Impact Reimagined

Voices of the Next Generation for Sustainability

Volume 2 Economies and Systems

Foreword by
Chavalit Frederick TSAO
TAI Sook Yee

Edited by
TAI Sook Yee
Lawrence LOH
ANG Hui Min

February 2026

WEGA
WELL-BEING AND EESG ALLIANCE

TPC

NO.17 FOUNDATION

NUS National University of Singapore
Centre for Governance and Sustainability
NUS Business School

Editors

TAI Sook Yee
Chair, NO.17 Foundation
Advisory Board Chair, Well-being and EESG Alliance

Lawrence LOH
Director, Centre for Governance and Sustainability,
National University of Singapore Business School
Executive Director, Well-being and EESG Alliance

ANG Hui Min
Communications Lead, Centre for Governance and Sustainability,
National University of Singapore Business School

Essay Authors

As listed in the essays.

Editorial Assistants

GOH Boon Hao
LIM Hui En
Lauren TAN Le En

Publishers

The e-book "Impact Reimagined: Voices of the Next Generation for Sustainability" is a joint publication by the Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation and the Centre for Governance and Sustainability at the National University of Singapore Business School. Published in February 2026, it consists of three volumes:

- Volume 1: Climate and Nature
- Volume 2: Economies and Systems
- Volume 3: Well-being and Humanity

About Well-being and EESG Alliance (WEGA)

The Well-being and EESG Alliance (WEGA), where EESG stands for Economics, Environmental, Social and Governance, is jointly established by TPC (Tsao Pao Chee) and the Centre for Governance and Sustainability at the National University of Singapore (NUS) Business School. Established in 2024, it aims to drive corporate sustainability, governance and well-being research focused on Asia. Additionally, it aims to foster a community of practitioners subscribing to the Asian sustainable well-being approach.

Learn more about WEGA at https://bschool.nus.edu.sg/cgs/wega.

About TPC (Tsao Pao Chee)

TPC (Tsao Pao Chee) is a fourth-generation family business holding company headquartered in Singapore that is committed to empowering the Well-being and happiness economy. TPC does this by supporting global connectivity and resilience through its supply chain and logistics activities, and well-being-focused activities aimed at fostering individual and collective growth. TPC's purpose-led Well-being business ecosystem comprises IMC Industrial, OCTAVE, and multiple non-profit organisations, including NO.17 Foundation, OCTAVE Institute, and Restore Nature Foundation, which operates in unity to add value to life. TPC has corporate offices in the People's Republic of China, Thailand, Indonesia, and Japan. Find out more about TPC (Tsao Pao Chee) at tsaopaochee.com and on LinkedIn.

About NO.17 Foundation

NO.17 Foundation is the nexus of capital, consciousness, and collaboration in the Well-being Era — the philanthropic heart of TPC (Tsao Pao Chee). Rooted in SDG 17: Partnerships for the Goals, NO.17 unites values-aligned funders, partners, and changemakers to catalyse systemic transformation. Through trust-based giving, regenerative coalitions, and strategic ecosystem building, we activate new forms of capital — financial, social, cultural, spiritual, institutional, ecological, and human — as a force for collective flourishing. Explore our movement to make philanthropy as a field of love for transformation at https://17foundation.org/ and on LinkedIn.

About Centre for Governance and Sustainability, NUS Business School

Founded in 2010, the Centre for Governance and Sustainability (CGS) is housed at the National University of Singapore (NUS) Business School. Our research empowers leaders, organisations and regulators in making informed decisions related to corporate sustainability and corporate governance. We bridge knowledge with industry needs, enabling organisations in the Asia Pacific, including ASEAN and Singapore, to go further in their sustainability journeys.

Our research pillars are as diverse as they are profound, covering initiatives in sustainability reporting, climate and nature-related reporting, the Singapore Governance and Transparency Index, the ASEAN Corporate Governance Scorecard and more.

Visit https://bschool.nus.edu.sg/cgs/ to find out more about our work.

Table of Contents

Introduction

The e-book "Impact Reimagined: Voices of the Next Generation for Sustainability" began from IMPACT WEEK, a well-being economic conference and festival organised by TPC (Tsao Pao Chee) and NO.17 Foundation. Held from 15 to 19 September 2025, with most activities concentrated at the Suntec Convention Centre in Singapore, the event attracted more than 4,000 people to learn, connect and take actions towards building well-being economies.

Among the attendees were 98 students from the National University of Singapore (NUS) Business School. Enrolled in the course "Strategic Sustainability" taught by Professor Lawrence Loh, these NUS MSc Strategic Analysis and Innovation students were assigned to explore IMPACT WEEK and write a learning journey log based on a session or topic of their own choice. They were also encouraged to include photos and videos in their essays.

Their reflections are diverse in topics and provoke thinking on what individuals, organisations and societies can do to serve our shared future.

The e-book is divided into three volumes. "Volume 1 Climate and Nature" covers perspectives related to climate action, nature regeneration, energy transition and collaboration. "Volume 2 Economies and Systems" portrays reflections on the blue, green and silver economies, the role of social entrepreneurs and family businesses, as well as how Asia writes its own chapter on sustainability. "Volume 3 Well-Being and Humanity" focuses on the mindsets for change, social innovation, and a holistic approach to promote well-being for humanity and the planet.

By publishing these reflective essays, we hope to inspire more meaningful conversations and action for a better world.

Foreword

Economics is often spoken of as though it were a force of its own—abstract, inevitable, and beyond human agency. Yet at its core, economics is nothing more than a reflection of human choice. It is shaped by what we value, what we desire, how we produce, how we consume, and how we relate to one another.

The systems we have built today mirror a particular state of consciousness—one that has prioritised efficiency over sufficiency, accumulation over care, and short-term gain over long-term flourishing. The consequences of these choices are now visible in widening inequality, ecological degradation, and a growing sense of disconnection from meaning and purpose.

Sustainability challenges, therefore, are not merely technical problems to be solved. They are invitations for human evolution. Without a transformation in consciousness and behaviour, even the most well-intended economic reforms risk reinforcing the very dynamics they seek to correct. True system change begins within—with awareness, responsibility, and a renewed sense of care for life.

At TPC (Tsao Pao Chee), a family enterprise with more than 120 years of history, we have come to recognise that business is not separate from society, nor is capital separate from values. Economics must return to its original purpose: to serve well-being of life and create wealth at the same time, while remaining in harmony with the living systems upon which all prosperity depends. This requires courage—to question inherited assumptions, to let go of extractive habits, and to re-centre love, stewardship, and sufficiency in our economic choices.

IMPACT WEEK 2025, presented by TPC and NO.17 Foundation, created a space where these questions could be explored openly—across business, capital, policy, education, and civil society. The reflections of National University of Singapore (NUS) students guided by Professor Lawrence Loh, form the heart of this volume. Their writings reveal a generation willing to interrogate systems not only from the outside, but from within—examining how beliefs, incentives, and behaviours shape economic realities.

This volume, *Economies & Systems*, captures that inquiry. It reflects a growing understanding that systems are not fixed structures, but living expressions of collective intent. When human consciousness evolves—when love, responsibility, and care are restored as guiding principles—economic systems can begin to reorganise in service of life rather than at its expense.

We invite readers to engage these reflections not as theoretical exercises, but as prompts for personal and collective responsibility. Each choice we make—as producers, consumers, investors, leaders, and citizens—contributes to the system we inhabit.

Chavalit Frederick Tsao
Chairman, TPC (Tsao Pao Chee)

Tai Sook Yee
Chair, NO.17 Foundation

Preamble

The adoption of the United Nations' 17 Sustainable Development Goals in 2015 marked a collective recognition that the challenges facing humanity are interconnected—and that progress toward a sustainable and equitable future demands more than isolated efforts. Among them, **Goal 17: Partnerships** stands as a unifying principle, reminding us that meaningful transformation emerges only when we learn to work together across boundaries, sectors, and worldviews.

NO.17 Foundation was established in this spirit. Inspired by the SDGs and guided by a deeper inquiry into what enables life to flourish, we invest in partnerships that strengthen human well-being while restoring harmony with the planet. We believe that collaboration is not merely a mechanism for delivery, but a practice of shared responsibility—one that invites trust, learning, and co-creation in service of the whole.

This belief found vivid expression at **IMPACT WEEK 2025**, co-hosted with **TPC (Tsao Pao Chee)** in Singapore. Conceived as a living platform rather than a conventional conference, IMPACT WEEK brought together diverse actors across business, capital, education, policy, and civil society to explore how inner values shape outer systems—and how partnerships can catalyse systemic change. From this convergence emerged initiatives such as the Impact Coalition, dedicated to human and planetary flourishing, and the Well-being and EESG Alliance (WEGA), formed through the partnership between TPC and the Centre for Governance and Sustainability (CGS) at NUS Business School. Each reflects a shared commitment to reimagining value creation through the lens of well-being.

It is within this same spirit of partnership and inquiry that we are honoured to join hands with **WEGA, CGS, and TPC** to present *Impact Reimagined: Voices of the Next Generation for Sustainability*. This three-volume e-book captures the reflections of NUS students who journeyed through IMPACT WEEK—listening, questioning, and engaging with some of the most pressing issues of our time.

Their voices offer more than commentary. They reveal moments of awakening—where ideas encountered in dialogue begin to take root personally, reshaping how these young leaders see climate and nature, economics and systems, and ultimately well-being and humanity. Together, their reflections remind us that sustainable futures are not designed solely through policy or technology, but through evolving consciousness, relationships, and ways of being.

Each story within these pages is a spark—an invitation to reimagine impact not as an individual achievement, but as something that unfolds through connection. As you read, we hope you will be inspired to reflect on your own role within the living systems you inhabit, and to cultivate partnerships that serve life, in all its forms.

Tai Sook Yee
Chair, NO.17 Foundation
Chair, Advisory Board, Well-being and EESG Alliance (WEGA)

About This Volume

"Volume 2: Economies and Systems" is part of the three-volume e-book, "Impact Reimagined: Voices of the Next Generation for Sustainability". The series features reflections by some 100 National University of Singapore (NUS) students, following their participation in IMPACT WEEK. Held from 15–19 September 2025 in Singapore, IMPACT WEEK was co-organised by TPC (Tsao Pao Chee) and NO.17 Foundation. The event's partners included the Centre for Governance and Sustainability at NUS Business School and the Well-being and EESG Alliance (WEGA).

This volume is organised into various sections. In the section, **"The Colours of Thriving Economies"**, students deliberate over the blue ocean economy, the low-carbon green economy and the silver economy where ageing is viewed through a positive lens.

Next, the section **"The People in Flourishing Systems"** zooms into how different actors, such as family businesses, philanthropic organisations and social entrepreneurs can help to shape flourishing societal and economic systems. Another focus in this section is the people behind sustainable food systems and circular value chains.

The third section **"The Stories in Asia"** takes a geographic lens at how different parts of Asia are promoting sustainability and well-being. Students examine the different conditions and collaborations that will allow each region to flourish and prosper. From Singapore to China's Greater Bay Area and more, sustainability initiatives are being developed.

We hope these essays will lead more people to reimagine how we can better build our economies and systems for a flourishing world across the economic, environmental, social and governance domains.

Lawrence Loh
Executive Director, Well-being and EESG Alliance (WEGA)
Director, Centre for Governance and Sustainability, NUS Business School

Ang Hui Min
Communications Lead
Centre for Governance and Sustainability, NUS Business School

The Colours of Thriving Economies

What do thriving economies look like? They could have a dash of green from conserving forests, a stroke of blue from protecting oceans, and a brush of silver from dignified ageing communities.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). Impact reimagined: Voices of the next generation for sustainability (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Blue Finance and the Greater Bay Area

XU Yichen

Introduction

For my learning during IMPACT WEEK, I selected two panel discussions with distinct yet complementary themes: "Financing the Blue Shift: From Pledges to Regenerative Capital" and "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact". These two sessions explored perspectives on global sustainable financial system transformation and regional institutional Environmental, Social and Governance (ESG) innovation. They showcased practical approaches to strategic sustainability at different levels and across different geographies.

IMPACT WEEK 2025 was organised by TPC (Tsao Pao Chee) and NO.17 Foundation.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

The blue finance session revealed the importance and methods of translating green commitments into actionable financial mechanisms for ocean sustainability. Meanwhile, the session on the Greater Bay Area (GBA) showcased the role of institutions, technology and social responsibility in achieving regional coordination. Together, these two sessions embodied comprehensive sustainable development pathways, from macro-capital flows to micro-governance innovation. These pathways remind me of the strategy and impact frameworks taught in my “Strategic Sustainability” course. Strategic sustainability is not just about corporate behaviour, but also about having a coordinated system across sectors and regions. Achieving sustainable development requires not only the ability to attract capital but also government support and funding.

