers like them can be found everywhere in rural China, producing any agricultural product we can think of. Xiangzhai Village in central Henan Province, for example, is the largest koi fish production site in the country, where nearly every household runs koi ponds and sells its output on Taobao and other e-commerce platforms; annual household incomes over RMB 10 million are not uncommon in such villages.

Second, more rural entrepreneurs are running non-farm businesses. Thanks to both the industrialisation drive in the 1980s and 1990s, and the infrastructural expansion in recent decades, Third China is probably the most industrialised rural area in the world. These non-farm businesses can be small to medium manufacturing factories or companies operating in service industries such as transportation, food and beverage, retail, hospitality, and education. In one typical village on the North China Plain where I conducted fieldwork, one-fifth of the village households were operating non-farm businesses. Most of them were in the long-haul trucking business, owing to the village's advantageous location near a provincial highway toll gate. The largest operator had a fleet of 20 semi-trailers, hiring two professional drivers for each vehicle.[12]

Additionally, thanks to the rapid improvements in infrastructure, and rapid penetration of the Internet and smartphones, a class of new tech professionals has emerged in Third China. Many of them are returning migrants who had mastered new skills during their sojourn in the cities. The e-commerce sector alone has generated countless job opportunities for these new professionals, including Taobao shop owners and other e-retailers who sell not only local farm produce but also myriads of industrial products online, shopping assistants who help villagers with their online orders, and distributors that manage the deliveries. In fact, call centres for customer service have also been relocated to rural areas. The precise size of the emerging group of prosperous consumers in the rural areas is hard to estimate. But given that the rural population of around 510 million, even 10 to 20 percent would make them a sizable group.



Third China is probably the most industrialised rural area in the world.



Second China

As for small towns and counties making up Second China, many actually have vibrant economies and growing populations. These places often give people the impression that they are full of vacant high-rise buildings and have been abandoned by most young people who have migrated to larger cities for better job opportunities. While there are certainly cases like that, many are often the 'hidden champions' of various industries. The most famous example is Cao County in southern Shandong Province, which in 2021 unexpectedly became the subject of viral social media memes. Dubbed as the "No. 1 county in the universe", this county of 1.4 million became widely known for its dominant position in the costumes e-commerce market.[13] A quarter of all the costumes–used for myriad purposes such as cosplay, theatres, weddings, and festivals–sold through e-commerce platforms on the domestic market are made in Cao County. Once people started to pay attention to the booming costumes industry in Cao County, an even more fascinating story emerged. It turned out that the costumes industry in the county initially produced burial dresses, and the demand for burial dresses was created by the county's other leading industry–coffin-making. For a host of reasons, including a long tradition in carpentry and abundant supply of paulownia timber, the county has produced and sold coffins to Japan since the late 1990s. At one point, coffins made in Cao County dominated 90 percent of the Japanese market.

Many such hidden champions abound. While Cao County is probably the most well-known, it is but one of many scattered across the country. Xincheng is in Liaoning, a small, seaside, county-level city, which is a leading producer of swimwear and responsible for a quarter of the global output. Several small towns in Xuchang City, Henan Province, have become the largest production and distribution hub of hair products in the country, contributing to 80 percent of the global supply. Chang'le County in Shandong Province is the largest producer of guitars in the country, accounting for 36 percent of the domestic market share. Shaodong, a small county in the mountainous Hunan Province, produces 70 percent of the plastic lighters sold in the world. Danyang, a county-level small city in Jiangsu Province, has the most developed eyewear industry in the country, supplying 40 percent of the eyewear lenses on the global market. Nan'an, a county in Fujian Province, leads the country in sanitary ware production and has a 60-percent market share.

CONCLUSION

Outside the 200-odd medium and large cities (First China) which have attracted the most attention in consumer research on China, there is Second China consisting of residents of small towns and counties, and Third China comprising residents of rural areas. Together, this ensemble of Other Chinas has a population over 900 million. The number of moderately prosperous consumers among this 900 million-strong population can easily exceed 100 million, even reaching 200 million. To give some perspective, a country of 100 million residents would have ranked among the global top 15 in terms of consumer market size.

While these consumers may be scattered across a large number of small towns and even villages, they are not necessarily hard to reach. This is because the majority of them are located in the densely populated eastern half of the country and under the jurisdiction of a sizable city, where virtually all villages are connected by paved roads and remain within an hour's drive from the nearest town, if not the county seat. In fact, an increasing proportion of the more prosperous rural residents typically own two residences–a house on the family plot in the village and a new apartment in the county seat, which allows their children or grandchildren to register for schools in the latter. Many of them are just as digitally connected as their urban counterparts.

More importantly, this consumer population is likely to have significantly different consumption patterns and preferences from those of their cousins in medium and large cities. Although much remains to be investigated, it seems reasonable to anticipate that with considerably lower education levels and lesser exposure to global trends, these consumers are likely to be less cosmopolitan. They probably show a stronger preference for domestic brands or are simply less brand conscious. Given their limited access to physical stores, they may become more reliant on digital retail channels when these become more easily available and affordable. Obviously, we still have a lot to learn about consumers in the other Chinas. AMI

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Acquiring an **Entrepreneurial Mindset**

Key ingredients to facilitate the acquisition.

by Foo Maw Der

Is entrepreneurship a mysterious gift, a burst of random inspiration, or just sheer individual genius at work? Is it a genetic trait that is replicable, that is passed down from one generation to another? Or is it something else altogether, like a skill that can be taught?

Such questions abound and have been subject to considerable debate. But what if we were to ask instead: can an entrepreneurship mindset be acquired? The answer would be a resounding yes. Rather than a personality feature, or a trait that you either have or do not have, the entrepreneurship mindset can be cultivated as a set of learnable skills. When it can be mastered and strengthened like a muscle, it is applicable to anyone who is intrinsically motivated to develop it.

Some entrepreneurial skills are represented in the BRiSK[3] Mind model (refer to Table 1). By no means is this framework a secret code to becoming a successful entrepreneur; rather, it maps out the key ingredients that can help people develop entrepreneurial skills and the necessary mindset, and highlights those that are unique to an entrepreneur.

BRiSK MIND

	B	R	i	S	K	Mind
ELEMENT	• Business Opportunity • Business Model • Business Plan	• Risk Mitigation • Relationship • Recruit	• Innovation • Investment • Intellectual Property	• Strategy and Culture • Scalability • Spirit	• Knowledge Capital • Kurtosis • *Kaizen*	• Effectual not Causal • Leader versus Manager • Traits and Drive

TABLE 1 — Source: Author

THE BRiSK^3 MIND MODEL

This model builds on my experience of teaching students about entrepreneurship, coupled with many years of advising companies, and researching on start-up ecosystems and innovation-driven industries. My main objective of developing this model is to lay down the principles of entrepreneurship, and demonstrate how a well-defined process of decision-making and effective action can steer an entrepreneur to success.

