

EDGES OF SOUTHEAST ASIA

2ND EDITION



Deloitte Center for
the Edge

EDB:
SINGAPORE

US-ASEAN
BUSINESS COUNCIL, INC.

Table of Contents

Forewords

Edgy strategies for a new era of growth <i>Deloitte Center for the Edge</i>	3
--	---

To make an impact, Start from the Edges <i>Deloitte</i>	4
--	---

Pioneering new horizons; Beyond conventional innovation <i>US-ASEAN Business Council</i>	5
---	---

Opportunities abound in this region on the move <i>Singapore Economic Development Board</i>	6
--	---

About the Edges

How to Use the Cards	7
Business Strategies of Tomorrow's World	8
Exploring the Edges of Southeast Asia	10
Acknowledgements	12



Edgy strategies for a new era of growth

Deloitte Center for
the Edge

When we launched the original version of Edges of Southeast Asia in 2020, we were thrilled with the response we received. The publication inspired conversations, speeches, and workshops, encouraging C-Suite leaders across industries to think critically about the existent and emerging needs within Southeast Asia. It prompted them to think about preparing their organisations for the world of tomorrow.

Since the first edition was launched, the business landscape has changed significantly. The era of low global interest rates is long gone, and in recent years, investments in early-stage startups has dried up considerably. However, we must remember that diamonds are formed under pressure – the challenging business environment that has emerged has meant that only the most adaptable companies can survive.

An important addition to this edition is the introduction of six business strategies for driving innovation. The aim of this publication is to provide actionable inspiration for other companies and innovators, regardless of industry. These strategies identified at the edges have been tested in real-world competition, demonstrating significant and measurable business impacts, and proving that they are more than just theoretical constructs.

Most importantly, we've had the opportunity to get to know the featured Edges over the past year of research. It has been a privilege to have a front row seat to their evolution. We invite you to explore these stories, to see beyond the conventional, and contribute to this evolving narrative.

Southeast Asia is not just adapting to future challenges; it's actively shaping them. Join us in this journey of discovery and impact, where every story contributes to a broader vision of sustainable and inclusive economic growth.



Duleesha Kulsooriya,
Managing Director, Center for the Edge,
Deloitte Southeast Asia;
Innovation Leader, Deloitte Asia Pacific

duleeshak@deloitte.com

www.deloitte.com/sg/c4edge

To make an impact, Start with the Edges

Deloitte.

Since our last edition of Edges of Southeast Asia, our region has undergone significant transformations. Amidst global challenges, including the far-reaching impacts of climate change and the rapid pace of technological advancement, Southeast Asia has not just been a follower, but a pioneer in many ways as well. Now, more than ever, it's crucial to spotlight the latest bright spots emerging from the region through showcasing new stories of resilience, creativity, and impact. This edition aims to capture the essence of Southeast Asia's ongoing transformation, reflecting its current state and the promising horizon ahead.

Many of these Edges originate from Singapore – the small nation-state continues to punch above its weight to lead in deep tech, digital innovation, and public sector transformation, supported by strong government backing and advanced tech infrastructure. More importantly, it serves as a gateway to Southeast Asia, which is why we are very excited to collaborate with the Economic Development Board of Singapore and the US-ASEAN Business Council again for this edition. Innovation is far from confined to Singapore alone; examples from Indonesia, Malaysia, the Philippines, Thailand, and Vietnam add to the diversity of potential and possibilities of the region.

You will notice that many of these edges are ESG-related – this is no coincidence. This region, characterised by its diverse, large, and young population, is at the forefront of addressing social and climate change through practical solutions. Its economic diversity, ranging from rural to urban settings, fosters a unique environment where ideas collide and evolve. Here, the barrier to entry for young entrepreneurs is notably lower, enabling a surge in change-makers focused on sustainable development.

To stimulate innovation and sustainable growth, we must move beyond the scarcity mindset rooted in historical constraints and economic challenges. Southeast Asia's vast resources, diverse talent, and its people's ingenuity offer immense opportunities. Embracing an abundance mindset will unlock the region's full potential, driving forward-thinking initiatives and inclusive prosperity.



Philip Yuen
Chair,
Deloitte Southeast Asia

Pioneering new horizons; Beyond conventional innovation



In the rapidly evolving landscape of Southeast Asia, innovation is the driving force that propels industries forward, reshapes economies, and enhances the lives of millions. The ASEAN region stands at the forefront of this transformation, where businesses are not just adopting new technologies – they are reimagining the very future of business models and practices in their industries.

The second edition of the Edges of Southeast Asia report highlights the pioneering spirit of ASEAN's innovators, whose efforts are far more than mere advancements in technology. These companies and entrepreneurs are beacons of innovation, offering future-oriented solutions, uplifting underserved communities, and serving joy to both employees and customers. This is achieved through thoughtful, community-oriented business practices which help promote smarter and more innovative ecosystems.

For the US-ASEAN Business Council, working with Deloitte's Center for the Edge and the Singapore Economic Development Board on this project is a reflection of our members' commitment to foster a brighter, more sustainable future for the region through their investments in local ecosystems. By partnering with these innovators, we aim to help catalyse growth, enhance connectivity, and build resilient supply chains which can help ASEAN economies to thrive in the face of global challenges.

This report serves as both a celebration of the remarkable progress made by ASEAN innovators and a call to action for continued collaboration. Together, we can shape a future where innovation is not just an ideal, but a reality that benefits all.

We extend our deepest gratitude to the innovators, partners, and stakeholders who have contributed to this journey. Your vision and dedication are the cornerstones of a prosperous ASEAN, and we are proud to support your efforts.

A handwritten signature in black ink, appearing to read 'Marc P. Mealy'.

Marc P. Mealy

Chief Policy Officer & Senior Vice President
— Research, US-ASEAN Business Council

mmealy@usasean.org

<https://www.usasean.org/contact>

Opportunities abound in this region on the move



Stop along any of Southeast Asia's main thoroughfares today, and you quickly get a sense that this is a region on the move. Our people are hustling, brokering, creating. Southeast Asia's growth story will no longer be driven just by a few specific sectors, but by many companies that have embraced disruption and fostered innovation.

You can see the ingenuity in every corner. In the Philippines, B2B platform Growsari is helping mom-and-pop shops digitalise to better serve the needs of communities. In Singapore, cold storage warehousing and logistics provider SuperFreeze has patented a process to achieve "ultra-cold capabilities" for regional logistics hubs.

These and other stories in this report [reveal a literal "SEA of opportunity"](#). We are proud to partner Deloitte and the US-ASEAN Business Council to bring stories of resilient entrepreneurs and transformative companies to life.

In Singapore, we are particularly excited about how innovation in AI, healthcare, advanced manufacturing, and sustainability solutions will shape Southeast Asia's growth.

We also know that we cannot go it alone – deeper collaboration between Southeast Asian countries will bring about benefits for the region's 670 million people.

Countries in Southeast Asia are negotiating a Digital Economy Framework Agreement that could double the size of the region's digital economy to US\$2 trillion by 2030. Thailand, Malaysia, and Singapore have already linked their domestic fast payment systems. Work is underway to make the Johor-Singapore Special Economic Zone a reality, with a more seamless cross-border flow of goods, people, and services. Our programmes like the Innovation Talent Exchange with Vietnam, and Tech:X with Indonesia, will enable more cross-border flow of talent and ideas.

It is truly an exciting time to be in Southeast Asia. We are keen to partner you and other regional stakeholders [to seize the opportunities that abound. Ask us how.](#)

A handwritten signature in black ink, appearing to read 'Jacqueline Poh'.

Jacqueline Poh
Managing Director,
Singapore Economic Development Board

Get updates and insights from EDB:
<https://go.gov.sg/sub-edb>

How to Use the Cards

The Edges of Southeast Asia publication is designed as a deck of cards to inspire you and your organisation to think creatively about business strategies, how other organisations have applied them successfully in their respective contexts, and how your organisation can do the same.

Here are three unique ways of exploring the Edges. Use the “Points to Ponder” on pages 9-10 to probe further.

#1: CASE STUDY

Read the case study of the specific card. What is unique or interesting about the Edge’s business strategy?



#2: DEEP DIVE

Choose 2-3 cards of the same colour. How can you design a new business borrowing different approaches to common strategies?



#3: MIX IT UP

Choose 3-4 cards, each from a different colour. How can you combine a few ideas to create a new business model?



Exploring the Edges of Southeast Asia

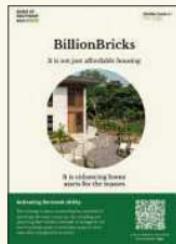
The Edges of Southeast Asia are crafted to ignite your creativity and uncover new business possibilities. Each card presents a unique emerging Edge, offering valuable insights and strategies that can be adapted across various industries.