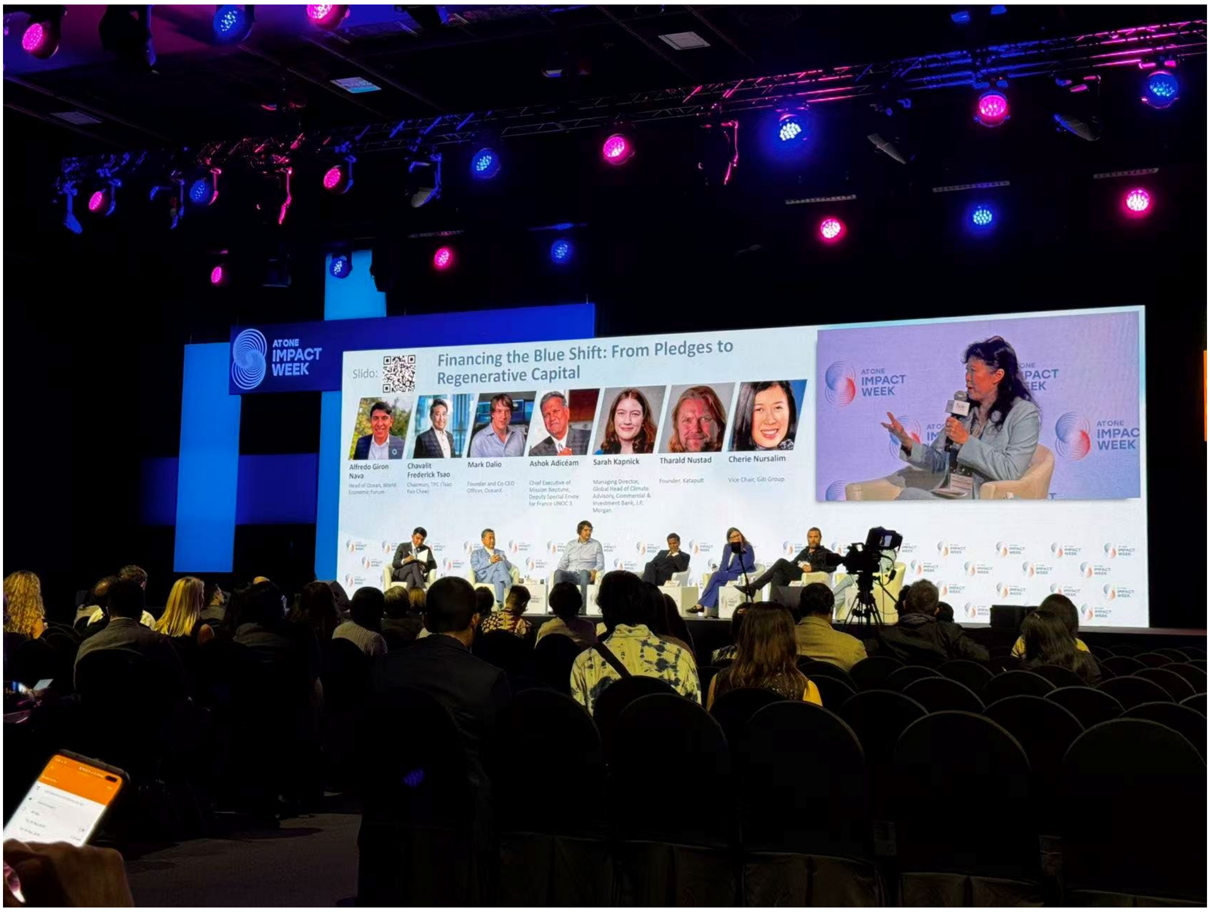
Financing the Blue Shift: From Pledges to Regenerative Capital

The session “Financing the Blue Shift: From Pledges to Regenerative Capital” was the first session that I attended. The discussion centred on generating actual capital flows for the blue ocean economy beyond mere green pledges. Panellists included Dr Alfredo Giron Nava, Head of Ocean Action Agenda, World Economic Forum; Mr Mark Dalio, Founder and Co-Chief Executive Officer, OceanX; Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee); Mr Tharald Nustad, Founder, Katapult; Dr Sarah Kapnick, Managing Director, Global Head of Climate Advisory, Commercial & Investment Bank, J.P. Morgan; Mr Ashok Adicéam, Chief Executive of Mission Neptune, Deputy Special Envoy to the French President for the Third United Nations Ocean Conference (UNOC3); and Ms Cherie Nursalim, Vice Chair, Giti Group.

Why Blue Finance Sees Slow Capital Flows

The core issues were the slow pace of capital flows to sustainable ocean development and ways for scaling blue sustainable growth through regenerative capital models. The panel noted a general lack of liquidity in blue finance. Although blue finance encompasses diverse sectors such as fisheries, shipping, marine energy and infrastructure, a very small portion of sustainable investment funds currently flows into ocean-related projects.

There are two main reasons: first, non-governmental green investors lack awareness of marine project risks and face difficulty in quantifying their payback periods, resulting in a lower appeal of marine projects; second, the absence of mature financial instruments and policy support makes it difficult to maintain an inflow of funds entering blue finance.



"Financing the Blue Shift: From Pledges to Regenerative Capital" panel discussion.

During the session, Ms Nursalim, who also advised the Indonesian government on climate matters, brought up a blue finance framework introduced during the 2022 G20 Bali Summit, which aims to provide long-term financing for coastal restoration and green port projects through policy, banks and public-private partnerships (PPPs). This approach is similar to traditional green bonds, but places greater emphasis on resilience and regenerative capacity.

China's Role in Blue Finance

China's key role in global blue finance was also highlighted. China has significant comparative advantages in shipbuilding and shipping, possessing a mature industrial chain and financial system, and has the capacity to promote regional blue finance cooperation. For example, China could take a leading role in projects relating to carbon-neutral ports, clean marine energy development and cross-border marine cooperation. In fact, the Chinese government has indeed increased its investment in blue finance. For example, Fujian Province has encouraged 48 financial institutions to jointly invest in marine projects, establish a database of key marine industry projects, and promote the development of projects worth hundreds of billions of yuan (China Oceanic Development Foundation, 2025)

I believe the main connection between this session and my “Strategic Sustainability” course is the need to focus on the sustainable development of the financial environment and business, particularly since it embodies the strategic shift from “pledge” to “performance”. Blue finance is not only an extension of green finance, but also a multi-stakeholder coordination mechanism that requires financial institutions to achieve a regenerative balance across the three dimensions of environment, society and economy. The concept of resilience, repeatedly mentioned throughout the discussion, is also of great significance. It is not only the core of climate finance risk management, but also a reflection of sustainable institutional design and governance.

A Potential New Engine for Sustainable Development

After listening to this panel discussion, I believe that blue finance has vast potential; however, the lack of consistent policies and low social awareness have prevented the market from recognising this potential. First, there is a lack of a unified pricing mechanism for the social and ecological returns of blue projects, making it difficult to translate their value into economic terms. Second, there is insufficient coordination among countries on policies and standards, and a lack of a unified blue finance framework. Finally, there is low public awareness of marine ecological issues.

To address these issues, the future development of blue finance should focus on three key areas: policy, market and awareness. First, blue finance organisations should establish a systematic blue ESG disclosure framework to enhance information transparency. Secondly, promote regional financial cooperation and knowledge sharing, which can be done through integrating knowledge and seeking common ground while preserving differences. Finally, strengthen public education and communication to increase social engagement in marine sustainability issues and attract more investors.

In conclusion, this session highlighted why the sustainable transition from green to blue is becoming a new trend in global capital markets. I believe that by further expanding the reach and liquidity of blue finance, the ocean economy will fully unleash its investment potential and become a new engine for sustainable development.

Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact

Panellists included Ms Helene Li, Executive Director, Association for Well-Being Economy; Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee); Ms Nan Li Collins, Chair, United Nations Sustainable Stock Exchanges Initiative and Divisional Director, Investment and Enterprise, UN Trade & Development (UNCTAD); Mr Richard Dong, Founding and Managing Partner, Hidden Hill Capital; Dr Au King-lun, Executive Director and Board Member, Financial Services Development Council; Ms Elissa Liu, Partner, Lanchi Ventures; and Mr Wei Wei, Chairman, Vision China Education Group.

At another session "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact", I gained deeper insights into the strategic role of the Guangdong-Hong Kong-Macao Greater Bay Area (GBA). I chose this session because I believe China has become a country with significant influence, and as one of China's major economic hubs, the GBA's efforts on ESG and sustainable development will significantly impact the entire country. The theme of the conference was not simply about economic growth, but about how to make the GBA a pioneering pilot zone for sustainable development and ESG innovation in China.

Dr Au King-lun, Executive Director and Board Member, Financial Services Development Council, Hong Kong, proposed that the new wave of Chinese companies going global is about finding a new, perfect balance between profit and social responsibility, thereby achieving green sustainability. This also represents the companies' globalisation approach shifting from "capital-driven" to "value- and responsibility-driven".

Tapping on Complementary Strengths

Regarding systemic coordination and structural transformation, some panellists noted that GBA still lacks fully unified mechanisms for industrial collaboration and innovation resource allocation. Its new development trends and core driving forces focus on the complementarity of strengths. Hong Kong's strengths primarily lie in finance, talent mobility, the legal system and international services. Meanwhile, new financial centres such as Shenzhen and Guangzhou are demonstrating strong vitality in manufacturing, digitalisation and AI innovation. When the GBA achieves full collaborative efficiency, the complementary "system + technology" model will provide new institutional support for the region's sustainable development.

I was impressed by the panellists' accurate positioning of Hong Kong as a key bridge for the financialisation of Chinese technology assets. During the panel discussion, it was mentioned that Hong Kong should go beyond being a gateway for international companies to being a mature platform that capitalises on China's technological innovations. The Hong Kong government is actively supporting the development of AI and digital industries, which will help to maintain the island's sustainable development and also attract Chinese companies that wish to expand beyond the mainland. I have noticed that smaller developed economies, such as Hong Kong and Singapore, are increasingly prioritising sustainability through subsidising related talent programmes or introducing related courses.

Sharing GBA's Sustainability Experience Nationwide

From a learning perspective, this IMPACT WEEK conference has allowed me, for the first time, to systematically reflect on the nexus between regional ESG implementation and national strategy. The GBA is not merely an engine of China's economic growth; it represents the Chinese government's vision and pilot programme for ESG institutional innovation. Through its pilots, we can observe the adaptability of ESG disclosure, green bond issuance and sustainable finance standardisation in China. Furthermore, I believe that the GBA's experience with green sustainable development has the potential to spread to inland China. For example, inland provinces could draw on the GBA's experience in governance and financial mechanisms relating to issues such as green energy, clean manufacturing and social inclusion. They could use localised ESG frameworks to promote regional transformation and implement green and sustainable development.

Efforts are ongoing. For example, provinces like Sichuan are actively developing green energy industry clusters by leveraging wind power and photovoltaic resources (Guangdong Society for Hydro & New Energy Power Engineering, 2025). Cities like Chongqing are experimenting with introducing green standards in their manufacturing systems, reducing carbon emissions through green supply chain management (Chongqing Municipal Government, 2024).

Risks

However, deepening green and sustainable development efforts in the GBA still face risks. The first is the social risk highlighted in class. Social innovation remains the most challenging aspect—companies can quantify their environmental performance, but there is still a lack of an assessment system for their social responsibility. Second, there are policy risks. While the GBA's open systems have fostered innovation, they can also create policy silos. This means that outward-looking institutional innovations cannot be effectively transmitted to inland areas, leading to policy fragmentation among municipal and provincial governments. Finally, the final risk, also stemming from the lessons learnt in class, is greenwashing. The GBA governments need to identify companies that misrepresent their sustainability potential and achievements in their bid to attract investment.

Reflecting on this session, I learnt that the core of sustainable development lies not just in policies or financial tools, but in institutional learning and diffusion. The GBA's success lies in localising and regionalising global ESG concepts and promoting social responsibility and green sustainable development through market-based means. However, policy implementation still faces risks, and the mainland Chinese government needs to translate the GBA's sustainable development experience into a replicable path nationwide that is also adapted to each ecosystem. This further reinforced the course content: true strategy is not just a company's own direction, but also a co-evolution of institutional and social systems, and governance plays a crucial role in the overall ESG and green sustainable development landscape.

Conclusion

After attending these two discussions, I gained a more systematic and profound understanding of strategic sustainability. The blue finance session taught me that for the global financial system to move from commitment to action, it must rely on regenerative capital and information transparency mechanisms to build a long-term sustainable financing logic, while also maintaining its vitality to attract capital inflows. The GBA session also made me realise that policies, coordinated governance structures, and project scalability are key for institutional innovation, with the latter two factors being even more important. Both sessions highlighted the main idea of sustainable development: from capital to institutions, from policy to action, a sustainable strategy requires intertwined ESG dimensions. I hope to apply these learnings in my future endeavours.