The cube (^{3}) in the middle of "BRiSK^3 Mind" refers to the three Bs, three Rs, three Is, three Ss, and three Ks that illuminate the aspiring entrepreneur's path. Of these, 'B' and 'R' are the most important elements, as they differentiate an entrepreneur who builds a start-up from a professional manager who works for an established company, so I will be elaborating on them at length. While 'I', 'S', and 'K' are essential too, they are similar to the elements that an executive deals within an existing firm, and also what management students traditionally learn in business schools. Hence, I will only discuss these components briefly in this article.

A TOOLKIT FOR ASPIRING ENTREPRENEURS

The BRiSK^3 Mind model is not meant to be a step-by-step guide. Rather, it is best understood as a 'toolkit', a collection of concepts essential for developing an entrepreneurial mindset. Let us first focus on the unique components of the model–'B' and 'R'–to understand how they can help aspiring entrepreneurs hone their skills and improve their game.

Element 'B'

'B' is about the whole business model, rather than only the idea itself. It calls attention to the insight that entrepreneurship is an experimental process in which practices such as failing fast, learning from the failure, and improving upon the value proposition form the iterative core elements. It includes the three Bs of Business Opportunity, Business Model, and Business Plan, details of which are provided below.

Business opportunity

First of all, an entrepreneur needs to identify the problem that is calling out to be solved. All sorts of viable opportunities exist around us. We just have to stay curious and learn how to identify problems in society, as well as how to ideate and implement solutions to these problems that create tangible value. Ways through which the ideas may be revealed include keen observation of pain points, external learning, refinement of existing solutions, and novel inventions. For example, founder and CEO Ritesh Agarwal of OYO Rooms, one of the largest and fastest-growing hospitality chains in India, recognised an opportunity owing to his painful personal experiences. During his weekend travels, he had often looked desperately for clean and safe temporary accommodation in New Delhi while being on a student budget.[1]

Entrepreneurs tend to be secretive as they believe the ideas that are borne out of their brainstorming process are not only precious, but unique. In fact, they believe others will copy their ideas. They think that the idea is the secret sauce. This is often not the case. In fact, the idea itself forms just a small part of the entire business model, because what makes the venture work most of the time requires things that an entrepreneur has to ask from others or even build from scratch. Consider Google. When it started, there was nothing new about the idea of a search engine. Others such as AltaVista and HotBot already existed. The secret sauce behind Google was the algorithms that it had built to perform the search, not the business model itself. Moreover, for technology-based start-ups, there are ways to protect such a secret sauce, for example, by using provisional patents.

Entrepreneurs also have to contend with questions such as which market to launch their products and services, and how much growth they can reasonably expect. They quickly realise that a market is not an independent, discrete entity. It is often not only served by many industries and regulated by multiple civil and government bodies, but also brought to life by a constellation of perceived rivals, benefactors, and beneficiaries. Therefore, entrepreneurs should map out existing incumbents, barriers to entry, competitive intensity, as well as alternative and substitute solutions to get a sense of 'the lay of the land'. Furthermore, they must conduct a comprehensive review of the target segment, and the strengths and weaknesses of existing players. Just as important, entrepreneurs should try and gauge the competition's reaction to the new entrants–would they fight to have new entrants barred, wage a price war, improve on their offerings, or seek a truce? It is important to evaluate the capability of your key competitors in terms of not only the threat they may pose to the venture, but also the opportunity they may present.

Business model

Entrepreneurs should explore research-based business models of entrepreneurial ventures that are validated under real market conditions, which would boost their confidence that the models actually work. In The Lean Startup model by Eric Ries,[2] for example, there are three stages. In the first stage, a business model that comprises nine building blocks, namely, value proposition, customer segments, customer relationships, channels, revenue model, costs, resources, key activities, and partnerships, is sketched. This helps an entrepreneur gain a clearer picture of the proposed business model and how it maps out. The next two stages are rapid prototyping, and hypothesis through customer validation. Start-ups should create a minimum viable product and validate its utility by testing it on a sample group of target customers. Some methods to do this include focus group interviews, one-on-one interviews, and A/B testing. The evaluation may help the entrepreneur decide whether to continue improving a product, pivot on the approach, or in the most extreme case, shelve the prototype entirely. Start-ups that ultimately succeed are the ones that move quickly from failure to failure by adapting, iterating, and improving on their initial ideas as they continuously learn from customers.

For example, when Jorge Heraud and Lee Redden started Blue River Technology, they had a vision of building robotic lawn mowers for commercial spaces.[3] After talking to 100 customers in 10 weeks, they learned that their original target customers who like golf courses did not value their proposition. Instead, their conversations with farmers turned out to be fortuitously promising. It revealed a huge demand for an automated way to eliminate weeds without chemicals. This became their new product focus, and within 10 weeks, Blue River built and tested a new prototype. Nine months later, the start-up obtained more than US$3 million in venture funding.

Business plan

A business plan is often underestimated and is typically seen as an unnecessary and unexciting aspect of the entrepreneurial process. However, this cannot be further from the truth. A business plan serves as a checklist that helps an entrepreneur to thoroughly analyse an opportunity and undertake a rigorous contingency planning exercise.

Unlike a business model, which focuses on the desirability and assumed viability of a solution, a business plan helps to evaluate the viability of the envisioned solution and the likelihood of its success in the long term. An objective formulation of a business plan helps reveal issues that may have been undiscovered or ignored previously, and facilitates the examination of blind spots before the launch of the venture.

At times, investors' decisions are influenced by the passion of the founder(s) and the team during a pitch, whereas a detailed business plan sends a strong signal about the strengths and capabilities of the enterprise.

Element 'R'

'R' points out that entrepreneurship is about co-creating an idea and getting it to materialise with the help of partners and networks. This is because an entrepreneur, by definition, is someone who tends to have very limited resources. This element includes the three Rs of Risk Mitigation, Relationship, and Recruit.

Risk mitigation

The best entrepreneurs are not risk-seekers who take a gamble; they are risk-mitigators. A successful entrepreneur

Entrepreneurs should explore research-based business models of entrepreneurial ventures that are validated under real market conditions.

does not gamble; such individuals proactively map the associated risks of their venture and assess whether the endeavour is worth the time, effort, and cost. If the risk is too great, the entrepreneur must be able to let the opportunity go, reposition, and hunt for other viable ones. The approach needs to be objective and systematic, and is invariably a continuous process.

Besides business uncertainty, risk may also stem from the investment structure. For example, consider the investor in the venture: would it be the founder(s), their family, an angel investor, a venture capitalist, or a bank? Depending on where the capital comes from, expectations and investment obligations will shape an entrepreneur's strategy and the risk profile of the venture. Entrepreneurial success is more likely when expected returns are higher than the associated risks, and may be sustained as per the venture's core values and purpose.

Relationships

The spark to create a business venture almost always starts in an individual's mind. However, it seldom remains the sole property of the originator, and very quickly grows to become a shared inheritance. This is because people get involved in multiple ways and exit the venture at various stages. As a result, relationships should be carefully mapped while the people involved need to be managed well.