We hope these cards not only inspire you to envision new opportunities but also to actively pursue them within Southeast Asia.

Activating Dormant Utility



Bike Scouts
Philippines



BillionBricks
Philippines



MFast
Vietnam

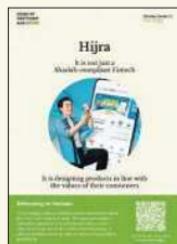


SuperFreeze
Singapore

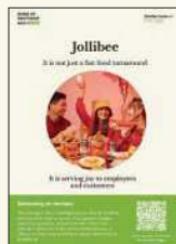


Xinterra
Singapore

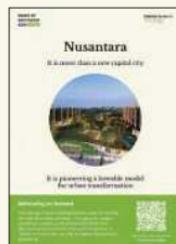
Refocusing on Humans



Hijra
Indonesia



Jollibee
Philippines



Nusantara
Indonesia



Tsao Pao Chee
Singapore



Growsari
Philippines

Unlocking Market Power

Establishing Regenerative



Inspirasi
It is not just quality affordable education

It is a continuous spiral that develops impact of every ratio

Unlocking Market Power

Unlocking Market Power

www.inspirasi.id





Jasberry
It is not just reprocessing the rice grain

It is creating a stimulus model, recycle the business and market

Unlocking Market Power

Unlocking Market Power

jasberry.com





PCX Markets
It is not just reducing plastic waste

It is replicating market principles to make environmental impact

Unlocking Market Power

Unlocking Market Power

pcxmarkets.com





A Little Wild
It is not just a regenerative forest

It is creating their own truly healthy forest and agriculture

Unlocking Market Power

Unlocking Market Power

www.alittlewild.com





GINLEE
It is not just a fashion brand

It is challenging fast fashion with sustainability

Unlocking Market Power

Unlocking Market Power

www.ginlee.com



Inspirasi
Indonesia

Jasberry
Thailand

PCX Markets
Philippines

A Little Wild
Malaysia

GINLEE
Singapore

Systems

Tinkering First-Hand



Potato Head
It is not just a resort

It is promoting a zero migration for sustainable tourism

Unlocking Market Power

Unlocking Market Power

www.potatohead.com





Crown Digital
It is not just coffee

It is redefining tradition through digital experimentation

Unlocking Market Power

Unlocking Market Power

crowndigital.com





eFishery
It is not just an aquaculture platform

It is redefining their local food system through a new model

Unlocking Market Power

Unlocking Market Power

efishery.com





Toyota Mobility Foundation
It is not just electric vehicles

It is establishing a research & transportation ecosystem

Unlocking Market Power

Unlocking Market Power

tmf.toyota





VinAI
It is not just an AI R&D company

It is a source of innovation

Unlocking Market Power

Unlocking Market Power

www.vinai.com



Potato Head
Indonesia

Crown Digital
Singapore

eFishery
Indonesia

Toyota Mobility Foundation
Indonesia

VinAI
Vietnam

Innovating from the Tech Edges



audax
It is not just a payment service

It is innovating new business models from the edges

Unlocking Market Power

Unlocking Market Power

www.audax.com





NUHS
It is not just adopting new technologies

It is redefining the operating model of your industry

Unlocking Market Power

Unlocking Market Power

www.nuhs.edu.sg





Ricult
It is not just an app for farmers

It is putting the power of AI and satellite technologies in their hands

Unlocking Market Power

Unlocking Market Power

www.ricult.com





UrbanMetry
It is not just property data

It is a catalyst for urban transformation

Unlocking Market Power

Unlocking Market Power

www.urbanmetry.com



audax
Singapore

NUHS
Singapore

Ricult
Thailand

UrbanMetry
Malaysia

Business Strategies of Tomorrow's World

This second edition highlights six strategic approaches that emerged from studying the featured Edges and what makes them tick. Each of the strategies are colour-coded. To start your journey of the Edges, here are some prompts to ponder.

Activating Dormant Utility

This strategy is about uncovering the untapped potential of seemingly dormant resources. By activating and unlocking their hidden potential, it reimagines the use of existing assets in innovative ways to serve new, often unexpected purposes.

Points to Ponder

- What are existing assets or resources that might be overlooked?
- In what innovative ways can we repurpose these dormant assets to meet new or unforeseen needs?

Refocusing on Humans

This strategy is about creating business value by elevating the traits that make us human. This approach realigns operations, products, and services with these traits – after all, humans are at the centre of all businesses. A refocus on these traits can help to inspire a future that is good for all.

Points to Ponder

- How can we realign our operations, products, and services to better elevate our human values?
- What human trait can we rally around that inspires a future that is beneficial for all stakeholders involved?

Unlocking Market Power

This strategy explores the unseen or neglected corners of the market landscape, identifying opportunities where others see none. By pioneering new concepts or leveraging innovative mechanisms, it unlocks the latent power of markets, creating value where it was previously overlooked or deemed impossible.

Points to Ponder

- In what overlooked or neglected areas of the market can we find opportunities to create new value or innovation?
- How can we pioneer new concepts or leverage innovative mechanisms to unlock the latent power of these markets?

Establishing Regenerative Systems

This strategy is about cultivating systems that do more than sustain, which only looks to minimise harm. Regenerative systems take on a more ambitious approach to have a net-positive impact on the environment and communities that they work with.

Points to Ponder

- What are the specific actions we can take to transform our current systems to create a net-positive benefit for the environment and its communities?
- How can we measure the impact of these regenerative systems to ensure they are contributing positively beyond mere sustainability?

Tinkering First-Hand

To ideate new strategies, getting hands-on is an often overlooked part of the process. Through direct experimentation, first-hand experience and iterative learning pave the way for breakthroughs that could never have been predicted.

Points to Ponder

- How can we foster a culture that encourages experimentation and hands-on engagement with new ideas or technologies?
- What processes can be implemented to ensure that learnings from these first-hand tinkering experiences are leveraged for innovation and disseminated across the organisation?

Innovating from the Tech Edges

Directing resources to the fringes of a business targets low-investment, high-growth opportunities. This approach has the potential to reshape and transform the entire organisation. Here, the spotlight is on the edge ideas which leverage technological frontiers.

Points to Ponder

- What is happening on the edges of our industries that has the potential to fundamentally transform our business?
- What strategies can we employ to scale these Edge opportunities in a way that allows us to reinvent our core business practices?

Acknowledgements

Research and Writing:

Duleesha Kulasooriya
Michelle Khoo
Michael Sagna
Althea Lim
Chia Hui Xiang
Gabrielle Soh
Hwang Seo Hyun
Jonathan Lee

Marc P. Mealy
Megan Tan
Michelle Tan
Prachi Indira
Suvrata Mohapatra

Graphic Design:

Iskandar Ruhaizat

We would also like to thank the following individuals, departments and organisations for their support and contributions:

Angga Antagia
Bar Carlo Gonzalez Dayandayan
Brandon Chew
Carie-Anne Bak
Chew Chiat Lee
Chodok Panyavarantan
Chow Tuck Wai
Christine Wan
Clarissa Sih
Denise Lee
Dr Narain Chutijirawong
Geetanjali Kaur
Han Yew Hock
Hari Shiv Raam T Kesavan
Hoa Nguyen Kim
Hung Nguyen Tien
Huynh Pham Dinh
James Walton
Jane Setiani Tjahjono
Janice Han
Janice Lim
Jeanette Juay
Joanne Teh
Jocelyn Lee

Kid Parchariyanon
Lee Bee Leng
Lynn Lee
Marie Pauline Manzanilla Zamora
Mitra Anusri Muralitharan
Mok Shu Xian
Nadia Lixian Hong
Paviter Kaur Autar Singh
Peiqi Zhuo
Raj Kannan
Rukhsana Pervez
Sarah Farhana Iqbal
Sarah Lessing
Steffi Mei Hui Goh
Sukainah Osman
Tasada Sangmanacharoen
Theethat Erk Rangkasiri
Tuan Minh Bui
Wayne David Savage
Yasuyuki Murakami

and all the teams behind the Edges mentioned in the 24 cards.

Additional Credits:

Images and statistics provided are all credited to the featured edges unless otherwise stated.

Bike Scouts

It is not just disaster response



It is leveraging the power of
hyper-localisation to do extraordinary good

Activating Dormant Utility

This strategy is about uncovering the potential of seemingly dormant resources. By activating and unlocking their hidden potential, it reimagines the use of existing assets in innovative ways to serve new, often unexpected purposes.



Scan to discover more about
this and other Edges.

The Philippines is among the most disaster-prone countries in the world, with 60% of its land and 74% of its population vulnerable to natural hazards such as floods, cyclones, droughts, earthquakes, tsunamis, and landslides.