References

China Oceanic Development Foundation. (2025, March 10). *Focusing on the construction of national marine development demonstration zones.* https://www.cfocean.org.cn/html/web/xinwenzixun/xingyedongtai/1909521535042723841.html

Guangdong Society for Hydro & New Energy Power Engineering. (2025, April 22). *Sichuan: By 2027, the province's installed capacity of photovoltaic and wind power will reach 45GW.* https://www.gdshe.org/article/24433.html

Chongqing Municipal Government. (2024, January 11). *Notice on the issuance of the implementation plan for promoting green and low-carbon development of the manufacturing industry in Chongqing.* https://jjxxw.cq.gov.cn/zwgk_213/zcwj/qtwj/202401/t20240111_12809259.html

China's Green Economy and New Generation of Entrepreneurs

HAN Qize

Introduction

I would like to thank Professor Lawrence Loh for giving us this wonderful opportunity to attend IMPACT WEEK, an inspiring event that brings together global leaders, bold thinkers and frontline changemakers to explore new models of regeneration, collaboration and shared prosperity.

As a student who hopes to return to China for work in the future, I chose to attend two China-focused sessions: "Greening at Scale: China's Green Economy in Action" and "Reimagining China's Future Through Next-Gen Innovation". These sessions offered me a valuable opportunity to view the topic of green economy from the unique perspectives of different stakeholders—including business leaders, government policymakers, educators, young entrepreneurs and financial investors.

In the following sections, I will discuss these two sessions in detail and share some of my personal reflections and experiences.

Greening at Scale: China's Green Economy In Action

During the "Greening at Scale" session, Mr Chavalit Frederick Tsao, Chairman of TPC (Tsao Pao Chee), pointed out that China's green economy has entered a new stage of "scaling up and going global simultaneously". On one hand, China now leads the world in new energy installations and battery shipments; on the other hand, production capacity and solutions are becoming more localised through international deployment. The other speakers further discussed how China's green economy—or the "China model"—is being applied abroad, touching on specific areas such as energy transition, food security and the circular economy, as well as the challenges that accompany these developments.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

"Greening at Scale: China's Green Economy in Action" panel discussion.

Strategy Illustration

China's green industries, such as new energy, batteries and energy storage, have become highly mature. The domestic market faces severe oversupply; there is a need to "take the mature value chain overseas". This can be a win-win approach: it helps Chinese companies generate additional revenue streams and supports global industrial upgrading.

Taking power batteries as an example, speakers argued that the most feasible path is distributed manufacturing: build a complete and reliable solution in China, then replicate it in overseas markets. Contemporary Amperex Technology Co., Limited (CATL), a Chinese battery manufacturer and technology company, illustrates this model well, achieving both financial value and industry leadership through efficient technology and reliable delivery.

In 2024, CATL's shipments of power and energy-storage batteries were about 491 GWh, with a global market share of roughly 38%, keeping the company in the number one position (Shanghai Metals Market, 2024). Energy-storage products proliferated and contributed a major share of the increase in market share. Regarding international manufacturing, CATL has already begun mass production at its first European plant in Arnstadt, Thuringia, Germany, where operations officially commenced in 2023 (Westerheide, 2025). It is also building a 100 GWh battery plant in Debrecen, Hungary, with an investment of €7.3 billion. These moves will significantly enhance Europe's local supply capacity under the distributed manufacturing model.

Risks and Challenges

However, going overseas is not as simple as "moving capacity abroad." Companies must deal with the pressures of cost, efficiency and demand, as well as barriers caused by different rules and institutions. Mr Ian Zhu, Founding Member of NIO Capital, noted that, in the process of international expansion, NIO has focused on localisation, partner channels and policy differences. For example, in Singapore, it works with Wearnes Automotive to use local dealership networks; in Europe, it has chosen to adapt to a charging model rather than battery swapping to integrate faster into the market.

Due to differing institutions and cultures, Chinese companies abroad often face a paradox of high costs, low efficiency and strong demand. The speakers agreed that, unlike China's rapid path of industrial upgrading, iteration and competition, the globalisation of the value chain requires time, patience and systematic management.

Investing Considerations

From an investment perspective, balancing "patience–performance–product delivery" requires a clear long-term roadmap and steady milestone delivery to continuously build market trust. The CATL case exemplified this strategy. Starting with the BMW order, it attained one key node after another and formed a positive feedback loop between operations and the capital market. Its scale grew, proving the virtuous cycle of "patient capital–enterprise growth".

Mr Zhu, who focuses on investments, added that companies should match different project stages—construction, ramp-up and scale-up—with suitable funding structures such as dedicated funds or project financing. At the same time, they should reduce over-reliance on short-term exit metrics (e.g. distribution to paid-in capital (DPI), internal rate of return (IRR)) and allocate resources to medium- and long-term innovation and product commercialisation. For example, private equity or asset managers can design various financial products for different targets, with payback periods ranging from a few months to as long as ten years.

Other Insights

In this session, the speakers also discussed rural revitalisation—achieving sustainable growth in rural economies and improving farmers' quality of life through industrial upgrading, ecological protection and infrastructure improvement—as well as local development. Land holds a significant meaning in Chinese culture. Mr Tsao remarked, “Rural revitalisation is not only an economic issue, but also about rebuilding the bond between land and people.” When talking about Chinese companies expanding overseas, the panellists agreed that one major challenge for rural revitalisation is local investment companies' reluctance to participate without clear profit incentives. Mr Tsao also proposed a solution: develop “branded” revitalisation models based on regional characteristics, and encourage experienced individuals who have stepped out to return and contribute, rebuilding the human and cultural trust that underpins the land.

Summary

Overall, China's green economy is shaping a development model of “domestic scaling and overseas localisation”. Domestically, rapid expansion and economies of scale have built strong competitive advantages, while abroad, decentralised manufacturing and localised supply networks have enhanced stability. In terms of capital, companies have gained investors' confidence through clear roadmaps and milestone achievements. Although short-term challenges remain—such as fluctuating demand in European markets and lengthy approval processes—the steady increase in production capacity shows that the internationalisation of China's green industries is already well underway. Looking ahead, the key lies in balancing cost, compliance and local partnerships across different markets, upgrading from product globalisation to ecosystem globalisation to achieve long-term sustainable growth.

Reimagining China's Future Through Next-Gen Innovation

Background

In 1978, China launched its “reform and opening-up” policy which marked the beginning of the country's integration with the world. Riding the tide of the times, many pioneers seized the opportunity and achieved success in their own fields.

47 years later, in 2025, those early entrepreneurs grew old, and many of them chose to pass their businesses on to the next generation. To quote an old Chinese saying, “It is easy to conquer the land, but hard to keep it.”

During IMPACT WEEK, we had the opportunity to hear the thoughts and reflections of China's new generation of entrepreneurs on inheriting family businesses. The guest speakers came from different industries: Mr Terry Cao, General Partner, ZQ Group; Associate Professor Winnie Qian Peng, Hong Kong University of Science and Technology (HKUST); Mr Will Li, Vice President & Chief

Strategy Officer, Monband; Ms Poppy Chen, Chief Sustainability Officer, Shanghai M&G Stationery Inc; Dr Teresa Chuang, Executive Vice President, Sustainable Development Committee, Beijing International Exchange Association; and Ms Yiwen Hao, Executive Director, Landun Xumei Foods.

"Reimagining China's Future Through Next-Gen Innovation" panel discussion.

Meaning of Heritage

Inheritance is not only about the continuation of wealth, but also a multi-dimensional process. At a corporate level, it means a long-term commitment to strategic direction and the brand spirit. At the family level, it includes the transmission of relationships, family culture and even social influence. This continuation of beliefs and mission often determines whether a family or business can survive through times of change, which makes it the most challenging type of heritage.

Professor Winnie Qian Peng, an associate professor in Business Practice of Finance, Hong Kong University of Science and Technology (HKUST), concluded, "True inheritance is the combination of tangible assets and intangible spirit. A family and its business achieve lasting sustainability only when wealth, beliefs, systems and culture support one another.

From Macro to Micro

From a macro perspective, the development of enterprises has always been intricately linked to a nation's destiny and economic cycle. Whether it is the rise and fall of industries or the flow of capital, companies cannot exist independently of national policies, the global environment and macroeconomic fluctuations such as the Kondratiev cycles or the Merrill Lynch Investment Clock.

At various stages, national economic policies, disruptive technological innovations and geopolitical shifts bring both opportunities and challenges to businesses. For example, when China's manufacturing industry was rapidly rising and expanding, Chinese President Xi Jinping proposed the principle, "We must have both clear waters and green mountains as well as mountains of gold and silver. If we must choose, we prefer clear waters and green mountains — because they are also mountains of gold and silver." This statement would deeply influence enterprises, especially those in manufacturing and traditional chemical and energy industries, shaping their strategic positioning and industrial planning. Forward-looking entrepreneurs should not only focus on short-term profits but should also seek long-term direction from national development strategies and social transformation, aligning their corporate mission with the changing times.

At the same time, a company's long-term sustainability depends on how well it balances the interests of shareholders and stakeholders. One speaker pointed out that "stakeholders are not the same as shareholders", but their goals can be aligned through the concept of shared value.

The key to sustainable development is to manage the entire life cycle of the value chain, ensuring that every stage reflects Environmental, Social and Governance (ESG) values. For example, from raw material sourcing to product recycling, companies should consider resource efficiency, social responsibility and governance transparency. Only when enterprises create social and environmental value alongside economic benefits can they achieve stable and lasting growth amidst macroeconomic fluctuations.

Insights from 100-year-old companies

The longevity of century-old enterprises often lies in the combination of altruism and long-term vision. Take Lee Kum Kee as an example. The Lee family institutionalised their core value of altruism as a guiding principle for investment (Lee Kum Kee Group, n.d.-b). In 2017, Lee Kum Kee Group founded venture capital firm Happiness Capital, which gives equal weight to both financial returns and "happiness returns" (Lee Kum Kee Group, n.d.-a). The fund invests in innovative projects related to the environment, food, health and trust — such as ClearSpace, a sustainable technology initiative focused on cleaning up space debris (Happiness Capital, n.d.). In its latest impact report and case studies, the company highlights its strategy of using capital to promote public well-being, showing how social value can be embedded into business objectives.

Coincidentally, the discussion among the speakers reminded me of a report I once read about Suntory Group. The company established its long-term social commitment under the philosophy of “Mizu to Ikiru” (Living with Water). Based on this vision, Suntory has developed a comprehensive system focusing on watershed conservation, hydrological research, and public education. Its official publications trace how this philosophy has guided the company’s strategy and operations since 1923, reflecting a form of long-termism that treats ecological public goods as the company’s primary production input (Suntory, n.d.).

Risks and Challenges

Many successors of family businesses mentioned that taking over the company is like a second entrepreneurship. China’s business environment changes very quickly. With rapid shifts in policies and social conditions, business leaders must “change before the times change”. This requires successors to create different development strategies based on specific situations.

In China, conflicts between individual values and family missions often lead to failure in succession. Many successors, supported by their parents, go abroad for higher education and receive advanced training. However, knowledge and reality are often different. Simply relying on experience or personal assumptions without considering real market conditions can easily cause a company to fail.

The speakers suggested that the best solution is to “inherit the previous generation’s experience while creating new directions”. For example, Liu Chang, the second-generation successor of New Hope Group, became the company’s chairperson at the age of 33. After taking over, she did not simply copy her father’s business model. Instead, while maintaining the group’s traditional livestock and feed operations, she actively developed “new economy” sectors such as investment platforms and digitalisation (Huang, 2025.). This approach reflects the idea of inheriting experience while innovating for the future.

Lastly, mindset building is also especially important. An incredibly strong successor often follows the principle of “Take care of someone makes you stronger”. This means caring about employees’ growth and dignity and understanding the real pain points of customers. At the same time, successors should not forget to develop their own personal style—whether it is a unique management approach or a distinct personal identity. By doing so, they can complete both inheritance and self-formation, giving the family business new growth opportunities and a refreshed social image in the modern era.

Future: From Family Business to Business Family

The transformation from a “family business” to an “enterprising family” represents a shift from a traditional model bound by blood ties to a modern system centred on entrepreneurial spirit. The former focuses on power and inheritance, while the latter emphasises responsibility and mission. For a family business to achieve sustainable development, it must evolve into a cultural community rather than merely a collection of shareholders. The key idea is for the enterprise to go beyond the family name and become a platform that brings together professional managers, long-term investors and partners in social responsibility.