Recruit

Entrepreneurs generally have a narrow set of skills, no matter how experienced they are. Therefore, they need to recruit partners and employees to leverage on the latter's skills, knowledge, and experience. Good relationships and networks offer support and endorsement from the professional, business, social, and political communities. Successful entrepreneurs distinguish themselves as team-builders, value creators, and leaders of flourishing organisations. As such, having rapport with various stakeholders is crucial to success.

Elements 'I', 'S', and 'K'

The factors 'I', 'S', and 'K' cover well-established managerial concepts, such as investment, strategy, and knowledge capital. Here, I highlight one key concept from each element–specifically Innovation, Scalability, and *Kaizen*.

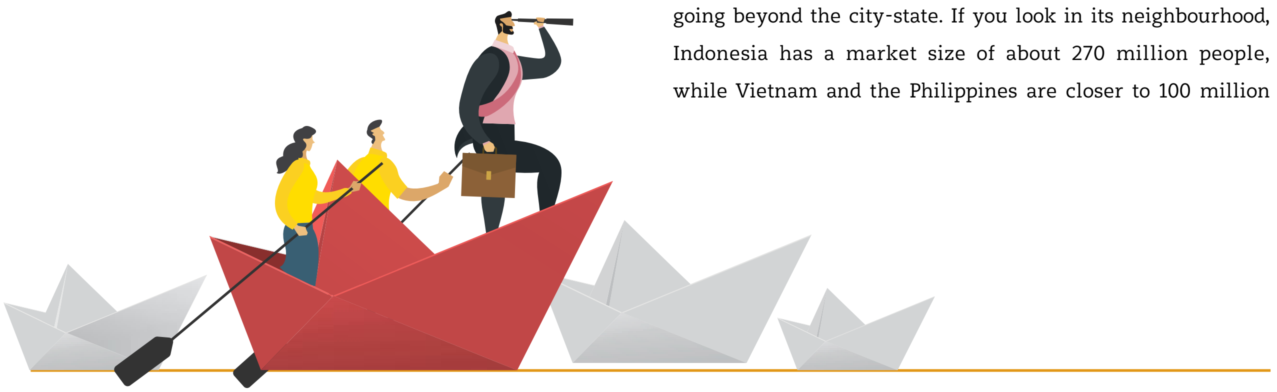
Innovation

Entrepreneurs often face this question: invent or innovate? Entrepreneurial success is about new value creation, and this can be done by solving an existing problem through old, new, or improved solutions. An innovative solution does not have to be an invention. It may be a technologically advanced version, or it could be as simple as the repurposing of an existing product. For instance, Apple's iPhone was not inventive. The first smartphone was created 15 years before it, but the iPhone was better than existing ones.

Scale

Scale can be built across different dimensions, such as new market segments, derivative or related products, and geographical expansion. How this is done depends on the context. For example, start-ups in Singapore tend to grow by going beyond the city-state. If you look in its neighbourhood, Indonesia has a market size of about 270 million people, while Vietnam and the Philippines are closer to 100 million each in size. Thailand has about 70 million and is richer than many Southeast Asian economies, while Malaysia has a population of slightly over 30 million. Clearly, the adjacent markets around Singapore offer significant opportunities to grow. On the other hand, start-ups in a large country like the US typically think of building scale domestically, either by entering new market segments or developing related products or improved versions of the same.

To build scale, entrepreneurs need to bring in more efficiencies by improving their processes and systems and introducing compliance structures. However, as they put in place standard operating procedures (SOPs), there is the danger of becoming too rigid and sacrificing flexibility, agility, and market responsiveness in the process. Thus, ventures require a fine balancing act; the higher the efficiency, the greater the risk of becoming too rigid.



Successful entrepreneurs distinguish themselves as team-builders, value creators, and leaders of flourishing organisations.

Kaizen

We use the Japanese term *kaizen* to refer to continuous business evolution and sustainability. Entrepreneurship is an endless journey filled with well-trodden paths, uncharted territory, shared pathways, roundabouts, and dead ends. Entrepreneurs need to be prompt and decisive to ensure a continued forward march towards the venture's desired destination. Each venture is treated as an experiment which results ultimately in either a successful outcome or a failure to learn from. When all possibilities of foreseeable growth are exhausted or a more promising opportunity arises, entrepreneurs often cash out and move on. As American author John C. Maxwell writes, "Fail early, fail often, but always fail forward."[4] Such learning allows entrepreneurs to pivot and conduct more experiments, and thus continue the process of *kaizen* to achieve success and beyond. This *kaizen* cycle repeats itself until the dissolution of the entrepreneurial spark.

DEVELOPING AN ENTREPRENEURIAL MINDSET

The entrepreneur needs to grasp the ins and outs of the business world through adaptability and curiosity. Passion is a must-have. While passion may dilute the objectivity of entrepreneurs, it enables them to endure and push through when the going gets tough. Nevertheless, passion alone is not enough; passion without preparation will fizzle out sooner or later.

Thinking out of the box is an ability that every aspiring entrepreneur must develop. This refers to the effectual process of problem-solving in which the entrepreneur starts with observing what resources are available, what demands exist, and then generating possible solutions with the resources available. This includes networking and embracing experimentation for the envisioned solution to find its feet in the market.

Those who have been trained as professionals tend to develop a causal mindset–more of a managerial style of analysis in which they define a measurable goal and take action to achieve that goal in ways that are explicitly sanctioned by the rules and driven by the key performance indicators (KPIs) laid out. However, with deliberate practice and an open mind, this may be supplemented with an entrepreneurial mindset.

The BRiSK[3] Mind model can be a handy conceptual toolkit for entrepreneurs to work through to strengthen their entrepreneurial skills and mindset. However, entrepreneurs are unique in terms of their ideas and thoughts, as well as their levels of passion and resourcefulness, and there is no standard cast from which one could be fashioned. What the model can offer is the knowledge that may guide thinking and action. At the end of the day, it is the user who must be willing to explore, experiment, and practise to get a shot at success.

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Gibran Huzaifah, founder and CEO of eFishery, speaks about his entrepreneurial journey in the aquaculture space.

It was an anecdote from a biology professor concerning the promising prospects of catfish farming that put Gibran, an aquaculture science graduate, on the path of becoming the founder and CEO of eFishery. eFishery is an agricultural tech start-up that provides automated feeding solutions to fish and shrimp farmers, and offers them services such as financing and market access. Using technological advancements, eFishery is now constructing an end-to-end value chain for fish and shrimp farming businesses, resulting in an integrated, sustainable ecosystem that would strengthen the future of global food security. Gibran talks about how he became a fish farmer-turned-tech entrepreneur, the aspirations that he has for eFishery, and what budding entrepreneurs can learn from his experience.

HOW DID YOU GET INTO THE FISH FARMING INDUSTRY?

I studied biology at ITB, the Institut Teknologi Bandung (or Bandung Institute of Technology). I didn't want to take money from my parents, so I started doing different things to pay for my tuition and daily needs. In my third year of college, I attended a class on aquaculture. We used to call the class 'Package A' because all its students are guaranteed an A-grade! So it's a very popular class, and that was my initial reason for taking it. But it was surprisingly inspiring for me. The professor told us that seafood would become one of the most important protein sources for humans, and it would hold much potential for the food production sector.