One of the worst disasters occurred in 2013 – Typhoon Haiyan. When Typhoon Haiyan made landfall, it overwhelmed the government response with only 23% of local governments in flood prone areas sufficiently resourced to respond. At the time, Myles Delfin saw the potential for ordinary citizens with bicycles to make an impact. They could go where roads were inaccessible and deliver necessary supplies, information, and communication. He posted on Facebook, seeking volunteer cyclists to join the disaster response. Within a few hours, 200 volunteers signed up, leading to the formation of the first Bike Scouts community.

Social media plays a pivotal role in mobilising citizens to become community responders. With 95% of internet users in the Philippines on Facebook, Bike Scouts leverages this platform to raise awareness and manage community operations. Recognising the untapped potential of local residents, who best understand community needs, Bike Scouts collaborated with local cycling groups to train volunteers to become first responders.

Bike Scouts is launching an app, SuperScout, to expand its good work beyond Facebook. Founded on the belief that people inherently want to do good, Bike Scouts taps into our latent potential to contribute to our communities. Over the past decade, more than 100,000 individuals have joined the Bike Scouts community, helping over 700,000 residents in the Philippines and beyond.

.....

Key stats



700,000

people helped by Bike Scouts in the past decade.



75%-98%

people in developing countries who volunteered during the Covid-19 pandemic.



11 hours

online per day on average. Filipinos spend the most time online globally.

BillionBricks

It is not just affordable housing



It is enhancing home
assets for the masses

Activating Dormant Utility

This strategy is about uncovering the potential of seemingly dormant resources. By activating and unlocking their hidden potential, it reimagines the use of existing assets in innovative ways to serve new, often unexpected purposes.



Scan to discover more about
this and other Edges.

The Philippines is grappling with a severe housing shortage, driven by rapid population growth and urbanisation. In 2022, the country faced a shortfall of [6.5 million homes](#), requiring a 23% increase in housing stock to meet the demand. [30% of the population](#) lives in informal settlements with inadequate water, sanitation, energy, and waste management.

BillionBricks has developed an ingenious financing solution to leverage solar panels to enable even low-income families to afford their own self-financing, net-zero homes. These solar-powered homes are designed for people, the planet, and profit. By integrating solar panels into the roofs, BillionBricks provides families with free electricity and allows them to sell excess electricity back to the grid, turning their homes into sustainable income streams that finance 15-20% of their mortgages. Furthermore, these net-zero homes maintain site drainage, treat their own sewage, and provide spaces for growing food. Designed with vulnerable families in mind, these houses are both affordable and durable, and are resilient to earthquakes and typhoons.

BillionBricks is currently developing several pilot projects in cities across the Philippines, laying the groundwork for the first large-scale BillionBricks community in the country. This community will encompass over 1,300 homes with a solar capacity of 10.4 megawatt peak energy, offsetting more than 6,160 tonnes of CO₂ emissions annually. This is equivalent to planting 191,000 trees.

BillionBricks' approach combines social impact, environmental stewardship, and financial viability, leveraging sunlight and unused roof surfaces to address two of the world's most pressing issues: affordable housing and climate change.

.....

Key stats



40%

of the world's carbon emissions come from the building and construction sector.



>3,072 tonnes

of annual CO₂ emissions offset by the first large-scale BillionBricks community to be built in the Philippines, encompassing over 1,300 homes and generating 4.45 gigawatts of energy.



20GW

of solar energy generated annually if BillionBricks were to address 10% of the Philippines' projected housing shortage of 22 million homes by 2040.

MFast

It is not just a sales channel
for financial products



It is harnessing the power of social capital in underserved communities

Activating Dormant Utility

This strategy is about uncovering the potential of seemingly dormant resources. By activating and unlocking their hidden potential, it reimagines the use of existing assets in innovative ways to serve new, often unexpected purposes.



Scan to discover more about
this and other Edges.

Over 70% of Southeast Asia's population is unbanked or underbanked, with a chronic lack of financial literacy and trust in financial products. They often turn to friends and relatives for financial advice.

MFast was founded on the premise that community relationships were an untapped resource in the distribution of financial products to underserved communities. Focusing on Tier 2 and Tier 3 cities in Vietnam, they built a network of sales agents who help educate consumers about the financial services most suited to them, including bank accounts, loans, credit cards, and insurance from various financial services providers. Each sales agent has access to their network of family and friends, growing the pool of potential customers.

MFast's exponential growth can be attributed to a profound understanding of human behaviour, complemented with straightforward technology. Through the MFast app, after completing in-app training, agents can engage with their networks to facilitate sales. Upon obtaining client consent, agents input the consumer's details into the app. The MFast team and relevant financial institutions then follow-up with the customer to finalise the sign-up process. Agents earn a commission for each sale. Three quarters of agents are part-time, with the average MFast agent earning US\$200 per month. The platform is providing new income streams, particularly among students and recent graduates, and opens up financial career opportunities for everyone.

Today, 367,000 MFast agents serve more than 2.6 million consumers across Vietnam. MFast recently launched in the Philippines, as the firm works to drive financial inclusion for the unbanked and underbanked populations across Southeast Asia.

.....

Key stats



74%

of SEA's population is either unbanked or underbanked.



>367k agents

in the MFast network, serving more than 2.6 million consumers and paid out over US\$212 million in commissions.



>US\$1 trillion

in gross transaction value for digital payments in SEA by 2025.

SuperFreeze

It is not just a cold chain solution



It is unlocking the super cool
potential in energy

Activating Dormant Utility

This strategy is about uncovering the potential of seemingly dormant resources. By activating and unlocking their hidden potential, it reimagines the use of existing assets in innovative ways to serve new, often unexpected purposes.



Scan to discover more about
this and other Edges.

SuperFreeze, a provider of cold storage warehousing and logistics, is revolutionising how we cool things down. In Singapore, 95% of electricity comes from liquified natural gas (LNG). Generating electricity from LNG requires warming LNG back to natural gas from temperatures of -162°C to 15°C. This is an expensive and carbon-intensive process that releases large amounts of cooling potential, or "cold energy", as waste.

Instead of wasting cold energy, SuperFreeze patented a process to regasify LNG and recycle cold energy for cooling warehouses to frozen, ultra cold (less than -20 °C) and cryogenic temperatures (-72°C to -60°C). This is used in South Korea and is now being implemented in Singapore. Tapping into the dormant utility of cold energy enable SuperFreeze to reduce the electricity consumption of its cold facilities by 75%, with no marginal carbon emissions.

Beyond cost and carbon, SuperFreeze's ultra-cold capabilities offer competitive services for food and pharmaceuticals. Traditional warehouses relying on electricity cannot provide ultra-low temperatures at scale or competitive prices. During the COVID-19 pandemic, SuperFreeze's warehouses emerged as the optimal storage solution for COVID-19 vaccines, especially those that needed to be kept at -80 °C to -30 °C. SuperFreeze's warehouses continue to store most of South Korea's COVID-19 vaccines.

Aiming to become Asia's largest cold chain provider, SuperFreeze is expanding to ports and logistic hubs across Southeast Asia. This innovative approach to harness the potential of waste has optimised resources, enhanced energy efficiency, and reduced carbon emissions in the cold chain.

.....

Key stats



250%

growth of ASEAN natural gas demand by 2040 as compared to 2017 rates.



potential reduction in global cold chain emissions through green upgrades.



reduction in SuperFreeze's electricity required for cooling versus comparable warehouses.

Xinterra

It is not just a T-shirt



It is transforming every thread
into a carbon sink

Activating Dormant Utility

This strategy is about uncovering the potential of seemingly dormant resources. By activating and unlocking their hidden potential, it reimagines the use of existing assets in innovative ways to serve new, often unexpected purposes.



Scan to discover more about
this and other Edges.

Global warming is nearing a critical tipping point, and the fashion industry is a significant contributor. It is responsible for about [6-8% of total global carbon emissions, amounting to 1.7 billion tonnes annually](#). Alarmingly, these emissions are projected to increase by [over 50% by 2030](#).

Xinterra is on a mission to turn every human being into a carbon capture agent through the clothes we wear. They have formulated a new liquid, COzTERRA, and invented a process to turn textiles into CO₂ absorbing agents.

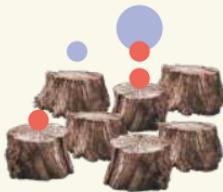
COzTERRA is a discovery of Xinterra Design Factory™ (XDF), which uses AI to increase the rate of discovery of materials by 10x. Upon exposure to air, COzTERRA absorbs CO₂. The captured carbon combines with common household detergent in the wash and is released as harmless minerals. The washed fabric is now ready to capture carbon again. A scalable solution for manufacturers to integrate into textile production and a simple solution for consumers to adapt.