In practice, the critical tool for this transformation is the family office. It is not only an asset management institution but also the governance centre of the family—coordinating wealth succession, equity arrangements, philanthropy and education funds. The goal is to strike a balance between professionalism and family values. At the same time, having a well-designed exit strategy is equally important. Through mechanisms such as equity trusts or fund structures, wealth can be gradually transformed into value capital, marking the shift from wealth management to value management. The family office's role is not merely that of a "money manager", but a steward that uses financial tools to preserve and transmit the family spirit, corporate culture and social responsibility. In this way, it achieves the true meaning of "passing down not only wealth, but also family culture".

Conclusion

I realised that mature industrial chains could expand abroad through distributed manufacturing and local collaboration. At the corporate level, firms need to adopt a "product + ecosystem" dual strategy for international expansion, with a focus on building local partnerships and compliance capabilities. Secondly, they have to secure "patient capital" through milestone-based delivery and transparent financing structures, and integrate ESG principles across the entire value chain to balance the interests of shareholders and stakeholders.

Meanwhile, a "family business" could upgrade to an "enterprising family" through long-term vision and institutionalised governance. Business leaders should emphasise both values and governance, using tools such as family offices to upgrade from "wealth management" to "value management"

Overall, only by building replicable long-term mechanisms in technology, capital, organisations and culture can enterprises achieve steady growth and shared prosperity in an uncertain global environment.

The author at IMPACT WEEK.

References

Happiness Capital. (n.d.). *ClearSpace, shaping the future of in-orbit operations.* https://happinesscapital.com/company/clearspace/

Huang, W. (2025, August 26). Mr "Forever Nice". *Chinanews.* https://www.chinanews.com.cn/cj/2025/08-26/10471147.shtml

Lee Kum Kee Group. (n.d.-a). *Happiness Capital.* https://www.leekumkeegroup.com/happiness-capital/

Lee Kum Kee Group. (n.d.-b). *Unique corporate culture.* https://www.leekumkeegroup.com/corporate-culture/

Shanghai Metal Market. (2025, February 26). *Global top 10 power and ESS battery shipments announced, six Chinese companies hold nearly 70% market share.* https://www.metal.com/en/newscontent/103195500

Suntory. (n.d.). *Institute for Water Science.* https://www.suntory.com/sic/mizu/

Westerheide, C. (2025, February 18). *CATL continues to ramp up battery production in Germany.* Electrive. https://www.electrive.com/2025/02/18/catl-continues-to-ramp-up-battery-production-in-germany/

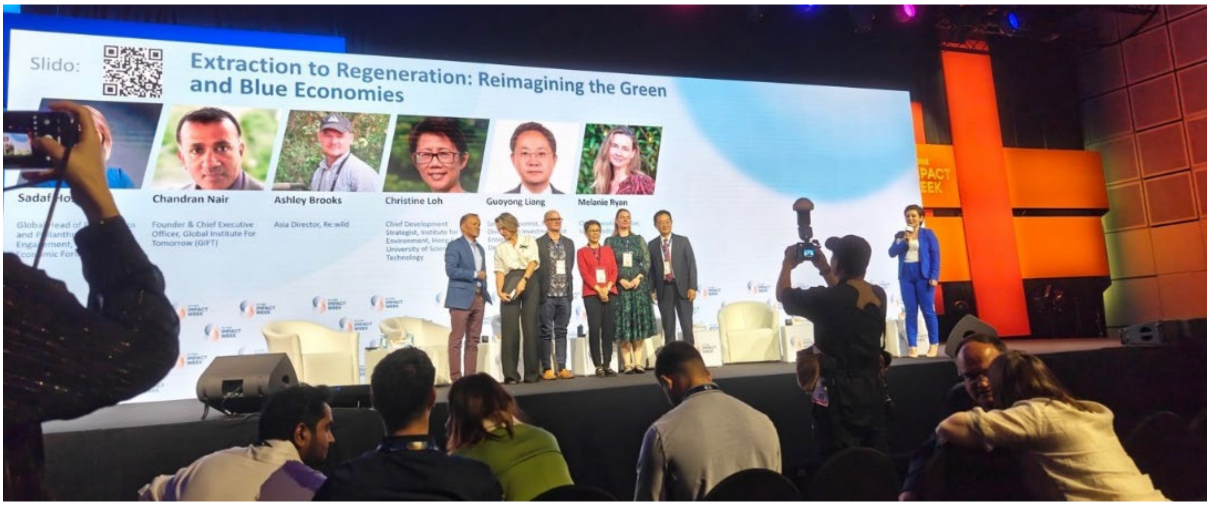
Economies of Green and Blue

ZHANG Yulin

Introduction

Our natural environment is flooded with discarded goods made by man. It is silent, only showing its attitude with higher temperatures and countless natural disasters. Man needs to recognise the harm we have done to the environment. As British biologist Sir David Attenborough said, "Chernobyl is considered one of the worst disasters in history, but it was a single event. The true tragedy of our time is still unfolding across the globe, barely noticeable from day to day (Hughes et al., 2020)."

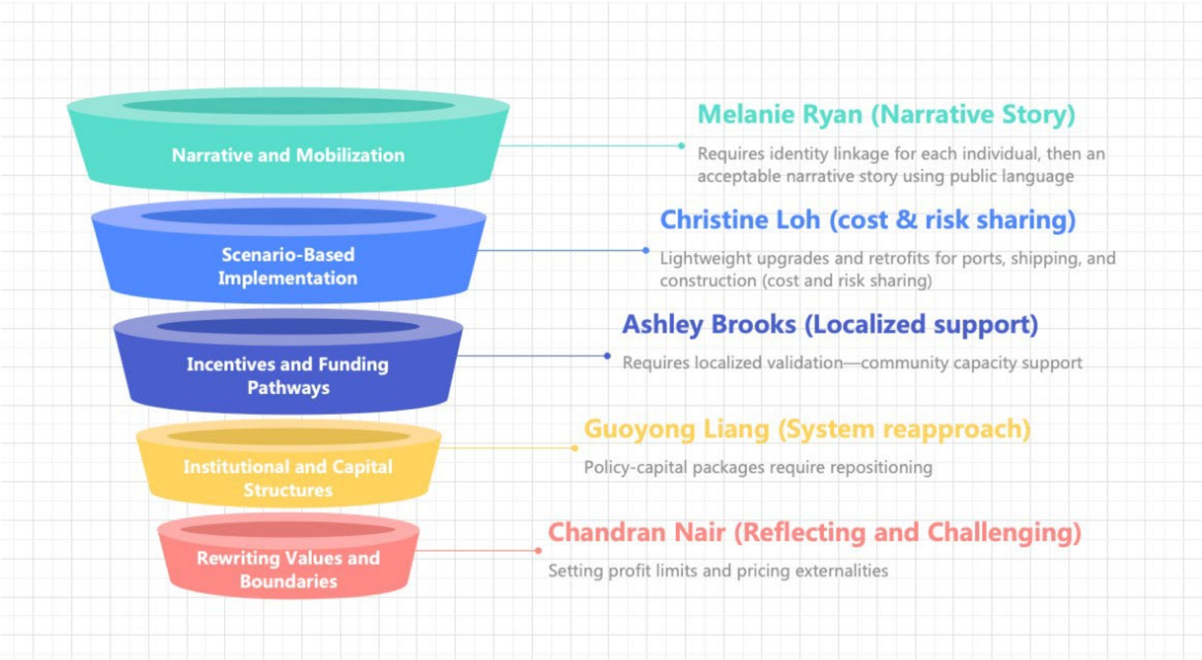
The panel discussion "Extraction to Regeneration: Reimagining the Green and Blue Economies" at IMPACT WEEK is about how humanity can coexist with nature in the new era. In the process of development, it is important to reimagine the blue and green economy, including the protection of natural ecological areas and biodiversity.



Panellists taking a group photo.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

I have divided this learning log into five sections to explain the speakers' views and my corresponding reflections and suggestions. I believe their views constitute the engine of change for a new era.



A diagram of key points of panellists.

Source: Author

Mr Chandran Nair on Rewriting Values & Boundaries

Speaker's Perspective

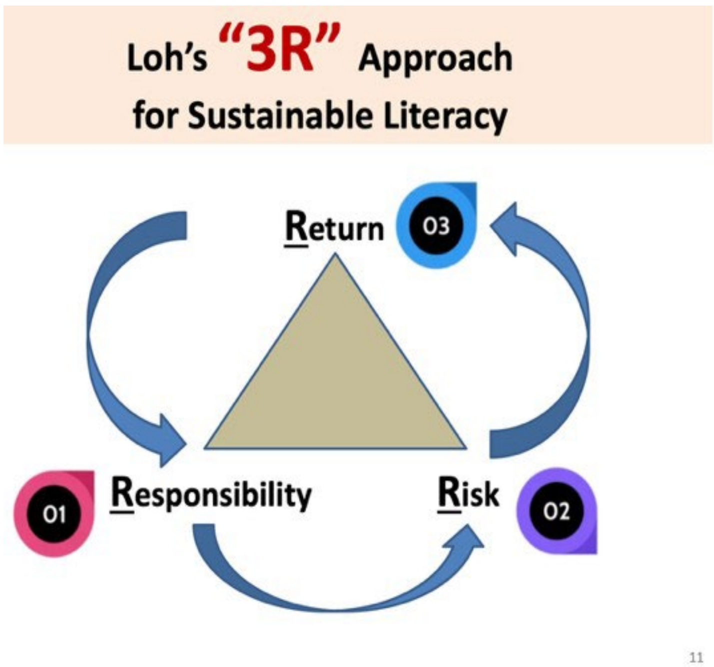
Mr Chandran Nair, Founder and Chief Executive Officer, Global Institute For Tomorrow (GIFT), breaks away from traditional theories of green economy perceptions. His central point is that the negative externalities caused by supply chains are not accurately recorded by society because of incomplete institutions and systems. For example, cowhide manufacture is not usually considered to be polluting. However, a report by the European Commission found that "tanning 1 kg of leather uses up to 2.5 kg of chemical substances and up to 250 litres of water, and generates up to 6.1 kg of solid waste" (Xia, 2023).

Mr Nair also argued against high-return green economy programmes, seeing them as a "scam". He identified a cognitive dissonance among current leaders, entrepreneurs and financiers. Overall, Mr Nair is disillusioned with the existing green economy framework and longs for scientists who understand the need to protect the environment to step up to the plate.

Reflections

Mr Nair gave great insights about the green economy, identifying how many corporations use the name of the green economy to make profits. I also strongly agree with his critique of the existing system. The unaccounted-for externalities harming the environment are a central proposition. Few countries can show the extent of pollution with accurate data and science. Carbon emissions are by far the best standard for green data, but there is still a lot of pollution that cannot be quantified by carbon emissions. Even many pollution measurements are through accounting methods, based on activity calculations rather than real-time monitoring data.

On the other hand, I disagree with Mr Nair's point against high-return green programmes. I believe that businesses must, nevertheless, pursue profits in the green economy. As exemplified by Loh's 3R approach for sustainable literacy (2025), which encompasses responsibility, risk and return, corporate sustainability initiatives can begin with responsibility, become urgent due to risk, and ultimately achieve sustainability and scale through return. The high profitability of the green economy indicates market unsaturation.



The 3R framework on why companies pursue sustainability.

Source: Loh, 2025

Entrepreneurs who invest early in the green economy stand to earn substantial returns. We can observe this in China's giant enterprise, Contemporary Amperex Technology Co., Limited (CATL). As early as 1999, Zeng Yuchun and partners saw promise in the battery industry and co-founded Amperex Technology Ltd. They bought a technology patent from the United States, but later found the technology to have a major flaw (Zhu, 2022). After spending time on the safety issue, they finally resolved it and would enter Apple's supply chain a few years later. ATL was later acquired by a Japanese firm.

Zeng still believed in the green economy and founded CATL, which grew with the times and became a market leader. With social responsibility in mind, CATL also launched a battery recycling programme through its subsidiary Brunp (CATL, n.d.). If the battery recycling programme is successful, it would reap fruitful returns for the firm.

We should be concerned with the question of whether the development of green industries is credible and not used to deceive investors. Loh's 3R approach can be a framework to justify this concept. In the future, the existence of detailed quantitative indices would translate to a more complete evaluation for companies in the green industry.

Suggestions

The first point made by Mr Nair on the lack of accurate pricing of economic externalities is one of the most prevalent economic issues today. The introduction of costing at all stages is essential, and companies can report according to standards such as the Global Reporting Initiative (GRI) and the International Sustainability Standards Board (ISSB). GRI focuses on different stakeholders and promotes social trust. ISSB has an investor focus and builds trust in the market. What is important, I think, is the General Disclosures in GRI, where society can establish actual physical monitoring points according to the information disclosed. Data is the best tool for correction and reflection.