He also mentioned how Vietnam was very successful in catfish farming, but as the Vietnamese didn't consume catfish that much, it was rebranded as dory fish and exported to the US and Europe. What the professor said next changed my life: "We're currently in the middle of the catfish revolution in Indonesia, because over the next five to 10 years, catfish, which is now considered street food, can be served in five-star hotels and restaurants. It's up to you whether you want to be part of this revolution."

After that class, I decided to set up my own catfish pond. I started renting one pond from a suburban area outside the city. It was surprisingly cheap, costing around S$40 per year. I then put the fish in and started my first cultivation cycle. Two years later, I was operating 76 ponds. Each pond is about 200 square metres with around 20,000 fish in it. For a long time, I was running the business single-handedly! Every morning after class, and late in the evening, I would feed the fish myself. The first harvesting cycle was challenging because I didn't have experience with the market. I tried selling the fish to small restaurants, but they didn't want to buy it from me. I tried selling it to the stalls at the wet market, but they already had their existing suppliers. In the end, I had to sell it to the middlemen and made very low margins. But after about two months, I learnt how to reach out and build the customer base myself. Everything that I did at the very beginning was very exciting because I did it myself, trying to figure out the supply chain, the market operations, and then scaling my business down the road.

WHAT LED TO THE IDEA FOR eFishery?

When I was operating 76 ponds, I wanted to grow my business bigger. I tried to learn from farmers who operated on a much larger scale than mine. When I consulted a farmer who operated 1,000 ponds and had 25 years' experience in building his business, he said that his biggest challenge was the feed, which accounted for 70 to 90 percent of the total costs. It was also the biggest cost for me. In fact, the feeding cost became a bigger challenge as the business grew. This was because farmers needed to hire more workers to feed the fish daily. The workers could be unreliable–sometimes they put in too much feed and overfed the fish; at other times, they were lazy and forgot to feed the fish. Occasionally, they even lied about feeding the fish, and instead stole and sold the feed to other farms. You couldn't really know for sure!

I came up with an idea and asked the farmer, "What if I build you a machine that you can use to control the feeding process automatically from your phone? Would you be willing to use it?" He was taken aback, but he replied, "If your technology can work effectively, all of my 1,000 ponds will use it." I realised this is a huge opportunity. No one was doing it, and Indonesia had 3.4 million farmers and 30 million ponds across the country. I began to figure out how to build an automatic feeder.

> Everything that I did at the very beginning was very exciting because I did it myself, trying to figure out the supply chain, the market operations, and then scaling my business down the road.

WHAT CHALLENGES DID YOU FACE WHEN BUILDING THE PROTOTYPE? WHEN DID YOU START ENLISTING PEOPLE TO HELP YOU?

I started building the prototype in a scrappy way, using second-hand materials. I googled a lot! I hired vocational students to do the hard work. That took two months and about S$250. The early prototype of the automatic feeding machine was SMS (text message)-based. You sent the SMS to the machine, and it would disperse the feed. I felt the prototype was good enough for me to go back to the farmers, and they were all excited because no one had built it before. But then one farmer realised that he needed to send 1,000 text messages to his 1,000 ponds, as it was one SMS per pond. I had clearly not thought it through enough. It was then that I realised that I really needed tech expertise and decided to get a partner with an engineering degree.

At the same time, a friend of mine, who had lived in the same dormitory as me at university, gave me some great advice. He had started the e-commerce platform and unicorn, Bukalapak, after graduating from ITB, and he believed that the tech scene in Indonesia would become massive. When I told him about my automated feeder idea, he told me this was an IoT (Internet of Things) solution. If it could capture data, I could do a lot more with it and spin it as an IoT company for aquaculture. That was when I started reading about what the technology could do. I looked at the business model of Amazon and Alibaba, and began adapting mine to create what would become the ecosystem for eFishery. The challenge during the early phase of the business was not about capturing the data; it was convincing farmers to use my technology as most did not have the tech-savviness to understand my technology. They didn't even have a smartphone! We needed to start with lending them smartphones and educating them on how to use the technology.

> Today, data is our key revenue driver, and this could happen because we had invested six years to convince farmers to use our technology.

Once we had the feeders deployed, capturing the data was the easy part. But this whole process took us six years, from deploying the first product in 2013 to activating the data for other use cases in 2019. The reason was that we didn't have enough user density to get any meaningful value and start a new business model based on the data. But today, data is our key revenue driver, and this could happen because we had invested those six years to convince farmers to use our technology.

WOULD YOU SAY THAT YOU HAVE A STRONG SIXTH SENSE OF WHERE YOUR VENTURE IS HEADING?

Definitely not! I'm not a visionary. I just solve problems that I can see right now, and right away. A lot of what we do at eFishery comes from that logical approach to solving problems. For example, we started building an automatic feeding solution because we knew that the problem for farmers was high feeding cost, so we created a cheap feeding method. When we extended the service from catfish farmers to shrimp farmers, it was solving the same problem. They were still aquaculture farmers after all, so the model remained the same.

The interesting part came when the farmers asked, "Could we buy the feed from you because we bought the feeders from you anyway?" After we started selling them feed, they asked whether they could buy on credit because they received money only after selling their fish. So we thought of using the data to build a credit-scoring mechanism. This way, we could convince the financial institutions to provide credit for farmers to buy our feed.

So our approach has always been to be obsessive about listening closely to the farmers, solving their problems, and figuring out how to build our capabilities to do so. We always start from their problems. That's also why we continue to stay at the frontline and distinguish ourselves from other service providers in the market.

WHAT IS YOUR BUSINESS MODEL LIKE? HOW DID THE COVID-19 PANDEMIC AFFECT YOUR BUSINESS?

We tell the farmers, "If you join us, you can get access to financing. You can also access cheaper feed and the market more easily, just like in a co-operative. All you need to do is pay a membership fee of S$10 per month, per pond." We don't sell an IoT service, end-to-end marketplace, or services that are so complex to farmers that they can't comprehend what they are buying into. Rather, we like to think of ourselves as a digital co-operative.

Because we are in the essential services sector, the pandemic didn't impact us that much because at the end of the day, people need to eat anyway. In fact, due to hard times during the pandemic, people tend to eat more fish as compared to other meats, so it has helped us. In the beginning, it was very hard for us to convince investors; now, because we're solving important problems for society, people finally see that essential sectors like ours have the resilience to even grow amid the pandemic. As for the operations side, we had a remote working policy since 2017, so when the pandemic happened, we had already established the culture, processes, and system for us to operate remotely and in a productive manner.

AS YOUR BUSINESS GREW, YOU HAD TO EVOLVE FROM ENTREPRENEUR TO CEO. HOW HAS THAT JOURNEY BEEN?