A T-shirt treated with COzTERRA can capture between 16 and 41 grams of CO₂ while active – approximately 20 washes. On a larger scale, if a medium-sized textile company were to adopt this technology, they could produce 8 million T-shirts which can absorb up to 328,000 kg of CO₂. This is comparable to the [annual CO₂ absorption of 15,000 trees](#).

COzTERRA is just the start of what XDF can do. The firm reduced the time for new formulation discovery from the industry standard of 5 years to 11 months using AI. It aims to discover another 100 materials or formulations in the next 10 years. With the advent of better materials, this could accelerate the world towards a more sustainable future.

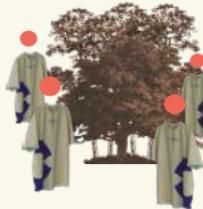
.....

Key stats



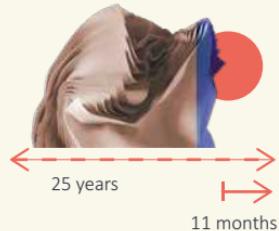
15b trees

cut down each year, necessitating the need for alternative source of carbon absorption.



16m trees

the equivalent amount of carbon absorbed by COzTERRA T-shirts if everyone in SEA's ~700m population wears one.



↑ AI R&D

XDF reduces the time taken to discover new materials from 25 years to 11 months.

Hijra

It is not just a
Shariah-compliant Fintech



It is designing products in line with
the values of their consumers

Refocusing on Humans

This strategy is about creating business value by elevating the traits that make us human. This approach realigns operations, products, and services with these traits – after all, humans are at the centre of all businesses. A refocus on these traits can help to inspire a future that is good for all.



Scan to discover more about
this and other Edges.

How can banks achieve higher repayment rates without charging high interest? One startup is appealing to people's moral and religious sensibilities.

Hijra, an Indonesian FinTech startup, is disrupting the field of social finance with its Shariah-compliant financing products by relying on non-punitive, non-interest based financing mechanisms. In Southeast Asia, Islam is the most widely practiced religion, with Muslims constituting 40% of the region's inhabitants. However, Shariah law prohibits interest (riba) which it deems exploitative, while prescribing that transactions be asset-backed. Indonesia's young Muslim population, averaging 23 years old, makes for fertile innovation at the intersection of Islamic finance and technology.

Hijra achieves an impressive 99.7% repayment rate on its Shariah-compliant financing. This has helped Hijra to grow rapidly into the largest Sharia-compliant FinTech startup within the US\$2.2 trillion Islamic finance market.

Beyond the Muslim population, Islamic finance offers consumers a choice to park their money in firms which do not invest in alcohol, gambling, and other activities deemed unethical by Shariah law. Hijra operates inclusively, serving non-Muslim customers on its deposit products and financing products. By adhering to inclusive Islamic finance principles, Hijra ensures its services are accessible to all, regardless of religious background. This demonstrates the broad potential and ethical appeal of Islamic and social finance models, more broadly, recentering on human morals to expand market access.

.....

Key stats



87%

Muslim population in Indonesia — the world's most populous Muslim majority nation.



US\$6.7 trillion

forecasted asset size of the global Islamic finance industry by 2027.

99.7%

repayment rate on Hijra's Shariah-compliant financing.



Jollibee

It is not just a fast food turnaround



It is serving joy to employees
and consumers

Refocusing on Humans

This strategy is about creating business value by elevating the traits that make us human. This approach realigns operations, products, and services with these traits – after all, humans are at the centre of all businesses. A refocus on these traits can help to inspire a future that is good for all.



Scan to discover more about
this and other Edges.

Jollibee Foods Corporation (JFC), also known as Jollibee Group, is one of the world's largest and fastest-growing restaurant companies with 6,900 stores in 32 countries across its 18 brands; its mission is to serve great tasting food, bringing the joy of eating to everyone.

As the COVID-19 pandemic ravaged the food and beverage sector, JFC had to adapt to a rapidly changing environment. Its approach? An Agile Transformation to rethink and redefine how they deliver value and joy to their consumers.

Part of this transformation is the formation of grassroots mission teams. These cross-functional, self-organised groups operate in sprints, using a test-learn-iterate approach to address organisational challenges, and empower employees to propose projects that further the company's mission, therefore encouraging them to develop new capabilities. These mission teams also provide JFC with market-ready prototypes that the organisation can test and scale.

Since the start of their transformation, JFC has initiated over 30 business missions, yielding over 100 prototypes led by over 194 talents. Along with business outcomes, this transformative journey is committed to make joyful experiences for consumers and each team member. It also created a movement within the organisation armed with enhanced readiness for disruption.

The transformation contributed to a record turnaround – especially in the Philippines, its home market – from a first-time loss in 2020 to two consecutive best-ever years for JFC – and a slew of accolades including recognition by Gallup, TIME Magazine, and Forbes.

JFC's Agile Transformation demonstrates how, with a powerful mission and a dedication to centring your people on joy, even the most challenging crises can become opportunities.

Key stats



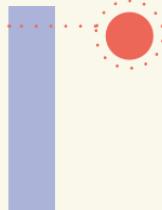
74th percentile

for employee engagement,
winning Gallup Exceptional
Workplace Award three times
(2020, 2023, 2024).



100+

prototypes created by JFC's
grassroots mission teams.



86th

Fortune's Southeast
Asia 500 list.

Nusantara

It is more than a new capital city



It is pioneering a loveable model
for urban transformation

Refocusing on Humans

This strategy is about creating business value by elevating the traits that make us human. This approach realigns operations, products, and services with these traits – after all, humans are at the centre of all businesses. A refocus on these traits can help to inspire a future that is good for all.



Scan to discover more about
this and other Edges.

Nusantara, Indonesia's new capital, aspires to be both a liveable and loveable city. Inspired by the DesignSingapore Council's study on [Loveable Singapore](#) and expanded globally with the [Deloitte Center for the Edge](#), the concept of a loveable city revolves around six human-centric aspects: inclusion, connection, attachment, stimulation, freedom, and agency. Although the city is slated for completion by 2045, the Nusantara Capital City Authority has already initiated several projects that embody these principles:

The "10-minute city" concept ensures residents can reach work or essential services within 10 minutes using mass transport, promoting freedom of movement, and stimulating smart city features.

Programmes like ["Coding Mum"](#) and ["Coding Difabel"](#) enhance inclusion by introducing programming skills to mothers and individuals with disabilities, opening new avenues for growth.

Nusantara aims to preserve [75% of the area as a production forest](#), with the potential to offer unique attractions like forest bathing, which reduces depression and enhances mental well-being.

Connection and community are fostered by integrating local wisdom and culture into daily life. The ["Solar Mum"](#) programme empowers communities to adopt renewable energy, providing them a sense of agency and participation in sustainable practices.

Key stats



↓ **2/3**

per passenger per kilometre of transport carbon footprint that can be reduced with public transport.



↓ **12°C**

temperature reduction provided by tree cover in urban spaces.



40%

higher risk of depression in cities compared to rural areas.

Tsao Pao Chee

It is not just a wellness business



It is recentring on human needs

Refocusing on Humans

This strategy is about creating business value by elevating the traits that make us human. This approach realigns operations, products, and services with these traits – after all, humans are at the centre of all businesses. A refocus on these traits can help to inspire a future that is good for all.



Scan to discover more about
this and other Edges.

Wellness is moving from niche to norm, with corporate wellness expanding from physical health to mental well-being. The next shift is to spiritual well-being, fuelled by younger generations' emphasis on purpose. 89% of millennials and 86% of Gen Zs find a sense of purpose essential for job satisfaction and well-being.

Tsao Pao Chee (TPC) is an international shipping conglomerate led by Chavalit Frederick Tsao. Convinced of well-being's importance, he expanded TPC's core business into the well-being economy by establishing three arms: Octave Living, Octave Institute, and Octave Well-being Economy Fund. TPC's corporate philanthropy includes three non-profits: OCTAVE Institute, No.17 Foundation, and Restore Nature Foundation, which focus on human relationships, collaboration, and nature respectively.

Octave Living's flagship offering, Sangha Resort, is a six-star holistic well-being community that blends ancient healing practices with modern medicine. TPC extends its wellness commitment to employees, offering well-being services and mindful retreats. Over 800 TPC employees have benefited, with nearly 500 completing an eight-day mindful living retreat.

With Octave Living's success, TPC now helps other corporations support their employees. The Octave Institute offers organisational development, consultancy and leadership transformation through mindful living and learning. Finally, the Octave Well-being Economy Fund has invested US\$320 million in companies aligned with their well-being mandate.