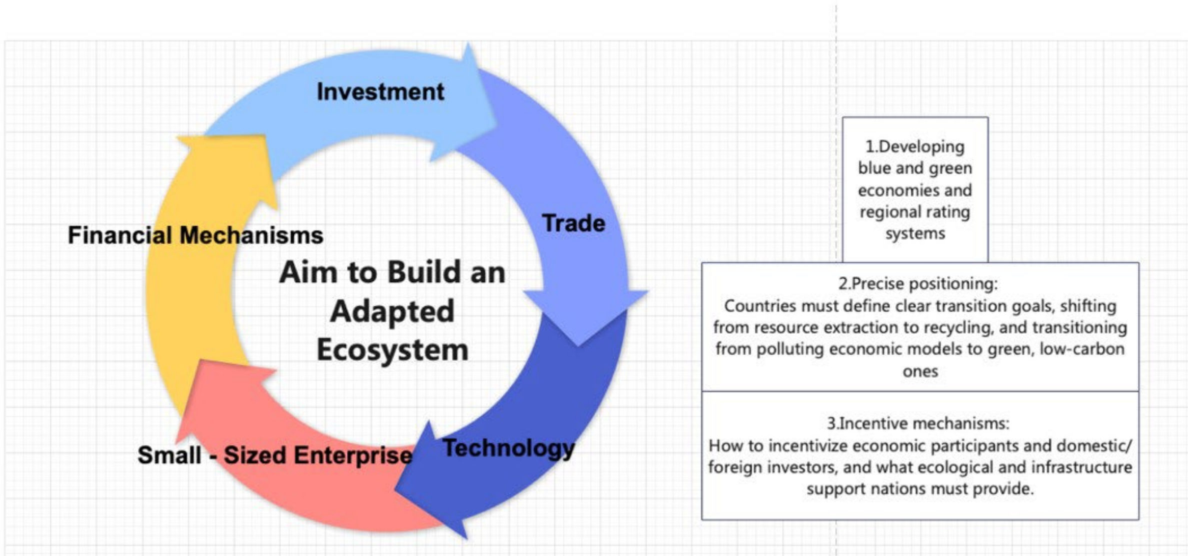
Dr Guoyong Liang on Institutional and Capital Structure

Speaker's Perspective

Dr Guoyong Liang, Senior Economist at the United Nations Trade and Development (UNCTAD), is a policy architect who advocates that each region should create policies that suit them. He believes that policies and structures should be complementary with trade, technology, small and medium-sized enterprises, financial mechanisms and investment. He also highlighted three key elements of green economy policies.

Reflections

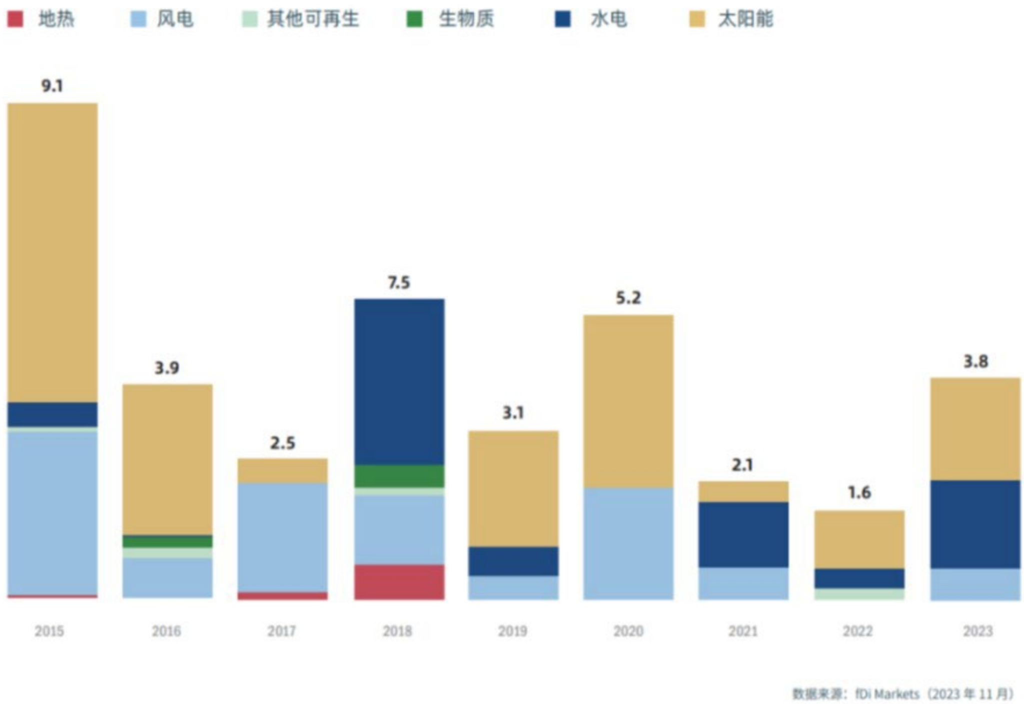
First, Dr Liang encouraged countries to develop their own policy preferences and rating systems. For example, businesses can grow faster when they operate in a legal and compliant environment. In such cases, institutions and policies become more important. This is evident through the different green practices and taxonomies in the European Union (EU) and ASEAN. The EU pursues high environmental standards, while ASEAN practices pursue flexibility. The Middle East is also developing its own policies. For example, Saudi Arabia's green vision rests on pillars including supporting local renewable energy research centres; establishing renewable energy industries; and creating training institutions to cultivate Saudi talent (Saudipedia, n.d.). Saudi Arabia can also attract foreign investment to boost its green industries.



An infographic summarising Dr Guoyong Liang's views at the panel session.

Source: Author

Secondly, Dr Liang emphasised the need for an effective incentive system with two balanced dimensions: "attracting investment" and "generating benefits". He recognises that the environment can only be sustained if companies survive. Company survival is often tied to cash flows. Renewable energy companies may do well in China due to state subsidies or state protection policy, but they may face higher cashflow pressures when expanding internationally. Investments for overseas renewable energy projects can vary: in 2023, Chinese companies secured only one-third of the financing they received in 2015 (Wang, 2024).



China's overseas renewable energy project investment (US$ billion)

Source: Wang, 2024

Suggestions

I am equally concerned about the survival rate of start-ups, and many green economy companies struggle with cash flow. Traditional energy companies may have a strong cash flow due to their natural reserves. Green economy businesses, on the other hand, are more vulnerable. I advocate for governments to establish stable green energy funds to support start-ups and expand the number of players in the carbon market.

In more detail, start-ups can highlight their ESG concepts at the very beginning. A growing number of green economy companies could also lead to market progress. Large energy companies will have to embrace sustainability concepts and requirements. Governments and institutions need to remain vigilant against greenwashing. In this area, a rating of green start-ups can help. Over time, the accumulation of numerous data points would be valuable in assessing the financing needs of green energy companies and impact value. This data can become future benchmarks.

Dr Ashley Brooks on Incentives and Funding Pathways

Speaker's Perspective

Dr Ashley Brooks, Asia Director, Re:wild, is deeply concerned about local economic inequality. He noted that the environment in deprived areas has been harmed by the misuse of resources. He pointed out that by 2030, "annual funding requirements will reach $920 billion" and proposes Payment for Ecosystem Services (PES). This is an extension of carbon credits that ensures that the environment is monitored by local people. In addition, he added that light-weight physical monitoring methods are easier to implement.

Reflections

The mechanism proposed by Dr Brooks will allow society to focus on the ecology of poorer regions. Only when basic survival is secured can a person pursue higher-level goals. In heavily polluted regions, some residents may feel compelled to extract and sell the minerals around them for money, a form of short-termism that eventually harms public health. Area monitoring allows governments and scientists to identify the difficulties of poorer regions. With the guidance of long-termism, governments can introduce new economic policies.

实时数据

全国实时空气质量监测>> 2025-10-11 20:00:00

城市	首要污染物	等级	AQI
宜昌	—	优	37
宜春	PM_{10}	良	53
宝鸡	—	优	11
宣城	$PM_{2.5}$	良	87
宿州	—	优	50
宿迁	$PM_{2.5}$	良	63
山南	—	优	41
岳阳	$PM_{2.5}$	轻度污染	128
崇左	—	优	50
巴中	—	优	14
巴彦淖尔	—	优	39
巴音郭楞蒙古自治州	PM_{10}	良	81

全国水质自动监测>>

监测断面	测量时间	水质类别
浙江洋溪渡	2025-10-11 16:00	III
浙江街口(鸠坑口)	2025-10-11 16:00	II
浙江清林渡	2025-10-11 16:00	III
浙江湘家荡	2025-10-11 16:00	III
浙江新港口(新塘港)	2025-10-11 16:00	II
浙江合溪	2025-10-11 16:00	III
浙江老鼠屿	2025-10-11 16:00	IV
浙江柏枝岙	2025-10-11 16:00	II
浙江沙湾上	2025-10-11 16:00	I
安徽新河入湖区	2025-10-11 16:00	劣V
安徽龟山	2025-10-11 16:00	III
安徽忠庙	2025-10-11 16:00	IV

The website of the China National Environmental Monitoring Centre shows real-time data on air and water quality across different regions in China.

Source: China National Environmental Monitoring Centre, 2025

Suggestions

Good infrastructure policies can protect the environment. My past internships were related to weak-power engineering, which made me realise that the Chinese government has a grid management system for air quality. They use multi-functional monitoring stations that have cameras, solar panels, alarms and various sensors to collect data. This includes monitoring for four types of gaseous pollutants, two types of particulate matter and five meteorological parameters. The data is uploaded to government websites such as the China National Environmental Monitoring Centre.

Hence, I strongly encourage other countries to learn from China's climate monitoring experience. The government is also using AI to regulate factory emissions and precisely allocate power and coal resources. Such systems require a few Internet-of-Things (IoT) sensors, AI and satellite remote sensing, achieving high coverage at low costs.

Professor Christine Loh on Scenario-based Implementation

Speaker's Perspective

As a former government employee and now a university professor at the Hong Kong University of Science and Technology, Professor Christine Loh has abundant experience and an engaging communication style. She believes that the success of government is based on effective communication among the government, businesses and residents.

This is a common narrative framework that keeps society moving towards a common goal. Professor Loh emphasised the need for financial language to be calm and simple, and more importantly, to be linked to society and ecology. In essence, she provided the audience with a framework for government communication in action. And in real life, a structured framework for corporate governance 1H-3W is a similar tool.

Reflections

I agree with Professor Loh's views. Governments and businesses tend to focus on different perspectives. Conservatism can make government officials hesitant to create new programmes with uncertain outcomes. Businesses may adjust their behaviour to meet government expectations rather than engage with residents. A successful mechanism, in Professor Loh's view, needs to have shared risk policies between the government and the company so that conflicts can be manageable. But I believe that it is important for governments or businesses to be proactive in accommodating the ideas and opinions of residents.

Suggestions

Professor Loh ended by emphasising the importance of public narratives and more efficient communication channels. I argue that such communication channels must be supported with common scientific language and data. As she stated, "Whether we're talking about high-level officials or professional staff, we don't always know what to do." This suggests that governments, businesses and residents need to communicate with one another. The point of communication is to balance the interests of each party. Professor Loh cited the example of a shipping facility that has expensive cleaning equipment and needs to address the question of who is going to pay for it and the source of the money. 1H-3W is a scientific language tool that can be used in this situation. The "What" question asks what the shipping facility governs. The "Why" question asks why governance is needed. The "Who" question addresses the roles involved, while the "How" question leads to ways of solving the issue.

But before 1H-3W can be truly realised, I think a digital measurement programme is needed. The government could designate "transformation zones" where government, businesses and the community can work together on projects. The data from the project could be fed into a climate simulation tool such as En-ROADS for a forecasting demonstration. This way, the government can see how much pollution has been reduced at each point in the construction of the terminal. At the next step, how much funding is needed? Governments, businesses and residents can move from vague communication to clear, precise decision-making.

Ms Melanie Ryan on Narrative and Mobilisation

Speaker's Perspective

Emotions turned out to be the final theme. Ms Melanie Ryan, Chief Executive Officer, Unearthodox, observed that trust and cooperation between people are based on emotions. Since the green transition requires scientists, entrepreneurs and governments, all with different backgrounds, to come together, emotions becomes an important factor that connects them.

Reflections

People narrate topics from different perspectives. Financiers focus on the rate of return, governments on stability, and residents on well-being. But certain qualities are universal, such as love and devotion, sacrifice and bravery. I believe what Ms Ryan is saying is that people need to connect from the heart. In a team, the leader who realises the limitations of his teammates can show tolerance, commitment and responsibility. The same is true in society. It is only when a group or organisation can connect everyone that it can lead the way to a sustainable culture.