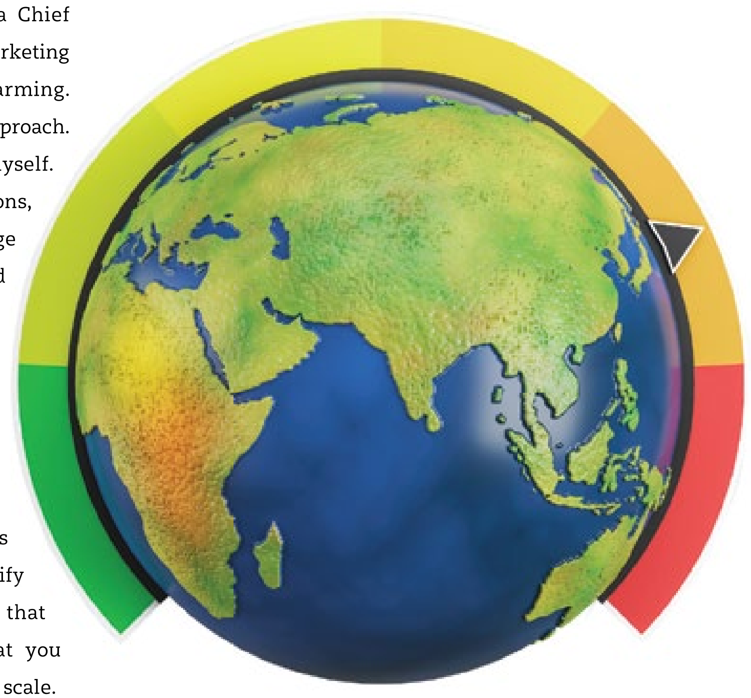
It was very challenging for me because I'm a first-time founder. I started eFishery right after I graduated from college. I didn't have any experience working in a large organisation. I built the prototype myself and I was the first salesperson.

I believe the most important part of this journey is that you need to know when to let go of your responsibilities as a founder. It is quite a delicate balance. When founders give up their responsibilities too early, they lose a lot of insights compared to when they did things themselves. I made the same mistake. Early in the business, I hired a Chief Marketing Officer who had 20 years' experience in marketing consumer products, but no direct experience in farming. It did not work out too well, and I had to change my approach. I ended up building and managing the sales team myself. But once I got to the point of having 50 salespersons, I knew that I did not have the experience to manage them. That's my second point–knowing who and when to hire. This means if you have 50 salespersons, don't hire someone who has experience in only managing 50 people. Instead, hire someone who has experience in managing 300. And the third–always stay at the frontline, even when you have people as your direct report. You need to know what's happening at the customer level and in the field. This way, you can gather strong insights to build and modify the system. And fourthly, you need to understand that it is the systems, the design, and the culture that you have put in place that will enable the organisation to scale.

WHAT CONCERNS YOU THE MOST TODAY WHEN YOU LOOK AHEAD TO THE NEXT FIVE TO 10 YEARS?

First, it's definitely climate change. We know that it will impact the food production sector as a whole, and fish farming and shrimp farming specifically, given the diseases that marine life is more prone to. We are figuring out which technology we need to invest in more, such as genetics, or new farming types, like vertical farming for fish farming. We need to look at this closely because we need to change our farming practices now.

Second, it is about sustainability. We have been farming unsustainably, using antibiotics and pesticides that release pollutants into the environment. However, aquaculture is still in the early phase, as it has started growing only since the last two decades, so we have the opportunity to rethink how we can farm our fish more sustainably, and this will eventually add value and give us premium status in the developed markets. We need to think about how we can embed sustainability into our business model and technology, and incentivise farmers to farm more sustainably. We are also looking at long-term technology, like alternative fish meal for example, that we can start investing in and working with a good partner.



Third, it is paying attention to the consolidation in the sector. There will invariably be a consolidation of certain types of commodities in the market. You can see that in the US agricultural market, where every farmer grows corn, soya, or other similar types of commodities, such as livestock, it is the large agricultural or food companies such as Cargill and Syngenta that own these farms. It may be the same for aquaculture. We are concerned that smallholder farmers might not have a chance to survive. That's why our approach to building the aquaculture sector is a co-op model, at least from the business perspective. It enables us to ensure that smallholder farmers will have room to grow when the sector and the economy grows.

LOOKING BACK, WHAT ARE SOME OF THE GREATEST INFLUENCES IN YOUR PERSONAL LIFE THAT HAVE SHAPED HOW YOU MAKE DECISIONS AND RUN eFishery TODAY?

When I started college, I lived in a different city from my family. I come from a very humble family background, and my family had trouble sending me money. At some point, I didn't have any money and was practically homeless. I stayed in a mosque for three straight days. I didn't have anything to eat for more than 70 hours and had to drink from the tap in the mosque. I also didn't have any friends then because I was the only one from my high school who was accepted into ITB.

During those three days, I felt like I was dying of hunger. I thought this would be the end of my life. Fortunately, I received money from my family on the third night. The next morning, I read from the newspaper that a man had starved to death. I cried because I recalled how miserable I had been when I was hungry. I thought to myself that Indonesia is such a rich country, so it's ironic that there are still people who would starve to death or suffer from malnutrition. That was when I had an epiphany–I wanted to fight against hunger. I wanted to make sure that at least in Indonesia, no one would starve to death. Having that purpose really shaped the way that I operate the business, because it was never about making eFishery a unicorn, or myself a rich man. It's about how we solve problems for farmers and eradicate hunger.

I hope everyone in the company shares the same purpose as me. As we continue to build and grow eFishery, it's not only for our personal financial goals but also using our company as a tool to solve bigger social problems that are as meaningful to them as they are to me. Since I come from a humble background, it's always about bringing positive impact to society.

WHAT ADVICE WOULD YOU HAVE FOR BUDDING ENTREPRENEURS?

These are very exciting times for new entrepreneurs because capital is abundant, the market is growing very fast, and there are high levels of digital savviness. However, I see some pitfalls for new entrepreneurs. Being a founder is a cool job and it is easy to start a company, but that's a wrong motivation. If you don't start by focusing on solving the right problems and having the right mindset, at the end of the day, you won't create any value for society. It will be a company that doesn't leave any legacy.

I always tell budding entrepreneurs to start from your 'why'. Why do you want to start a company? Why is this important for you? Often people start by looking outwards, thinking about what business can be funded and what investors will go after. Instead, start by solving a problem that not only matters to you but is also important to society. Because if you build a business from tackling a problem that is big enough, it will be a long-lasting venture.

At the end of the day, you just need to start–start early, start small, and learn as you go. And be open-minded about what you need to learn, knowing that you still have a lot of things to learn. Prioritise your self-development, because the company can't grow if you don't grow.

I always tell budding entrepreneurs to start from your 'why'. Why do you want to start a company? Why is this important for you?

Asia's Waste Crisis

A festering issue.

by Havovi Joshi

"This may not come as a surprise to many–the world is on a trajectory where waste generation will drastically outpace population growth by more than double by 2050." With this stark warning, the 2018 World Bank solid waste management report continued, "Without urgent action, global waste will increase by 70 percent from current levels by 2050, amounting to an estimated 3.40 billion tons."[1] In the low-income countries, the situation is grimmer–the total quantity of waste generated is expected to increase by more than three times by 2050.[2] Given the rampant urbanisation, population explosion, and strong economic growth in many parts of the developing world, it is clear that waste management, an altogether unpleasant challenge, will particularly affect these countries.