By recentring on human needs, TPC has built a well-being ecosystem that creates wealth while doing good.

Key stats



260m

people in SEA are living with mental health conditions.



>80%

89% of millennials and 86% of Gen Zs say that a sense of purpose is important for their job satisfaction and well-being.



\$7.25b

projected global revenue from meditation apps.

Growsari

It is not just digitising a
traditional sector



It is leveraging the power
of the collective

Unlocking Market Power

This strategy explores the unseen or neglected corners of the market landscape, identifying opportunities where others see none. By pioneering new concepts or leveraging innovative mechanisms, it unlocks the latent power of markets, creating value where it was previously overlooked or deemed impossible.



Scan to discover more about
this and other Edges.

Sari-saris (mom-and-pop stores) are at the centre of the Philippines' grassroots economy. The country's 1.3 million sari-saris accounted for [41% of national Fast-Moving Consumer Goods \(FMCG\) sales in 2022](#), and over 90% of its micro, small and medium enterprises (MSMEs). However, each store purchases an average of only around PHP500 (around US\$40) of inventory, limiting their bargaining power with distributors.

Growsari is a B2B ordering and store solution platform that provides the infrastructure for sari-sari store owners to grow their businesses. By consolidating a suite of products and services, Growsari connects suppliers, service providers, and sari-sari stores.

Due to its focus on players overlooked due to their small size, Growsari was also able to unveil new business units around shared infrastructure, namely Sarimart and Saripay. These services were part of Growsari's expanded vision to transform sari-saris from simple FMCG outlets to comprehensive service hubs for the nation's communities.

Through Sarimart, sari-sari stores can double their earnings through accessing almost 1,000 products from 85 FMCG brands and free delivery right to their doorsteps. On the other hand, Saripay, an independent financial services company, provides support to MSMEs with working capital loans, cash management, remittances, and similar products. Growsari also offers different e-services through eNegosyo, such as top-ups to various e-wallets and prepaid phone services, as well as bill settlement.

Growsari's business model unlocks the market power of over 100,000 sari-saris to benefit everyone in the ecosystem – FMCGs, Growsari, end-customers, telcos, and other vendors.

Key stats



Up to 100%

increase in profits per item of sari-sari stores with GrowSari.



90%

of MSMEs in the Philippines are sari-sari stores.



100k

active users, which is 10% penetration of the total sari-sari market.

Inspirasi

It is not just quality
affordable education



It is a virtuous spiral that
doubles impact at every turn

Unlocking Market Power

This strategy explores the unseen or neglected corners of the market landscape, identifying opportunities where others see none. By pioneering new concepts or leveraging innovative mechanisms, it unlocks the latent power of markets, creating value where it was previously overlooked or deemed impossible.



Scan to discover more about
this and other Edges.

As the son of a doorman and having worked across Indonesia, Jaspal Sidhu recognised the need for affordable schools in a country consistently ranked at the bottom 10% of OECD's PISA rankings of global education systems.

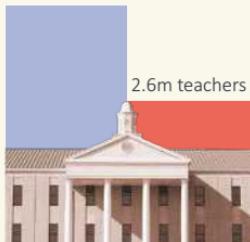
Jaspal's experience as a businessman allowed him to recognise the power of enterprise to achieve scale, quality, and sustained impact. He pioneered the 'Half-Fee' model, reducing school fees by half from the average of top-tier institutions with each new school launched in a new city to broaden access. To ensure no school within the network operates in isolation, Jaspal conceived a collaborative ecosystem powered by technology. In 2019, the World Bank (IFC) and Financial Times (UK) acknowledged his transformative work with a global award. Today, his group operates 15 campuses under the SIS' brand in Indonesia, India, and Myanmar, each impacting nearly 3,000 individuals.

Determined to further reduce fees, Jaspal launched 'Inspirasi' in 2024, a brand for emerging cities in Indonesia. Fees are set at no more than US\$2,000, and the schools employ teachers from local communities. With Deloitte, he created a unique playbook for hiring and training teachers, incorporating modern HR practices from outside the education industry. A key insight from this partnership was the mantra "Hire for Attitude and Train for Skills".

Inspirasi drives social equity by delivering quality education to emerging cities, empowering local teachers through innovative training, fostering vibrant communities, and unlocking every child's limitless potential, transforming lives and futures.

Key stats

50m students



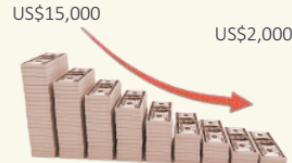
250,000

schools, making Indonesia the 4th largest education pool in the world.



+8-10%

typical raise of an individual's earnings with each additional year of schooling (with larger increases for women).



87%

reduction of tuition fees with Inspirasi's 'Half-Fee' model.

Jasberry

It is not just reinventing
the rice grain



It is creating a virtuous wealth cycle for
farmers and markets

Unlocking Market Power

This strategy explores the unseen or neglected corners of the market landscape, identifying opportunities where others see none. By pioneering new concepts or leveraging innovative mechanisms, it unlocks the latent power of markets, creating value where it was previously overlooked or deemed impossible.



Scan to discover more about
this and other Edges.

While rice remains a staple for more than half the world's population, its margins are low for the over 4.3 million Thai households involved in rice cultivation. White rice is also high in sugar, and each daily serving correlates with an 11% higher chance of developing type 2 diabetes.

Enter Jasberry rice, the grain from Jasberry Co., Ltd. which is both nutritious for consumers and uplifts the lives of farmers growing it. Jasberry rice is a superfood crossbred through 12 years of research, boasting over 40 times the antioxidants of brown rice and four times the antioxidants in quinoa.

To uplift farmers, Jasberry Co., Ltd. provides rice cooperatives with Jasberry seeds and teaches them organic farming practices. As Jasberry rice is 25% less water-intensive than normal rice, operational costs are reduced. Furthermore, microloans, facilitated through a partnership with online lending platform Kiva, support farmers in procuring organic fertilisers and diversifying into livestock, yielding up to 30% profit within a year.

Following the harvest, Jasberry farmers keep 25% for personal consumption so their families can have better health. Jasberry Co., Ltd. then purchases the rest at up to 200% more than the rate for conventional rice. These grains are packaged and redistributed through its 1,600 channels, with the largest market in the US where the organic food market is valued at US\$173 billion.

By tapping into demand for healthier food, Jasberry creates a sustainable market to achieve its social mission, with a remarkable 14 times increase in daily pay for its farmers from US\$0.40 to US\$5.80.

Key stats



30%

of the world's rice fields are in SEA.



US\$530b
size of the global organic foods
market by 2032, Compound
Annual Growth Rate of 13%



0 to 1600

Jasberry retail store distribution channels in a year

PCX Markets

It is not just reducing plastic waste



It is applying market principles
to scale environmental impact

Unlocking Market Power

This strategy explores the unseen or neglected corners of the market landscape, identifying opportunities where others see none. By pioneering new concepts or leveraging innovative mechanisms, it unlocks the latent power of markets, creating value where it was previously overlooked or deemed impossible.



Scan to discover more about
this and other Edges.

The world faces a severe plastic pollution crisis, especially in Southeast Asia, where [11.7 million metric tonnes of plastic waste](#) is produced annually. Clean-ups, though well-intentioned, cannot match the pace of plastic pollution, which is [expected to double](#) through 2050.

To address this, PCX encourages responsible plastic waste management by leveraging market mechanisms. PCX Markets is a marketplace for funding projects that divert and responsibly process plastic that would otherwise end up in the natural environment.

PCX helps plastic producers kickstart their plastic responsibility strategy by auditing their plastic footprint to inform the volume of plastic waste recovery they should support. On the supply side, projects which divert plastic from the natural environment can apply to be listed. PCX screens for projects that go beyond cleanups to process waste through recycling, upcycling or energy recovery, ensuring plastic does not end up in nature or unmanaged landfills. Project impact is audited by independent verification bodies, which then issue plastic credit certificates. Projects set the price of their credits based on costs.

Companies purchase credits to mitigate plastic pollution and build processing capacity, with each credit representing the diversion of one tonne of plastic waste from nature. Through PCX Markets, 100 million kilograms of plastic have been diverted across 11 countries.

One of PCX's project partners is Ailing Tindera, a community waste-to-cash initiative which has recovered approximately 4 million kilograms of plastic. This programme empowers women micro-entrepreneurs to collect post-consumer plastic waste. In sorting and selling plastic, these women experience an average monthly income increase of 48%.

Key stats



100m kg

of plastic waste diverted from nature by PCX.



85%

of all marine litter is plastic. This will nearly triple by 2040.

Global plastic waste



46%

of global plastic waste is landfilled, while 22% is mismanaged and becomes litter.