Moving from a linear to a circular economy requires such a narrative, with leaders leading others.

Suggestions

After examining many methods, practical examples and data, I realised that emotional connection is essential. Governments could launch a "Sustainable Reinvention Programme" to transform cold ESG data into human narratives through documentaries, art exhibitions and programmes that develop the next generation of leaders with both professionalism and mission. Leaders require not only strength but also morals and responsibility.

Conclusion

IMPACT WEEK was deeply inspiring. Despite the challenges encountered, the speakers chose to stand on stage and declare their striving for human happiness.

Overall, the speakers' narratives can be summarised into three dimensions, with Mr Nair and Ms Ryan making powerful reflections and critiques of past frameworks. In terms of designing systems, Dr Liang and Professor Loh provided implementable frameworks, while Dr Brooks made it clear that on-the-ground solutions are attractive to the community. In all, the speakers provided a colourful strategy blueprint to take us further and better.

As Sir Attenborough stated, "But it's now becoming apparent that it's not all doom and gloom. There's a chance for us to make amends, to complete our journey of development, manage our impact, and once again become a species in balance with nature. All we need is the will to do so. We now have the opportunity to create the perfect home for ourselves and restore the rich, healthy, and wonderful world that we inherited. Just imagine that (Hughes et al., 2020)."

The author at IMPACT WEEK.

References

CATL. (n.d.). *Battery recycling.* https://www.catl.com/en/solution/recycling/

China National Environmental Monitoring Centre. (2025). *Real-time data* [Photograph]. Retrieved October 11, 2025, from https://www.cnemc.cn/

Hughes, J., Scholey, K., & Fothergill, A. (Directors). (2020). *David Attenborough: A life on our planet* [Film]. Altitude Film Entertainment; Silverback Films; World Wildlife Fund; Netflix.

Loh, L. (2025, August 18). *Loh's 3R approach for sustainable literacy* [Lecture].

Saudipedia (n.d.). *Does Saudi Arabia support the green economy?* https://saudipedia.com/ch/article/922/%E7%BB%8F%E6%B5%8E%E4%B8%8E%E5%95%86%E4%B8%9A/%E7%BB%8F%E6%B5%8E%E4%BA%8B%E5%8A%A1/%E6%B2%99%E7%89%B9%E7%8E%8B%E5%9B%BD%E6%98%AF%E5%90%A6%E6%94%AF%E6%8C%81%E7%BB%BF%E8%89%B2%E7%BB%8F%E6%B5%8E%EF%BC%9F

Wang, N. (2024, September 25). *How difficult is it for Chinese renewable energy companies to secure financing overseas?* Greenpeace. https://www.greenpeace.org.cn/2024/09/25/chinese-renewableenergy-companies-offshore-financing/

Xia, K. (2023, August 29). *The leather industry's impact on the environment*. Faunalytics. https://faunalytics.org/the-leatherindustrys-impact-on-the-environment/

Zhu, K. (2022, June 19). *How did CATL rise to become the "King" in 11 years?* CheJiaHao. https://chejiahao.m.autohome.com.cn/partner/vivo/info/10700605

From Green Transition to Silver Economy: Scaling Sustainability for Planet and People

GAO Chang

Introduction

During IMPACT WEEK 2025, I attended two sessions that left a strong impression on me: "Greening at Scale: China's Green Economy in Action" and "Unlocking the Silver Economy: Asian Families Leading the Way". The first session showed how countries and industries can move beyond small pilot projects to build large and financially sustainable green transitions. The second turned attention from the environment to people, exploring how ageing societies can become drivers of social innovation rather than economic burden.

I chose these two sessions because they reflect the two essential dimensions of sustainability. One focuses on protecting the planet, while the other focuses on improving human well-being. Together, they illustrate that real sustainability is not only about cutting emissions, but also about creating inclusion and dignity for people of all ages.

Scaling Up and Sustaining the Green Transition

The global green transition aims to move societies towards eco-friendly practices, but that will only last if the practices become economically viable and not just exist as moral ideals. Environmental protection must go hand in hand with value creation, so that firms, governments and communities have incentives to continue these efforts. The key question is how to make a green transition broader in scale, deeper in impact, and financially sustainable. This section explores four guiding principles that emerged from the IMPACT WEEK sessions: government leadership, expanding the economic pie, modular technology, and patient capital. Together, they show how environmental goals can become practical and profitable.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Government Provides Direction; Businesses Get Things Done

Strong government leadership can give the private sector the confidence to invest and innovate. Governments can set clear goals, offer incentives, and remove regulatory barriers. This direction is essential because most green projects require high upfront costs and a long payback period; clear guidance and support from the government reduce uncertainty and attract private companies' participation.

The case of Shenzhen's electric bus programme shows how government direction can make a green transition real. By the end of 2018, the city had converted about 16,000 buses to fully electric operations (Keegan, 2018). The government offered clear targets and financial support, and local firms made the plan work. I think this matters because it shows that when the public and private sectors operate together, big and costly projects can succeed.

Shenzhen achieved this by doing three things well. First, the local government made electric transport a political priority. Second, it offered substantial purchase and operation subsidies that covered a significant amount of bus costs. Third, it built tens of thousands of charging stations before the fleet expansion, ensuring buses could run efficiently. These reduced risks for operators and signalled that the city was committed to the long run. In short, the policies implemented ensured the smooth transition to electric transportation.

Subsequently, companies work on solving technical and financial challenges. Manufacturers like BYD supplied vehicles on a large scale, while companies used leasing models to prevent high upfront costs. Specialised partners managed charging and battery maintenance, which reduced downtime. The division of roles shared the risks and uncertainties of the project, speeding up project roll-out (Cities Climate Finance Leadership Alliance, n.d.).

The Shenzhen case worked due to the alignment of public goals and private incentives. This balance built trust. The government provided a stable framework and long-term support, while companies focused on daily operations and technical improvements. Prior to attending this session, I assumed that green energy projects were mostly charitable efforts operated at a financial loss. After listening to the speakers, I realised that when direction, policies and markets align, green energy can, in fact, become a profitable business. However, I wonder whether this approach would fit smaller cities with fewer resources. Such projects require substantial investments and strong coordination that many local governments may struggle to meet.

Creating Shared Value Instead of Competing for Resources

For a green transition to gain broad support, it must be seen as a creator of new value rather than a competition over existing wealth. In other words, governments, firms and communities all need to benefit. This idea of "growing the pie" (increasing overall benefits) instead of "splitting the same pie" among different players means that environmental projects should expand opportunities instead of forcing trade-offs.

A powerful example is China's Kubuqi Desert restoration project. Since the late 1980s, the local government, residents and Elion Resources Group have jointly turned a barren desert into a productive ecosystem that benefits all stakeholders (Wang & Li, 2019). They deliberately integrated environmental restoration with economic development. As a result, the greening of Kubuqi created new industries. Local residents began growing liquorice, a valuable medicinal plant, on restored land. Tourism followed, bringing hotels and dune buggy tours, while renewable energy farms were built on the desert flats. All these activities provided jobs and new income streams for local communities and profit for the company, while improving the ecosystem. The United Nations Environment Programme estimated that the Kubuqi programme created about US$1.8 billion in total value over 50 years (Campbell, 2017). I previously viewed green projects mainly as environmental actions, however, I now recognise that more resilient and efficient models are those built on win-win models where nature, the economy and communities all benefit together.

By focusing on expanding the overall economic pie, green transition becomes a positive-sum game. This shared gain turns sustainability from a perceived cost into a shared opportunity—an engine of innovation and growth that communities and companies alike want to invest in.

Making Green Technology Modular and Accessible

Another lesson from the IMPACT WEEK discussion was that for the green transition to grow and last, technology must be simple, standardised and easy to adopt. If solutions are too complex or expensive, they remain niche. But if they become modular, it can spread quickly. Modularity reduces costs and allows ordinary users to participate without specialised knowledge (Sustainability Directory, n.d.).

The Kubuqi Desert case has illustrated the power of modular thinking. Engineers developed simple and repeatable methods, such as planting willow trees using high-pressure water jets, which reduced planting time per tree from ten minutes to ten seconds. They also identified hardy plants like liquorice, and willow that could serve as standard "modules" for reforestation. These species were easy to grow, served both ecological and commercial purposes, and were replicable across many sites (Campbell, 2017). By turning green tech into modular and user-friendly components, barriers to entry become lower. Small businesses, farmers, or even individual households can participate.

This inclusiveness builds momentum, as more users generate demand and help drive further innovation. Over time, modularity transforms sustainability from a niche practice into a mainstream social movement. In turn, this widespread adoption creates a bigger market that further lowers costs and stimulates innovation.

Patient Capital: Investing in Long-Term Green Gains

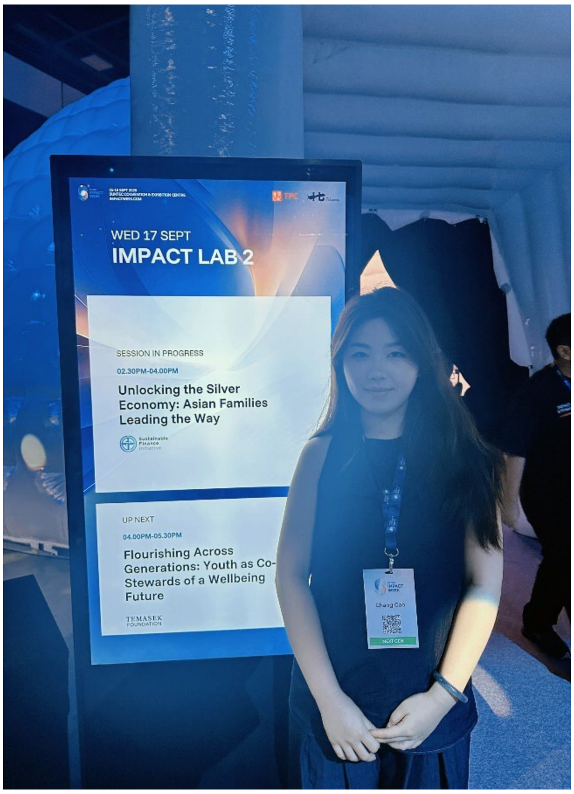
The green transition also depends on patient investment. Many green projects take years to yield returns. If investors are unwilling to wait, projects may collapse prematurely. Therefore, sustainable financing requires patience.

This idea of "patient capital" emphasises the need for both government and private investors to adopt long-term perspectives. Again, the Kubuqi case demonstrates this principle. During its early years, costs were high and direct profits were minimal; nevertheless, Elion Group and its partners persisted because they believed that ecological recovery and business growth required time. As the project leader explained, "Welfare work alone is not sustainable… So we had to make sure local people made a profit alongside us." This profit-sharing model motivated everyone to stay involved. The project reached profitability only after approximately 25 years of consistent effort, and this long-term dedication generated steady revenue from agriculture, solar power, and tourism while delivering environmental benefits (Campbell, 2017).

The result is a self-sufficient ecosystem that now attracts global recognition. The United Nations named Elion a Global Dryland Champion in 2013 for improving livelihoods and combating desertification. Personally, cultivating this level of patience is challenging since businesses typically seek quick profits. In summary, patient capital acts as the bridge between the early, difficult years of green innovation and its later success.

Silver Economy: Turning Demographic Pressure into Opportunity

After examining the environmental dimension of sustainability, I turned to its social dimension, the challenges and opportunities created by ageing populations. During IMPACT WEEK, I attended a session on the silver economy that reshaped how I view demographic change.

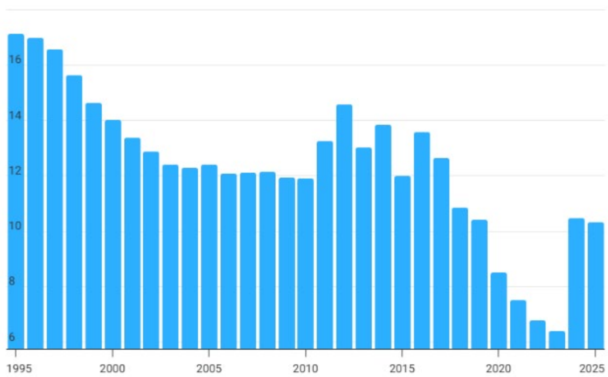


The author at the IMPACT WEEK 2025 session "Unlocking the Silver Economy: Asian Families Leading the Way".