Not only do low-income countries have to grapple with their own waste, but they also have to deal with the waste trade and dumping that comes from high-income countries. While accounting for only 16 percent of the world's population, high-income countries generate about 34 percent, or 683 million tonnes, of the world's solid waste.[3] Solid waste includes organic waste which is made up of food and green waste. As low-income countries continue to grapple with waste management, straining under the volume of trash that leads to uncontrolled dumping and overflowing landfills, it is causing severe pollution and greenhouse gas emissions, exacerbating urban flooding, and endangering the lives and livelihoods of particularly the poorest and most vulnerable. So what is being done about it in Asia?

THE WASTE CHALLENGE IN ASIA

Many Asian countries have drawn up national strategies to address waste management through their policy and regulatory frameworks, and put in place policies that promote green growth and sustainable development. However, nations across the continent are at vastly different stages of waste management. On one end, countries like Japan, China, and Singapore are ahead of the curve, and have invested in sound and structured waste management systems. On the other end, less developed nations continue to dispose most of their waste at open dumps.

Only 30 percent of global solid waste undergoes recycling and composting or treatment through modern incineration, another 33 percent is openly dumped while the remaining 37 percent is disposed of in landfills.[4] A closer examination tells us that the use of controlled landfills is found primarily in the higher income countries. In the low-income countries, and that includes those in Asia, the statistics are far more distressing: over 90 percent of their waste is being openly dumped or burned.[5] Indonesia and the Philippines, for instance, dump almost all their waste in poorly managed landfills.[6]

TAKING THE TRASH OUT

There are glimmers of hope that the waste management situation in Asia is improving. In 2017, China, the world's top recycler, banned imports of plastic trash. One unintended consequence of this decision was that millions of tonnes of trash were diverted to less-regulated countries in Southeast Asia. Interestingly, as if taking a cue from China, and also due to mounting pressure from local environmentalists, Southeast Asian countries such as Indonesia, the Philippines, and Malaysia have also started rejecting trash imports from developed countries like Canada and Australia.[7]

> Not only do low-income countries have to grapple with their own waste, but they also have to deal with the waste trade and dumping that comes from high-income countries.

However, a lot remains to be done in most parts of Asia. For example, even though we have started to see the emergence of regional agreements, such as the June 2019 ASEAN Framework of Action on Marine Debris signed by the leaders of all the ASEAN countries, implementation and enforcement have been weak, resulting in disappointing collection and recycling rates.[8] For instance, barely 20 percent of the waste in Pakistan and Cambodia is collected and disposed of in a hygienic manner.[9]

There is also an urgent need in Asia to introduce enforcement and incentive programmes, along with education and awareness campaigns, to encourage people to reduce, reuse and recycle, and only use disposal as the very last resort. Collaborative decision-making involving all stakeholders is crucial for ensuring the acceptance and success of public waste management initiatives.

To improve Asia's solid waste management efforts, research from Asia Development Bank (ADB) notes some consistent challenges and proposes five lessons that can be applied to the region.[10] First, adopt the best available technology that can be afforded. Second, improve waste collection and haulage efficiency by encouraging initiatives like separating organic and recyclable waste from the residual waste. Third, improve landfill practices and management to extend their lifecycle. Fourth, involve the private sector, as it can bring in financial resources as well as enhance efficiency. And fifth, implement social marketing campaigns that can help spread the message, and encourage enduring behavioural changes.

Until the above happens, Asia's overflowing landfills are here to stay. AMI

JAPAN: AN EXEMPLAR IN WASTE MANAGEMENT

Japan's transformative story demonstrates how successful waste management models can be implemented within just two decades. Thirty years ago, the overwhelming majority of Japanese waste went to landfills or illegal dumps and only five percent of municipal waste was recycled; by 2018, only 1.2 percent of Japanese waste was destined for the landfill. This change was brought about in 1993 when the Basic Environmental Law, which includes waste management, was passed. While it is a national law, its execution was shrewdly left to local governments. Collection of household trash is managed by municipalities, and households and firms are mandated to separate trash into items that can be recycled and those that can/cannot be burned. The majority of Japanese waste, about 70 percent, is turned into energy via a process that engages stakeholders like local residents. Japan's success story underscores the importance of effective local execution, high levels of civic engagement, imaginative public-private interaction, and conversations about waste to bring about behavioural changes.

Source: Geoffrey Jones, "Asia's Waste Management Failures Reach Crisis Levels", Nikkei Asia, September 5, 2018

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LEADING BY EXAMPLE

Leadership lessons from Singapore's pioneer civil servants.

by Yeo Whee Jim

He was the understated *Undercover Boss*, way before the American reality series even hit TV screens. At 30,000 feet up in the air, J. Y. Pillay was quietly walking the ground.

The founding chairman of Singapore Airlines (SIA) had an intriguing reputation for posing as a regular passenger walking the length of the aircraft. From inspecting the seats to checking out the passengers' mood, nothing escaped Pillay's eagle eyes. He would even politely ask to visit the cockpit to speak with the pilots. On one of his rounds, he was dismissed by the crew as a wandering drunk.

But nothing was going to stop the man on a mission, to see for himself if the in-flight services met the exacting standards that SIA had set for itself.

This determination to walk the ground allowed Pillay to pick up the smallest of details. On one flight, he noticed that the cabin crew were mishandling catering equipment such as trays and cutlery. He ran a quick check and found that this was costing the airline S$20,000 every day. Aghast, he wrote a blistering note in the company's in-house newsletter, insisting that the issue be addressed. Such a move not only helped the airline's bottom line but also raised its in-flight service standards.

Pillay's roll-up-your-sleeves, do-it-yourself approach helped transform SIA into one of the world's leading airlines during his tenure from 1972 to 1996. Armed with a razor-sharp mind, a visionary outlook, and the guts to make bold decisions, yet having the humility to walk the ground, Pillay helped SIA navigate through its turbulent early years. Despite the lack of a domestic market, SIA not only prevailed, it thrived.

Pillay's courageous determination to take Singapore's flag carrier to greater heights is chronicled in *The Last Fools: The Eight Immortals of Lee Kuan Yew.*[1] The book showcases the accomplishments of eight lesser-known pioneer senior civil servants who supported Singapore's first prime minister, the late Mr Lee Kuan Yew, and his band of Old Guard leaders who transformed Singapore and built its national institutions into what they are today.[2]

Besides Pillay, the other seven are George Bogaars, Andrew Chew, Hon Sui Sen, Howe Yoon Chong, Lee Ek Tieng, Ngiam Tong Dow, and Sim Kee Boon. From healthcare and housing to transport and talent, these eight officials made countless wide-ranging contributions to the Republic.