A Little Wild

It is not just a regenerative farm



Photo by Samuel Goh

It is farming that works with
nature, not against it

Establishing Regenerative Systems

This strategy is about uncovering the untapped potential of seemingly dormant resources. By activating and unlocking their hidden potential, it reimagines the use of existing assets in innovative ways to serve new, often unexpected purposes.



Scan to discover more about
this and other Edges.

Modern agriculture has [degraded about 75% of Earth's land areas](#), due to industrial farming practices. For example, monocropping – the practice of planting the same crop repeatedly on a piece of land – depletes nutrients, necessitates extensive pesticide and fertiliser use, and replaces diverse ecosystems. This results in an [estimated 60% decline](#) in vertebrate species richness compared to natural forests.

And yet, this does not have to be. Regenerative farms can be [78% more profitable](#) than conventional farms, despite being 29% less productive on average, due to lower agricultural inputs and higher selling prices. Imagine a commercial farm that is as lush and regenerative as a rainforest, thriving above the surface and rehabilitating soil fertility deep underground without pesticides, irrigation, or fertilisers.

This concept is a reality at A Little Wild (ALW), Southeast Asia's first commercial Syntropic Agroforestry farm. Since 2020, the team has transformed 10% of a 138-acre oil palm plantation with encouraging results – restored plots have captured double the carbon compared to areas planted in oil palm.

ALW integrates syntropic agroforestry, planting diverse trees to mimic natural forest layers, regenerative agriculture, improving soil health using natural methods such as covering soil with organic matter, and permaculture, which is a design methodology to create closed loop systems for resilience and self-sufficiency. These practices merge indigenous knowledge with scientific rigour, enhancing farming techniques despite climate challenges.

Moreover, ALW is transforming into a fruit forest that supports local communities. Partnering with the Global Peace Foundation, it helps the Orang Asli community in Rompin District, Malaysia shift from monoculture to diversified, resilient agriculture, improving food security and empowering sustainable development.

Key stats



US\$809b

in GDP contribution of the agri-food sector across the above countries in 2021.



↑ Up to 78%

more profitable than conventional farms.



~75%

Earth's land areas degraded due to arable land misuse and conventional farming.

GINLEE

It is not just a fashion brand



It is challenging fast fashion culture with circularity

Establishing Regenerative Systems

This strategy is about uncovering the untapped potential of seemingly dormant resources. By activating and unlocking their hidden potential, it reimagines the use of existing assets in innovative ways to serve new, often unexpected purposes.



Scan to discover more about this and other Edges.

Fast fashion has been a major driver of textile waste, creating a culture of overconsumption and overproduction. In contrast, designer womenswear label GINLEE embraces 'slow fashion' and 'Making Fashion That Matters'. Initiatives like the Get Order on Demand (G.O.O.D) programme and _/\V\ake experience aim to push for the fashion industry to 'slow down'.

Slow, circular fashion is fast catching on. [45% of millennials and Gen Z](#) say they refuse to buy from non-sustainable brands and retailers. The secondhand market is expected to be [2x larger than fast fashion by 2030](#).

GINLEE also offers a unique _/\V\ake experience, which allows customers to customise merchandise on demand in store. Templatized products are sourced locally and in small batches to minimise waste. These are then pleated and coloured based on consumer preferences, either by the staff or by the customers themselves. This experience enhances consumer attachment to the products, promoting intentional purchases over impulse buying, and reducing the likelihood of early disposal.

GINLEE also extends product life through repair services, and repurposes other products at the end of their life cycles. At their workshop studio MAKE O, they reduce waste going to landfills by reusing off-cuts, and adopting repair and upcycling techniques. The Tee-to-Bag initiative, a flagship project under MAKE O, repurposes discarded t-shirts into stylish bags, extending the life of materials that would otherwise contribute to landfill waste.

Such initiatives question the norms of fast fashion culture, challenging us to rethink our relationship to the clothing we wear.

.....

Key stats



US\$52b

projected revenues of the apparel market in SEA.



>US\$500b

yearly economic opportunity lost due to lack of recycling and clothing utilisation.



#1: Long lasting

Consumers value durability and repairability when making a purchase.

Potato Head

It is not just a resort



It is pioneering a new template for
regenerative tourism

Establishing Regenerative Systems

This strategy is about uncovering the untapped potential of seemingly dormant resources. By activating and unlocking their hidden potential, it reimagines the use of existing assets in innovative ways to serve new, often unexpected purposes.



Scan to discover more about
this and other Edges.

The hospitality industry is a big waste generator, producing [more than 1kg of waste per guest daily](#). Bali's Potato Head resort stands out through its commitment to regeneration. The resort has cut landfill waste within its compound from 50% of total waste to less than 3% by recycling, composting, and upcycling. In its boutique, the Circle Store, Potato Head sells products like caps made from recycled cotton and off-cuts from Indonesian garment factories. Much of its furniture and amenities are made from upcycled waste collected from the resort.

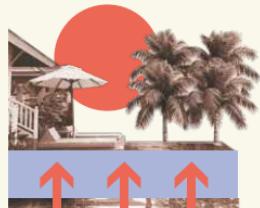
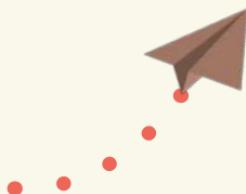
One resort's commitment is not enough – [1.6 million tonnes of waste is produced yearly](#) in Bali, 303,000 tonnes of which is plastic. Potato Head is leading the change by building the first Collective Waste Centre (Wasted Suwung). With this shared facility, other Bali resorts benefit from Potato Head's zero-waste expertise and can turn their trash into treasure.

In the spirit of regeneration, Potato Head goes beyond reducing harm by uplifting surrounding communities. The resort supports local farmers by buying organic rice directly. This eliminates the need for intermediaries, so that profits can go straight to the farmers. Guaranteed purchases give farmers a stable income, enabling land ownership and sustainable farming practices. Potato Head ensures that most of these benefits go directly to the local community as 99% of their suppliers are Indonesian, of which approximately 70% are Balinese.

In the past 6 years, Potato Head has attracted over 2 million visitors, attained the B Corp certification for meeting high standards of social and environmental impact, and earned the distinction of being the only Balinese hotel listed among the World's 50 Best Hotels. This shows doing good and doing well are not mutually exclusive.

.....

Key stats



64% / 63%

of Gen Zs and millennials, respectively, are willing to pay more for sustainable products and services.

US\$38b

expected market volume of the travel and tourism market in SEA in 2028.

~5%

size of premium that customers are willing to pay for 'green' hotels.

Crown Digital

It is not just coffee



It is transforming tradition through
constant experimentation

Tinkering First-Hand

To ideate new strategies, getting hands-on is an often overlooked part of the process. Through direct experimentation, first-hand experience and iterative learning pave the way for breakthroughs that could never have been predicted.



Scan to discover more about
this and other Edges.

Keith Tan, the owner of Crown Coffee, faced a common challenge in the F&B industry. Despite having a high-tech coffee machine and high-quality Buscaglione coffee beans from Italy – he lacked one crucial ingredient, manpower.

With no prior experience in robotics, Keith transformed his traditional café into a vertically-integrated, full stack robotics and AI company. This journey started when he experimented with programming a collaborative robot that could handle tasks like picking up a chocolate croissant. Further tinkering led to the development of Ella, a robot barista.

Crown Coffee was then transformed into Crown Digital, with Ella being able to serve up to 200 cups of coffee per hour – quadrupling the output of a typical human barista. This is done without compromising on quality or affordability – a latte by Ella is priced at around US\$3.50, compared to US\$5 at typical cafés. More than just a robotic arm, Ella is part of an integrated ecosystem featuring a mobile app, payment gateway, e-wallet, AI-enabled vision system for operational monitoring, and advanced analytics for supply chain optimisation.

Crown Digital's commitment to innovation has led to numerous updates to Ella, with six version upgrades in five years. Since Version 3, Crown Digital's modular design allows new capabilities to be added instantly. The latest addition, through a partnership with Hong Kong's Wada Foodtech, is a freshly cooked hot bento system, the first of its kind globally. Now, Ella has served 500,000 cups of coffee at hospitals, an airport, subway stations, and corporate offices. Keith's journey from a traditional café owner to a tech company owner highlights the power of tinkering, experimenting, and building to remain at the forefront.

Key stats

Market growth (US\$)



US\$510M

projected value of the Food Industry robotics market by 2028.



20-30%

rate of understaffing of F&B outlets in Singapore.



25-30%

hike in service crew wages, yet manpower crisis remains for F&B brands in Singapore.

eFishery

It is not just an
aquaculture unicorn



It is tinkering first-hand to
unlock a new market

Tinkering First-Hand

To ideate new strategies, getting hands-on is an often overlooked part of the process. Through direct experimentation, first-hand experience and iterative learning pave the way for breakthroughs that could never have been predicted.