The term silver economy refers to the range of economic activities that serve people aged around 50 and above. In other words, it is about transforming the needs of older adults into new demand, new jobs and reduced social tension. In China, this issue is especially urgent. Population ageing has become irreversible and is now considered a basic national condition (Yuan, 2025). In this section, I will examine why the silver economy is vital, how China and its neighbouring countries are responding, and what challenges remain.

China's Demographic Shift and Economic Impact

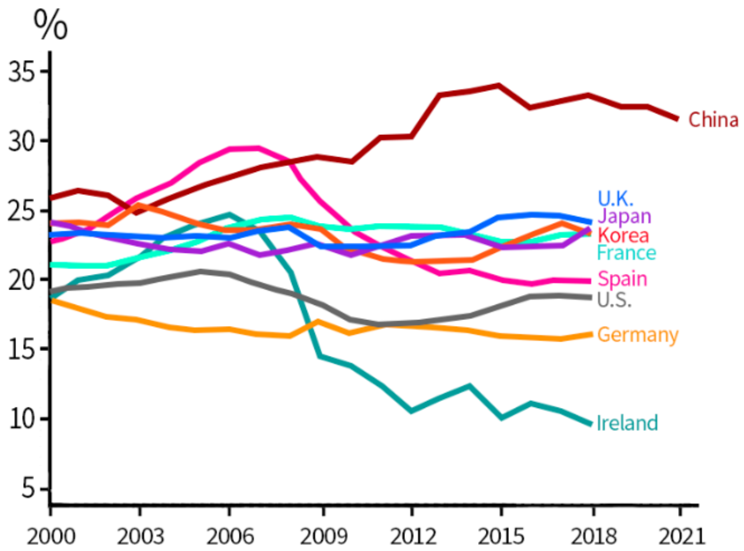
China's population trend is clear. According to Macrotrends (2025), China's birth rate has been declining for years, with only a brief rise in 2024 due to the symbolic Year of the Dragon. Even so, the rate remains far below pre-2018 levels, and projections for 2025 continue downward. This demographic shift has weakened sectors that once drove economic growth, such as housing and education.



China's birth rate from 1995 to 2025.

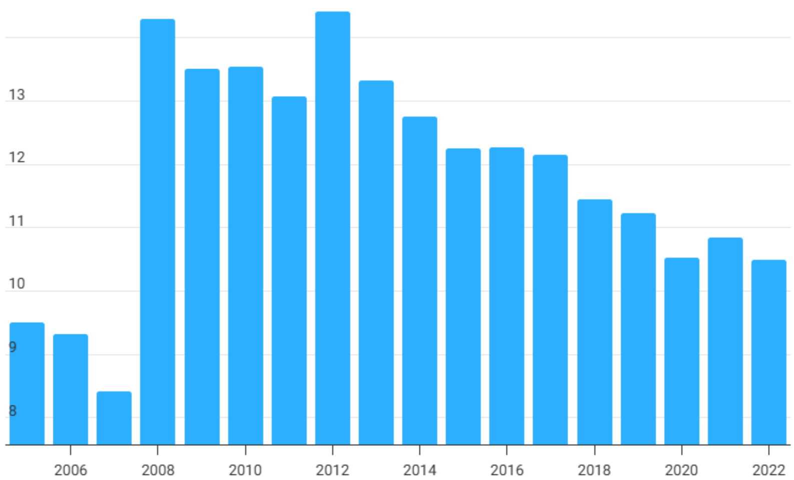
Source: Macrotrends, 2025

Official data shows that real estate and infrastructure still account for a large share of China's Gross Domestic Product (GDP), but their returns have dropped (Stanford Center on China's Economy and Institutions, n.d.). Spending on education, once a strong driver, has also plateaued (Macrotrends, 2022). These slowdowns will likely pressure local finances and employment. Declining demand for maternity hospitals and kindergartens is just the beginning. For a country long dependent on land-based revenue, this structural transformation challenges the foundations of China's earlier growth model.



Real estate and infrastructure demand as a percentage of GDP.

Source: Stanford Center on China's Economy and Institutions, 2025



China education spending as a percentage of GDP from 2006 to 2022.

Source: Macrotrends, 2022

The government has introduced several policies to boost births, such as first relaxing the two-child rule, then introducing the three-child rule and support measures, but these steps did not reverse the trend (The State Council of China, 2021). Since policies can quickly change personal choice, I focus more on services for older adults and caregivers- sectors that can grow despite fertility rates.

The government has introduced several policies to boost births, such as first relaxing the two-child rule, then introducing the three-child rule and support measures, but these steps did not reverse the trend (The State Council of China, 2021). Since policies can quickly change personal choice, I focus more on services for older adults and caregivers—sectors that can grow despite fertility rates.

Learning from Neighbours: Japan, South Korea and Singapore

Countries beyond China, such as Japan, South Korea and Singapore, also faced ageing populations (Lim, 2024). There are efforts to expand elder-related industries. For example, South Korea is developing senior-oriented products such as specialty food, as well as healthcare services (Wisconsin Economic Development, 2024). These examples show that ageing can unlock new markets. The lesson is simple: when products meet real needs, and prices are transparent, older consumers are willing to pay. I think Chinese companies can learn from this emphasis on clear value and reliable delivery.

Today's seniors are active consumers. They often have savings, access to digital tools, and a strong desire for dignity and connection. They are willing to spend on products that make life easier, healthier or more enjoyable. If services respect their habits and provide real value, they become loyal users (Preet, 2024).

China's Response: Digital Transformation and "Senior-Friendly" Innovation

This part was inspired by my boyfriend, who works at China Telecom, and through his experience, I noticed how telecom companies play a key role in adapting digital services for older users.

In early 2024, the General Office of the State Council issued the country's first national plan for the silver economy. It outlined 26 key tasks across services, standards, industrial clusters, and branding (The State Council of China, 2024). Soon after, the Ministry of Industry and Information Technology (MIIT) launched the Digital Senior-Friendly China campaign, calling major state telecom operators to make apps, websites, and smart devices easier for older adults to use (Ministry of Industry and Information Technology, 2024). These initiatives signal that the government expects firms to deliver practical solutions rather than slogans.

Major telecom operators responded quickly. China Telecom rolled out many "digital senior" products, such as simplified mobile apps, talking blood pressure monitors, and a 5G home monitoring system (Sohu, 2025). China Mobile launched the Elderly Guard Programme, serving tens of millions of users by the end of 2024. These programmes not only created new jobs but also generated new revenue streams while enhancing each company's social reputation. Many seniors who live alone now rely on these digital tools for safety and health management.

Beyond health, digital tools can also address emotional needs. Voice-interactive radios, immersive VR experiences, and online entertainment platforms help reduce loneliness. Adult children benefit too, as remote monitoring and smart reminders lower caregiving stress and free up time for work or rest.

Challenges and Reflections

Despite progress, the silver economy remains uneven. Many products are designed from assumptions rather than real needs. Some designs ignore the physical, cognitive and emotional differences among seniors. Others are overly complex or misleading. For instance, my grandparents do not trust health supplements and find many "smart" devices confusing. They still believe the traditional saying that "all medicine carries some toxicity". Effective products prioritise simplicity and comfort, not novelty. This reflects a deeper trust gap between older consumers and the market.

What worries me more is the rise of scams disguised as "senior-care investment". News reports frequently expose schemes that exploit seniors' savings under the guise of health or financial opportunities. Without strict regulation and honest marketing, the credibility of the whole industry could be damaged. Therefore, building trust must precede large-scale industry expansion.

Conclusion

Looking ahead, I believe the silver economy will keep expanding. The silver economy also creates new employment opportunities for former teachers, nurses and healthcare workers. Across Chinese cities, a growing number of individual service providers and small businesses now serve older clients. Professional caregivers support seniors with limited mobility, community doctors conduct home visits for basic check-ups, and senior colleges teach digital skills to help older adults reconnect with society.

Building a robust silver economy is a long-term task that requires rethinking how societies provide care to older adults and how older adults consume services. By 2050, one in three Chinese citizens will be a senior. By then, I will be older as well. The products, services and policies we innovate now will define the quality of life for millions of seniors and eventually for ourselves. The silver economy reminds me that true sustainability means including everyone, regardless of age, and turning every social challenge into a chance for progress.

References

Campbell, C. (2017, July 27). China's greening of the vast kubuqi desert is a model for land restoration projects everywhere. *TIME.* https://time.com/4851013/china-greening-kubuqi-desert-land-restoration/

Cities Climate Finance Leadership Alliance. (n.d.). *Leasing model for electric buses and charging infrastructure in Shenzhen, China.* https://citiesclimatefinance.org/financial-instruments/cases/leasing_model_for_electric_buses_and_charging_infrastructure_in_shenzhen_china

Keegan, M. (2018, December 12). Shenzhen's silent revolution: World's first fully electric bus fleet quietens Chinese megacity. *The Guardian.* https://www.theguardian.com/cities/2018/dec/12/silence-shenzhen-world-first-electric-bus-fleet

Lim, L. (2024, March 13). East Asian societies have the world's lowest birth rates—and are learning that 'throwing a bit of money' at the problem isn't solving anything. *Yahoo Finance.* https://finance.yahoo.com/news/east-asian-societies-world-lowest-210000351.html

Macrotrends. (2022). *China education spending.* https://www.macrotrends.net/global-metrics/countries/CHN/china/education-spending

Macrotrends. (2025). *China birth rate 1950-2025.* https://www.macrotrends.net/global-metrics/countries/CHN/china/birth-rate

Ministry of Industry and Information Technology, China. (2024, April 29). *Notice from the General Office of the Ministry of Industry and Information Technology on launching the 2024 digital senior-friendly China campaign.* https://www.gov.cn/zhengce/zhengceku/202405/content_6950952.htm

Preet, K. (2024, July 19). *Unlocking the potential of APAC's silver economy.* FedEx. https://www.fedex.com/en-sg/business-insights/sme/unlocking-the-potential-of-apacs-silver-economy.html

Sohu. (2025, August 27). *Tender care in sweltering heat: China Telecom's elder-friendly services warm hearts.* https://www.sohu.com/a/929079840_100263313

Stanford Center on China's Economy and Institutions. (2025). *Overbuilt? Assessing the diminishing returns to building in China.* https://sccei.fsi.stanford.edu/china-briefs/overbuilt-assessing-diminishing-returns-building-china

Sustainability Directory. (n.d.). *Modular technology.* https://lifestyle.sustainability-directory.com/area/modular-technology/

The State Council of China. (2021, July 20). *China releases decision on third-child policy, supporting measures.* https://english.www.gov.cn/policies/latestreleases/202107/20/content_WS60f6c308c6d0df57f98dd491.html

The State Council of China. (2024, January 15). *Opinions of the General Office of the State Council on developing the silver economy and improving the well-being of the elderly.* https://www.gov.cn/zhengce/content/202401/content_6926087.htm

Wang, M., & Li, D. (2019, July 28). Kubuqi combines desert control with economic growth. *CGTN.* https://news.cgtn.com/news/2019-07-28/Kubuqi-combines-desert-control-with-economic-growth-IHEv4q7qSs/index.html

Wisconsin Economic Development. (2024, February 1). *South Korea capitalizes on the "silver economy."* https://wedc.org/market-intelligence/posts/south-korea-capitalizes-on-the-silver-economy/

Yuan, X. (2025, September 17). China's solution to proactively developing the silver economy. *Global Times.* https://www.globaltimes.cn/page/202509/1343764.shtml

Green Journey of IMPACT WEEK

OUYANG Ziqi

Introduction

IMPACT WEEK 2025 provided an integrated and comprehensive platform for discussions about sustainability through multi-stakeholder discussions. During the event, politicians, green investors, environmental NGOs, researchers and other experts from different industries gathered in Singapore to share their experience, reflections and insights.

This journey log summarises two dialogues: "From Carbon to Coherence: ASEAN's Leap into Regenerative Climate Economies" and "Financing the Blue Shift: From Pledges to Regenerative Capital". The first discussion was about the challenges and opportunities ASEAN nations face within the global climate transition landscape. Under the Paris Agreement, emissions must be reduced by 45% by 2030 and reach net-zero by 2050 (United Nations, n.d.). Over the past decade from 2014 to 2024, less than 10% of global marine-related investment capital has flowed into Asia (Skattum, 2025). Thus, the second discussion mentioned the potential crisis relating to Asia's blue finance and capital structures.

Dialogue 1: Transforming ASEAN's Climate Economy

Decarbonisation and Recarbonisation

Professor Yuen Yoong Leong, Director of Sustainability Studies at the United Nations Sustainable Development Solutions Network, emphasised that for ASEAN to achieve a low-carbon transition, it must move beyond fragmented approaches based on various national policies. Instead, it should adopt a system-designed approach to decarbonisation and ecosystem recarbonisation.