We can glean many leadership lessons from them; each of these individuals' accomplishments is a masterclass in leadership and management.

What made it possible for them to build national institutions from scratch? Why did they succeed beyond our wildest imagination when there were so many naysayers around them? How did they accomplish so much despite not having the resources that many are accustomed to getting today?

In this article, we explore and discuss six key lessons from the book that leaders can draw from to take their organisations and teams forward.

LEADING WITH INTEGRITY

In the 1970s, then-permanent secretary of the communications ministry, Sim Kee Boon, set out to make Changi Airport the best in the world.[3] This was despite a global oil crisis that had prompted an austerity drive in government spending.

Believing that Changi was critical for Singapore's survival, Sim spared no expense in securing the best for Singapore's airport of the future. From luxurious toilets to Italian marble slabs for the airport's interiors, he splurged to propel the airport to the top. Shrewdly, of course. For example, he negotiated with suppliers of TV screens–a luxury in those days–so that passengers could be entertained between flights. In return, the suppliers received free advertisements.

Such expenses were only made possible when the business dealings were conducted with integrity. As the Singapore public service had already established a well-known ethos of zero tolerance for corruption, this created a deep reservoir of trust with the people. Sim was known to have told his subordinates, "If you had put just $1 in your pocket illegally, I would have gone after you."[4]

Integrity should be inseparable from leadership. It is about doing the right thing, when no one is looking, *and* especially when everyone is looking yet thinking otherwise. This was the case in the high-profile Changi Airport project where there would have been many occasions that presented temptation for misconduct for those charged to deliver it.

It is easy to lead when things are going smoothly. But it is when leaders set the right example and lead with integrity when times are tough that subordinates sit up and take notice. The impact of such actions trickles downwards, thus building greater trust with and among employees. It strengthens the organisation's credibility with partners and external parties, enlarging the space for it to aim higher and move ahead of its competition.

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Integrity is a key, intangible currency for all businesses. As American political scientist Francis Fukuyama argues, only those societies with a high degree of social trust will be able to create the flexible, large-scale business organisations that are needed to compete in the new global economy.[5]

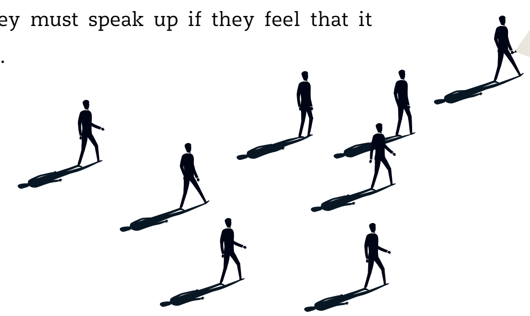
SPEAKING UP WITHOUT FEAR OR FAVOUR

There is another dimension to leadership and integrity. A good leader speaks up for what is right. Indeed, many of the eight men were known for their candour when it came to matters of national interest. They were by no means yes-men. Instead, they spoke up without fear or favour and often acted against the grain of the wisdom of the day.

The late veteran civil servant Ngiam Tong Dow in particular was known for his honest opinion on issues that ranged from government scholarship recipients to taxes. For instance, he lamented that government scholars were only deployed in the public sector upon the completion of their university education. The business and social sectors, on the other hand, were being deprived of such talent.

In 2003, he spoke up against the Government's decision to raise the Goods and Services Tax. "Why tax the lower income, then return it to them in an aid package? It demeans human dignity and creates a growing supplicant class who habitually hold out their palms," he said.

While he might have stepped on many toes through the manner in which he put forth his views, his outspokenness stemmed from the fact that he cared for Singapore and his fellow Singaporeans. There was an innate desire to do the right thing in the right manner. This is a value that all leaders must hold. They must speak up if they feel that it is the right thing to do.



At the same time, leaders have a responsibility to develop and maintain a culture in which people feel it is safe enough to voice their opinions, regardless of their ranks. Closing the power distance and creating space for employees to speak up and challenge one another's perspectives bring many benefits.

Such a safe culture strengthens organisations by stress-testing decisions before they are finalised, thus helping them secure the best possible outcomes. This also promotes an inclusive workplace that allows employees to feel more invested and engaged in their jobs, fellow colleagues, and the organisation.

MAKING DECISIONS BOLDLY

Decision-making is an important skill for every leader. The eight bureaucrats were exemplary decision-makers. Clarity of thought and purpose allowed them to act quickly and fearlessly when making major decisions.

In 1978, Pillay and his SIA team decided to buy up to 19 Boeing jets for US$900 million, which was then the largest ever purchase made by any airline in the world. Some media described it as "the sale of the century".[6] Pillay dismissed such lofty headlines. For him, it was simply about making the right decision. SIA needed better aircraft to grow and overcome the lack of a domestic market. "You don't get responsible organisations placing orders with an eye towards the history books," he said.

Leadership is most certainly not a popularity contest. It is about having the courage to make unpopular choices for the greater good. Then-permanent secretary of the Ministry of the Environment Lee Ek Tieng demonstrated this approach. When he was tasked with what was conceived to be an impossible mission of cleaning up the Singapore River in 1977, he had to make the difficult call of shutting down industries that were polluting the waters downstream, such as pig farming and textile manufacturing. Residents living by the river also had to be relocated.

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This caused plenty of friction among government agencies as some fought to keep the industries alive. Many residents were forced to move. Some even lost their livelihoods. But the job had to be done, and such hard choices eventually resulted in a pristine river and a clean environment for Singapore.

The late Howe Yoon Chong literally bulldozed his way through slums to build public housing when he was the chief executive at the Housing and Development Board (HDB). At a time when most residents preferred to live on the ground, he pressed ahead with high-rise buildings to solve land-scarce Singapore's housing problems, creating a nation of homeowners. When flat-building was at its peak, it was said that a flat was completed every 36 minutes.

LOOKING AHEAD COURAGEOUSLY

Foresight is a vital but often overlooked leadership quality. However, more often than not, leaders find themselves bogged down by the day-to-day running of their organisations. Organisations that are in it for the long haul need their leaders to keep an eye on the future.

Howe was perhaps the best 'fortune-teller' among the 'eight immortals'. He not only had an uncanny ability to anticipate mega global trends, but also a relentless work ethic to ensure that he and his team acted on the 'predictions'. At a time when Singapore was debating whether to keep its overworked airport in Paya Lebar, he knew that the country needed far bigger space to cope with the future of travel–aviation.

Howe fought to build Changi Airport and in 1981, he proclaimed boldly, "Singapore is up in the heart of ASEAN, the fastest growing economic grouping in the world. The potentials for further expansion of trade, industry, tourism, banking, and finance are enormous. For as long as wide-bodied jets continue to be used, Changi Airport will attract more aircraft and passenger traffic and more air cargo. The real growth is yet to come." He was proven right. Before the COVID-19 pandemic, Changi was the world's seventh busiest airport in terms of passenger traffic[7] and had won 'Best Airport in the World' award 27 times between 1991 and 2020.[8]

In the 1970s, Howe had found himself in the thick of another national transport challenge. There was a big debate within the Singapore government on whether to retain the all-bus public transport system or invest in a new subway, known as the Mass Rapid Transit (MRT). Of the two, he believed that the MRT was the better option, since the trains could maximise the use of Singapore's limited land by going under and above the ground. While it would come at a huge financial cost to the government, it would boost long-term investor confidence, decentralise economic activities from the congested city-centre, and effectively reduce traffic jams.