Scan to discover more about
this and other Edges.

Gibran Hufaizah's path to establishing the world's first aquaculture unicorn valued at US\$1.4 billion, eFishery, started at the Bandung Institute of Technology. From an aquaculture class, he was inspired by the industry's potential and rented a pond to farm catfish. This first-hand experience as a catfish farmer gave him valuable insights into the industry.

He discovered that profits were meagre due to high feeding costs (feed accounts for 70% to 90% of total costs), improper feeding practices (hand feeding led to under- and overfeeding), and a poor grasp of feeding time. To address this, he created the eFeeder, an IoT device that ensures optimal feed amounts and timing. This increased feed efficiency by up to 30% and saw farmers' income increase by up to 45%.

Hufaizah did not stop at the eFeeder. His understanding of the industry helped him recognize other challenges, such as excessive middleman fees and financial inaccessibility. He expanded eFishery's offerings through eFisheryKu and eFarm. These platforms sell feeds and connect fish and shrimp farmers, respectively, with B2B buyers to cut out the costs of middlemen. Additionally, eFishery's Kabayan offers a credit scheme to purchase feed and fish for business expansion. These other business offerings are now significant contributors to this aquaculture unicorn that made US\$266 million in revenue in 2022.

eFishery is set to boost productivity in Indonesia's aquaculture sector, supporting the country's ambitious goal to [export US\\$7.2 billion worth of fishery products by end 2024](#). This impressive success began with a founder whose first-hand experience as a catfish farmer enabled him to make a big splash in a market he understood intuitively.

Key stats

Fish & seafood market



44b kg

of global fish & seafood estimated to be produced by 2029.

2.9kg CO₂ equivalent



30kg CO₂ equivalent



Lower carbon footprint

CO₂ equivalent for every kilogram of edible parts for fish versus cattle.



22m tonnes

of fish production in 2021 makes Indonesia the 2nd largest fish producer.

Toyota Mobility Foundation

It is not just electric vehicles



It is establishing a smart
transportation ecosystem

Tinkering First-Hand

To ideate new strategies, getting hands-on is an often overlooked part of the process. Through direct experimentation, first-hand experience and iterative learning pave the way for breakthroughs that could never have been predicted.



Scan to discover more about
this and other Edges.

The world's cities are growing fast. Today, 56% of the world's population – 4.4 billion people – live in cities, and this number is expected to double by 2050. As urban populations boom, we need new solutions to move people efficiently. Imagine a future where mobility is seamless, sustainable, and designed by the communities it serves. The Toyota Mobility Foundation (TMF) is making that vision a reality. It empowers local communities to design sustainable mobility solutions. TMF collaborates with local talent – residents, governments, and businesses – to create solutions that address local needs.

SMART @Ubud is a shining example. Co-developed with Deloitte Future of Mobility Solution Centre, TMF's fully-funded Sustainable Mobility Advancing Real Transformation (SMART) programme developed mobility solutions and sustainable business models for the local context. TMF established relationships with the community to understand its mobility issues. It then deployed app-based electrified vehicle (xEV) shuttle services and real-time bus schedule displays, iteratively developing processes which resolved issues as they arose.

Over nine months, the trial served 20,000 customers, achieving improved customer satisfaction with an average rating of 4.8 out of 5.0. The programme reduced congestion by removing 7,000 vehicles from Ubud's roads, cutting approximately 51 tonnes of CO₂ emissions annually. An 80% increase in the willingness to use public transport was also achieved due to bus schedule displays.

TMF empowers communities by engaging with them for capacity building, sharing learnings, building capabilities, and leaving a legacy, enabling Ubud to chart its own course towards a greener future. This exemplifies the power of collaboration: communities becoming architects of their own sustainable mobility revolutions.

Key stats



78%

of urban areas analysed saw an increase in global traffic.



51.6%

of the global urban population has convenient access to public transport.



23%

of global greenhouse gas emissions come from the transport sector, with road transport accounting for around 77% of these emissions.

VinAI

It is not just an AI R&D company



It is a beacon of innovation

Tinkering First-Hand

To ideate new strategies, getting hands-on is an often overlooked part of the process. Through direct experimentation, first-hand experience and iterative learning pave the way for breakthroughs that could never have been predicted.



Scan to discover more about
this and other Edges.

As AI reshapes the world, countries are racing to lead the AI revolution. Bridging the gap between research and real-world application remains a formidable challenge. One Southeast Asian AI R&D lab is making headway on this front.

Founded in 2019 as a subsidiary of VinGroup, VinAI has rapidly risen to global prominence. Thundermark Capital ranked VinAI among the [top 20 AI R&D labs](#) worldwide, as the only Southeast Asian firm to rank so highly. The firm has published over 160 research papers, filed 69 patents, and nurtured AI talents through its residency programme.

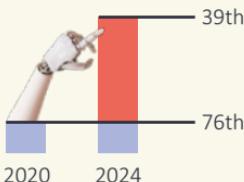
VinAI, strategically positioned in Vietnam and Southeast Asia, is playing an active role in this transformation, creating technologies for the safe and responsible use of AI. In smart mobility, VinAI's products are enhancing driver safety, comfort and convenience.

Inventions such as InteriorSense can monitor the driver to ensure their attention remains on the road, while MirrorSense automatically adjusts car mirrors based on eye position, helping VinAI win the [2024 CES innovation award](#).

In the field of Generative AI, VinAI has developed solutions that make generative AI accessible, efficient and reliable for everyone. Examples include PhoGPT (the first open-source Large Language Model designed for nuances in the Vietnamese language), a private AI-powered enterprise search, and many more.

By translating cutting-edge AI research into practical solutions, VinAI is setting new standards for the industry.

Key stats



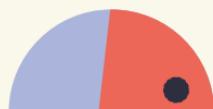
39th

Vietnam's 2024 global ranking for AI readiness after the launch of Vietnam's National Strategy for Artificial Intelligence in 2021.



+ US\$1 trillion

potential impact of AI on SEA economy by 2030.

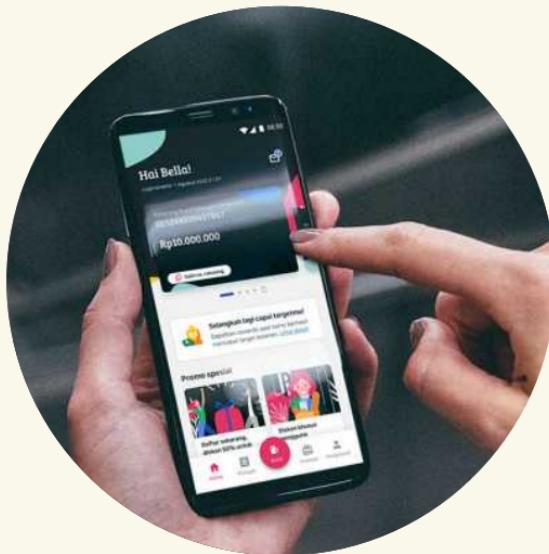


46%

of firms that had implemented AI globally only provided AI to a small minority (<20%) of employees.

audax

It is not just a corporate venture



It is innovating new business
models from the edges

Innovating from the Tech Edges

Directing resources to the fringes of a business targets low-investment, high-growth opportunities. This approach has the potential to reshape and transform the entire organisation. Here, the spotlight is on the edge ideas which leverage technological frontiers.



Scan to discover more about
this and other Edges.

Can a 170-year-old bank maintain its innovative edge and transform its business model from within?

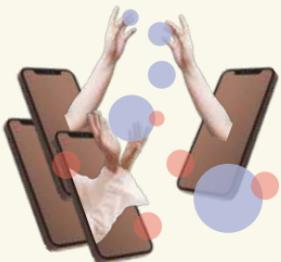
audax began as an idea by intrapreneur Kelvin Tan at Standard Chartered (SC) to grow its retail and SME segments without heavy investment in physical infrastructure. Recognising that over 70% of Southeast Asia's population is unbanked yet actively transacts online, he built SC nexus, a white-label plug-and-play Banking-as-a-Service (BaaS) offering incubated at SC Ventures, the Bank's innovation, fintech investment and ventures arm. Later, SC Ventures launched audax, with Kelvin as CEO.

audax offers a plug-and-play digital banking platform with modularised capabilities for digital banking, BaaS, and modernisation of existing infrastructure, reducing launch time from 3-5 years to 6-9 months. One example is BukaTabungan, a digital banking service in Indonesia. audax powered SC's partnership with commerce company Bukalapak to provide digital banking to Bukalapak's ecosystem of more than 110 million users and 20 million business owners. This partnership tripled SC's customer base in Indonesia within six months at a fraction of the original acquisition costs, with 98% of BukaTabungan's customers being first-time users of SC services.