Another key 'immortal' was George Bogaars. When Singapore achieved self-government in 1959, he was only in his early 30s and carving out a career at the Treasury Department. Despite not having any experience dealing with internal security issues, Bogaars boldly answered the call to be Singapore's first local to head and subsequently revamp the Special Branch.[9] It is the courage and foresight of Bogaars and others like him that paved the way for the safe and secure environment that Singapore enjoys today.

LEADING NIMBLY

It would be hard to find an organisation advocating good governance that does not have structures, processes, and systems in place to clearly define responsibilities and proper communication channels. But while adhering to proper procedure is undoubtedly important, organisations need leaders to display astute nimbleness when the situation calls for it.

This flexible approach is even more pertinent in today's unpredictable world fraught with complex issues like wars, supply chain disruptions, and economic crises. Critically, leaders must learn how to modify their methods in response to unforeseen challenges and adapt accordingly.

Dr Andrew Chew, the former permanent secretary at the Ministry of Health, was one who displayed such flexibility. Singapore used to have two ambulance services. At one point, it could take as long as 25 minutes for critical help to arrive. Assessing that it was too slow and inefficient, Chew overhauled the entire structure by implementing a nationwide system. Ambulances were to transport cases from certain districts to hospitals in a particular zone. It was a move that massively improved the speed and efficacy of Singapore's medical services.

But in his haste, Chew had forgotten to put together the necessary Cabinet papers to inform the ministers about the plan. Instead of navigating the bureaucracy, he thought that saving lives was more important. He only informed his political leaders when he had to issue a press release about the revamped national ambulance service. Ultimately, it was a move that paid off, as he eventually received the green light to proceed. To this day, all ambulances in Singapore are still following the system that Chew implemented more than 50 years ago.

Why many Singapore streets remain relatively unflooded after heavy downpours is again the result of another leader not letting red tape get in the way. Back in the early 1970s, the HDB was building homes in record time to house squatters and the drainage system could not keep up. The floods were so severe that they sometimes reached chest-level.

As permanent secretary of the Ministry of the Environment, Lee Ek Tieng knew he had to act fast and so an urgent paper was written, requesting for the roll-out of a S$100-million five-year drainage programme. He could not afford to let bureaucracy slow things down, so he bypassed the Finance Ministry and went straight to the Cabinet. The unit got the money swiftly and the flooding problem was solved.

These examples illustrate how leaders need to discern when to depart from protocols and take swift, decisive action whenever it is necessary. While it should be a key competency of any leader worth his salt, this is clearly not for the faint-hearted.

NURTURING TALENT TIRELESSLY

Talent is what differentiates one organisation from another. Few organisations will argue that talented and dedicated employees are a valuable resource who can improve their competitiveness, increase their productivity, and secure their long-term prospects.

According to McKinsey, high performers are four times more productive than average ones.[10] In more complex jobs, this doubles to eight times. The message is clear: the more difficult the task, the greater the need for high-performance workers. This is why leaders must surround themselves with the right people who are motivated by the right reasons.

As the first chairman of the Economic Development Board (EDB), Hon Sui Sen was well aware of the importance of developing a culture of grooming talent so that he could leave the organisation stronger than when he found it. In the list of capable officers that he pulled to join him at EDB were Pillay, Ngiam, and S. Dhanabalan. Dhanabalan would go on to become a key member of Singapore's second-generation political leadership.

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Together, Hon and his young group of EDB officers kickstarted Singapore's industrial revolution in the 1960s. At breakneck speed, they transformed the region of Jurong–then a barren swampland in the western part of Singapore–into an important industrial area. In just seven years, over 200 factories set up shop in Jurong, with a workforce of over 20,000 people.

Successful leaders make it a point to develop others. Besides having an eye for potential, Hon was also a master at talent management. He reportedly once told Ngiam, "When I look at you, I never think of your weak points. I always think of your strong points, and I use your strong points to do my work for me rather than spend day and night on your weak points."

Hon was never afraid to tap the people around him. For example, as finance minister in 1970, he tasked then-senior minister of state for finance, Goh Chok Tong, to deliver the government's Budget in Parliament. It was an unprecedented move. The finance minister had always made the Budget speech. Goh, on the other hand, was a junior minister.

There was a strategic calculation behind that audacious move: it was a shrewd test of Goh's credentials as a politician. Hon's approach would eventually be validated, as Goh would later go on to become Singapore's second prime minister.

Today, we are facing a global talent crunch. Employment agency ManpowerGroup's 2022 study found that global talent shortage is at a 16-year-high, with three in four employers finding it difficult to secure the talent they need.[11] This makes it even more crucial that leaders develop an eye for talent and invest in grooming promising employees.

LEADERSHIP SETS THE FOUNDATION

The six leadership qualities displayed by these eight outstanding former public servants enabled them to transform Singapore, turning the island city-state into a success story. The qualities and lessons that we distil from them are not specific to the civil service and can be readily applicable for top-management executives in any organisation. They can become a foundation for executives to further hone and develop their leadership skills, nurture teams, and ultimately leave organisations far stronger than when they found it. AMI

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Endnotes

1. The "Last Fools" phrase was inspired by what Howe, a former civil service head, was reported to have said in a speech: "Singapore's success was built by fools, and I was one of them." He was wondering aloud whether younger generations of Singaporeans would continue to take on the challenges of public service. Additionally, 'Eight Immortals' is a reference to a group of eight powerful figures in Chinese Taoist mythology.
2. Peh Shing Huei, Sue-Ann Chia, Aaron Low, et al., "The Last Fools: The Eight Immortals of Lee Kuan Yew", Singapore: The Nutgraf Books, 2022.
3. In the Singapore Civil Service, a permanent secretary is the most senior-ranking civil servant of a department or ministry who is responsible for running its day-to-day activities.
4. Unless otherwise stated, all quotes in this article were taken from "The Last Fools: The Eight Immortals of Lee Kuan Yew".
5. Francis Fukuyama, "Trust: The Social Virtues and the Creation of Prosperity", Free Press, 1995.
6. Sitragandi Arunasalam, "J. Y. Pillay", Singapore Infopedia, 2005.
7. Hariz Baharudin, "Parliament: Changi Drops from 7th to 58th on Busiest Airport List, Now Serving 1.5% of Usual Passenger Volume", The Straits Times, October 6, 2020.
8. Changi Airport Group, "Our Pride".
9. The Special Branch was the predecessor of the Internal Security Department, which is under the Ministry of Home Affairs.
10. Scott Keller, "Attracting and Retaining the Right Talent", McKinsey, November 24, 2017.
11. ManpowerGroup, "The Talent Shortage", 2022.