This idea not only spun off a successful venture, but also digitally transformed the bank from within. And it all started with intrapreneur Kelvin's observation of what was happening on the edges.

.....

Key stats



440m

wallets in use across SEA by 2025, the fastest growing mobile wallet region.



311%

growth of digital wallet usage between 2020 and 2025 across SEA.



Physical bank branches

and scaling up of digital banking as coverage of mobile networks expand in developed countries.

NUHS

It is not just adopting
new technologies



It is reimagining the operating
model of your industry

Innovating from the Tech Edges

Directing resources to the fringes of a business targets low-investment, high-growth opportunities. This approach has the potential to reshape and transform the entire organisation. Here, the spotlight is on the edge ideas which leverage technological frontiers.



Scan to discover more about
this and other Edges.

The National University Health System (NUHS) is an academic health system of the future. Its flagship hospital, the National University Hospital, is the first hospital with a Hybrid Enterprise-Grade 5G network in Asia Pacific. NUHS has its own locally-trained Large Language Model, houses the first supercomputer in Singapore's healthcare sector, and is a global pioneer in Holomedicine as one of three Holomedicine Centres of Excellence worldwide.

More important is the impact of these technologies. Like Minority Report's "Precrime" police, NUHS uses its supercomputer, "PreScience," to predict patient health trajectories and recommend interventions before conditions deteriorate. At the touch of a button, doctors can access diagnosis recommendations, summarise patients' case notes, and write referral letters. This not only improves diagnosis quality; doctors can focus on patient care.

As part of the Holomedicine Programme, NUHS surgeons across nine specialties can use mixed-reality headsets and AI-rendered 3D scans to conduct surgeries with near pinpoint precision, even visualising tumours invisible to the naked eye. This reduces potential complications and risk, as well as operation and recovery times. The next frontier is digital twins: virtual 3D anatomical and functional replicas of patients' internal organs, personalised with their specific biomechanical data. This is used to precisely predict healthcare outcomes.

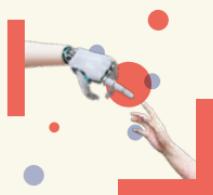
NUHS' progress is the result of collaboration across different workstreams, powered by a 50-member strong tech team comprising surgeons, data scientists, network architects, and other diverse tech talents. The team constantly tinkers with a range of technologies, but what ultimately sets them apart is their willingness to experiment in a traditionally risk-averse industry. Their mission? To make medicine predictive, precise, and personalised.

Key stats



US\$188b

value of global healthcare AI market by 2030.



72%

of organisations' trust in AI has risen since 2022.



1 of 3

global Holomedicine Centres of Excellence worldwide (Singapore, US, and Germany).

Ricul

It is not just an app for farmers



It is putting the power of AI and satellite technologies in their hands

Innovating from the Tech Edges

Directing resources to the fringes of a business targets low-investment, high-growth opportunities. This approach has the potential to reshape and transform the entire organisation. Here, the spotlight is on the edge ideas which leverage technological frontiers.



Scan to discover more about this and other Edges.

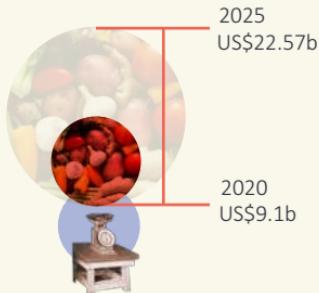
80% of the world's poor live in rural areas, mainly relying on farming for their livelihood. Without income statements and collaterals, smallholder farmers are often ineligible for bank loans, preventing them from obtaining useful tools and technologies.

Ricult has developed an innovative solution using satellite imaging to help banks assess farmers' creditworthiness, facilitating over US\$1 million in loans. Their AI-based Crop Scan uses deep learning to analyse satellite imagery of farmers' holdings. The model generates detailed profiles of the farmland, including information on crop types, growth stages, and estimated harvests, to determine credit risk. This credit score allows banks to make informed lending decisions, enabling farmers to access the loans they need. Additionally, Ricult uses farm data to predict farmers' financial needs, allowing banks to design products better suited to farming cycles, in turn creating greater financial access for farmers.

The Ricult Farmer app provides smallholder farmers with free access to localised weather data, farm advisory, and farm health monitoring via satellite imagery. As a result, farmers can time their planting, fertilising, and harvesting to maximise agricultural productivity. Ricult also connects farmers with mills and input companies, earning commissions from loans and offtake agreements to sustain their business model.

With over 800,000 downloads, Ricult has been a gamechanger for farmers and agricultural stakeholders in Thailand. By using technology to address a gap in information, Ricult has created a win-win situation for banks and farmers.

Key stats



**More than 2x
in 5 years**

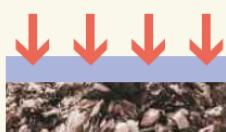
expected rise in the global market value of Agtech.

**Agriculture 2-4x
more effective**

in reducing poverty than other sectors with equivalent investment levels.

~30%

remaining improvement potential for key crops yield.



UrbanMetry

It is not just property data



It is a catalyst for urban
transformation

Innovating from the Tech Edges

Directing resources to the fringes of a business targets low-investment, high-growth opportunities. This approach has the potential to reshape and transform the entire organisation. Here, the spotlight is on the edge ideas which leverage technological frontiers.



Scan to discover more about
this and other Edges.

What do Nasi Lemak and artisan cafes have to do with urban development? Plenty, according to UrbanMetry.

Developing cities in Southeast Asia offer immense opportunities, but can also come with significant challenges. Government capacity gaps in the region make it difficult to obtain reliable data across the region's diverse cultural and physical landscapes, stymying investment in the region.

That's where UrbanMetry comes in. Founded in Malaysia, UrbanMetry uses novel indicators to track urban lifestyle patterns, unlocking opportunity for real estate investors. Take the Nasi Lemak Map, for example. Generated using analysis of geospatial data, it reveals deeper insights into the distribution of halal and non-halal eateries, mirroring the ethnic and cultural landscapes of Greater Kuala Lumpur. Similarly, the Cafe Index tracks artisan coffee shops to provide another datapoint for investors.

Its groundbreaking climate risk assessment project exemplifies the transformative impact of data. By mapping areas across Malaysia prone to landslides and floods, and overlaying this with mortgage data, they provide a comprehensive risk evaluation for properties. This aids banks in stress testing and sustainability planning, offering detailed insights with their 2030 sea level rise risk map. This project not only identifies potential hazards but also guides future urban planning and disaster mitigation. This is just one way UrbanMetry is building more resilient cities.

Beyond assisting property developers, governments, and banks, UrbanMetry aspires to empower end-consumers to make better-informed choices. Their work paves the way for smarter, more inclusive cities, demonstrating the profound impact of innovative data analytics on urban planning and housing affordability.

Key stats



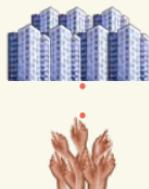
~70%

of the global population will reside in urban areas by 2050.



Below 80th percentile

rank of most developing countries in World Bank's data capabilities metrics, highlighting a significant gap in data capabilities.



25,816 units

Malaysia's residential oversupply in 2023, with Perak's overhang surging 98.9%.

Deloitte.

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms, and their related entities (collectively, the "Deloitte organization"). DTTL (also referred to as "Deloitte Global") and each of its member firms and related entities are legally separate and independent entities, which cannot obligate or bind each other in respect of third parties. DTTL and each DTTL member firm and related entity is liable only for its own acts and omissions, and not those of each other. DTTL does not provide services to clients. Please see www.deloitte.com/about to learn more.

Deloitte Asia Pacific Limited is a company limited by guarantee and a member firm of DTTL. Members of Deloitte Asia Pacific Limited and their related entities, each of which is a separate and independent legal entity, provide services from more than 100 cities across the region, including Auckland, Bangkok, Beijing, Bengaluru, Hanoi, Hong Kong, Jakarta, Kuala Lumpur, Manila, Melbourne, Mumbai, New Delhi, Osaka, Seoul, Shanghai, Singapore, Sydney, Taipei and Tokyo.

This communication contains general information only, and none of DTTL, its global network of member firms or their related entities is, by means of this communication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

No representations, warranties or undertakings (express or implied) are given as to the accuracy or completeness of the information in this communication, and none of DTTL, its member firms, related entities, employees or agents shall be liable or responsible for any loss or damage whatsoever arising directly or indirectly in connection with any person relying on this communication.

None of DTTL, its member firms, related entities, employees or agents shall be responsible for any loss or damage whatsoever arising directly or indirectly in connection with any person relying on this communication.