While many scholars agree with the positive role of renewable energy in green development, one study suggested that investments in solar and other clean energy technologies would significantly advance sustainable development over

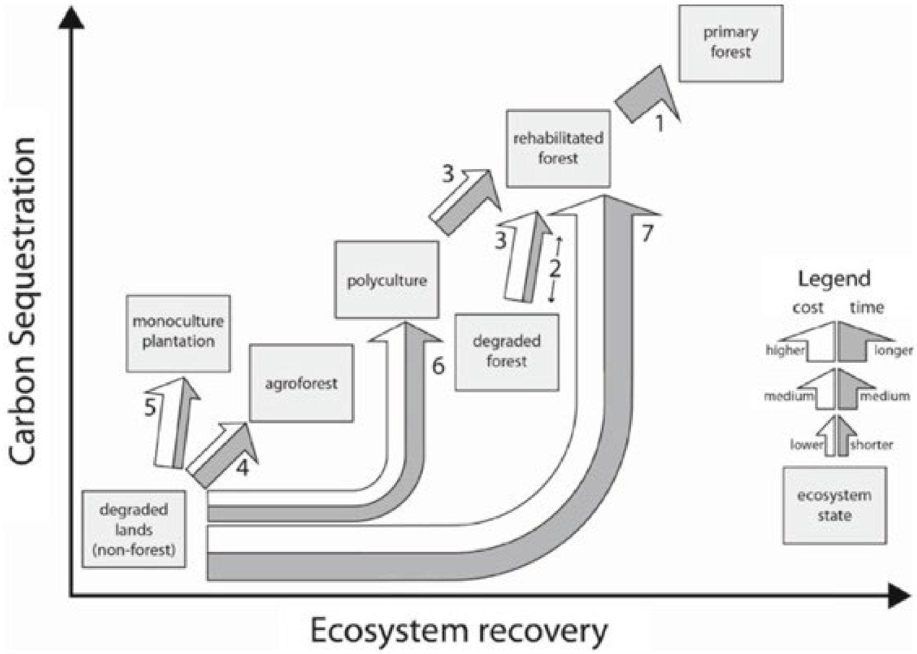
Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

the coming decades (Maka, Ghalut & Elsaye, 2024). However, Professor Leong argued that manufacturing, transportation and disposal processes still incur substantial embedded carbon costs. In class, the "Domains for Decarbonisation" concept reinforced the same perspective (Loh, 2025)—decarbonisation encompasses not only energy substitution and efficiency improvements but also requires fundamental emission control starting at the design and development stage, such as R&D for carbon capture.

"From Carbon to Coherence: ASEAN's Leap into Regenerative Climate Economies" panel discussion.

Regarding ecological recarbonisation, Professor Leong pointed out that decades of decarbonising development had severely depleted ecosystem carbon stocks. This provided me with a tangible understanding of the strategic implementation of the Paris Agreement's net-zero target: the restoration of ecosystem health towards the establishment of a renewable carbon cycle system.

The panel moderator, Mr Bradford Willis, Senior Associate at the Columbia Center on Sustainable Investment, added that while decarbonising electricity systems is a primary objective of climate action, land and soil conservation could reduce emissions by as much as 30% worldwide. To mitigate the impact of anthropogenic carbon emissions, exploring the capacity of natural ecosystems to sequester and store atmospheric carbon is essential (Venter et al., 2012). The trade-offs among various reforestation approaches based on carbon values and ecosystem integrity are illustrated in the diagram below.



The relationship between the carbon sequestration benefits of recarbonisation and ecosystem recovery.

Source: Venter et al., 2012

Recarbonisation and decarbonisation are not two separate measures but an integrated approach. The former involves the development of green economy infrastructure and systems design, while the latter restores ecosystems' capacity for self-regulation. They work in tandem with each other to provide the structural basis for net-zero emission targets. Net zero is a systemic and long-term choice, as discussed in class. Nations and companies must balance technological progress and ecological restoration to create a virtuous cycle in which natural regeneration and economic expansion reinforce and compound each other, leading ASEAN towards a regenerative economy.

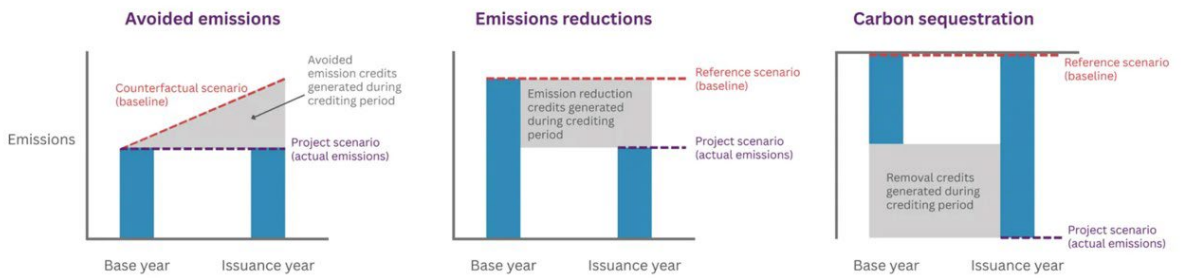
Carbon Credits and Carbon Finance

More businesses are making their climate actions and future emissions reduction commitments public, using the Voluntary Carbon Market to buy carbon credits to offset their own emissions. However, due to the lack of unified regulatory and verification mechanisms for climate claims, their authenticity and transparency were frequently questioned, and they were criticised for being misleading or "greenwashing" (Trouwloon et al., 2023). According to MSCI

Panellists discussed carbon credits.

(Turner, 2025), the 2024 average spot price of carbon credit fell by approximately 20% compared with 2023, indicating weak market confidence and reduced trading volumes. Experts at the panel discussion attributed this to uncertainty between "abatement credits" and "removal credits", where investors cannot determine the actual climate benefits of projects.

The ways carbon reduction is approached remain unclear, which encouraged me to conduct research. The Science Based Targets Initiative (2025) emphasised distinguishing aspects in climate contribution pathways between different carbon credit types. There are three intervention mechanisms: Avoided Emissions, Emission Reductions, and Carbon Sequestration.



Three different types of carbon credits.

Sourced: Science Based Targets Initiative, 2025

One of the conflicts in the carbon credit market is the wide disparity in the timing and effectiveness of different climate projects. This makes it difficult for companies and investors to accurately value a project's actual climate merits, thereby undermining market trust and price stability. Top-quality carbon offsets, as defined in Professor Lawrence Loh's lecture notes (Loh, 2025), must meet five criteria: "Additionality", "Verification", "Permanence", "Measurability" and "Avoid Leakage".

Mr Wayne Mulligan, Chief Executive Officer, NZ Bio Forestry, argued that carbon credits should not be regarded as financial instruments for pricing today. He cited New Zealand as an example, demonstrating how converting forestry residues and biomass into new materials and clean energy transforms carbon into a driver for innovation and green industries. This shift serves as an example of how carbon financing can move beyond emissions control and focus on resource circulation and regeneration of value.

Based on conference discussions and my research, the future of carbon finance goes beyond establishing a reasonably priced and stable market. It could drive a deeper systemic shift. Ecosystems cannot be saved solely by carbon traded at market prices. As Mr Mulligan emphasised, carbon credits are not a solution for corporate emissions offsetting, rather, they are a mechanism for society to recognise carbon's economic value. Society could achieve net-zero transformation by means of ecological restoration and a circular economy of recarbonisation.

Regional Cooperation

At the end of this session, I was struck by the speakers' unified stance on strategic collaboration. The speakers collectively emphasised the pivotal role of regional collaboration in achieving ASEAN's low-carbon transition. Scholars concluded that regional collaboration is the key to overcoming inter-state rivalry and achieving shared prosperity, in addition to being a policy tool for ASEAN's low-carbon transformation. Through resource sharing and transnational energy connectivity, ASEAN members jointly create a systemic low-carbon green framework that is resilient and equitable. Such collaboration represents the flow of finance and energy as well as the fusion of technology and knowledge based on mutual trust.

Dialogue 2: Unlocking Regenerative Finance for Oceans

Asia's Strategic Leadership in Marine Regenerative Finance

The panellists emphasised that Asia is the "engine of the marine economy" since it has the greatest port infrastructure, shipbuilding capacity, fishing fleets and shipping logistics systems in the world. As the core region for blue-economy industries, China's proactive institutional strategy should serve as a model. By 2030, China's ports are expected to achieve an annual growth rate of 6%, a dominance that carries commensurate environmental responsibilities (Skattum, 2025).

The speakers' discussion on Asia's blue economy sectors influenced my understanding. I recognise that the blue economy is essential to Asia's economic development, coupled with the green economy, and requires public attention and effective conservation measures. One of the speakers said that there would be no hope for humans if Asia did not change, highlighting the necessity for change in Asia's blue economy. Their analysis suggested that Asia must create a system of governance which coordinates economic growth and the environment. Even though Asia's wealth of resources presents opportunities, it also increases the potential for harmful environmental effects. The solution to achieving effective, sustainable development is to reduce these risks.

Actions and Measures

Although blue finance is gaining attention, the key challenge lies in converting verbal promises into structured capital flows. The speakers emphasised the significance of creating finance channels and mechanisms, particularly in Asia. Without structured financial systems, the impact of sustainable initiatives may remain limited.

Ms Cherie Nursalim, Vice Chair, Giti Group, recommended the adoption of blended finance strategies for ocean financing. The blended finance combines public, private and philanthropic funds to share risk and reduce capital costs. Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee), similarly emphasised the necessity for standards and regulations.

I agree that these recommendations are both realistic and feasible. The World Bank Group (n.d.) proposed that blended finance has become more popular in the application of public-private partnerships in infrastructure, climate and social impact fields, which could be one of the leading drivers of global sustainable development and would increase the convenience of marine economic development and financing. Capital inflows, outflows and risk assessments are significant to control so that funds flow into sustainable and high-potential marine sustainability ventures. A standardised, transparent and data-driven regulatory framework could promote the benefits of blue finance despite its vast scale, allowing the blue economy to expand consistently and sustainably.

Conclusion

Through these two forums, I developed two profound insights.

First, Asia and emerging economies should not be limited to implementing future targets or objectives. They must take ownership of both the process and outcome of sustainability action through forward-looking strategic planning and systemic innovation. Whether in recarbonisation, the blue economy, or regenerative finance, strengthening Asia's leadership is essential. This approach places Asia in a dominant position of regulation and capital allocation, which enhances its leadership and contribution to global sustainable governance.

Secondly, I realise that "sustainable development" is a network of systemic processes and capital allocation rather than a slogan. We must understand and construct the systematic and capital structures rather than relying on literal interpretations or definitions of "green" or "sustainability."

References

Loh, L. (2025). *BMP5103 – Week 8: Carbon disclosures and management* [PowerPoint slides 27-39]. National University of Singapore, Business School.

Maka, A. O. M., Ghalut, T., & Elsaye, E. (2024). The pathway towards decarbonisation and net-zero emissions by 2050: The role of solar energy technology. *Green Technologies and Sustainability, 2*(3), 100107. https://doi.org/10.1016/j.grets.2024.100107

Science Based Targets Initiative. (2025, July 8). *Deep dive: The role of carbon credits in SBTi Corporate Net-Zero Standard V2.* https://sciencebasedtargets.org/blog/deep-dive-the-role-of-carbon-credits-in-sbti-corporate-net-zero-standard-v2

Skattum, J. (2025, July 29). *Asia's ocean opportunity: why a blue-economy venture fund is needed.* Economist Impact World Ocean Initiative. https://impact.economist.com/ocean/sustainable-ocean-economy/asias-ocean-opportunity-why-a-blue-economy-venture-fund-is-needed

Trouwloon, D., Streck, C., Chagas, T., & Martinus, G. (2023). Understanding the use of carbon credits by companies: A review of the defining elements of corporate climate claims. *Global Challenges, 7*(4), 2200158. https://doi.org/10.1002/gch2.202200158

Turner, G., Saunders, J., Akhouri, U., & Lambert, J. (2025, January 6). *Frozen carbon credit market may thaw as 2030 gets closer.* MSCI. https://www.msci.com/research-and-insights/blog-post/frozen-carbon-credit-market-may-thaw-as-2030-gets-closer

United Nations. (n.d.). *For a livable climate: Net-zero commitments must be backed by credible action.* https://www.un.org/en/climatechange/net-zero-coalition

Venter, M., Venter, O., Laurance, S., & Bird, M. (2012). Recarbonization of the humid tropics. In R. Lal, K. Lorenz, R. F. Hüttl, B. U. Schneider, & J. von Braun (Eds.), *Recarbonization of the biosphere: ecosystems and the global carbon cycle* (pp. 226– 269). Springer. https://www.researchgate.net/figure/Carbon-sequestration-benefi-ts-of-recarbonization-strategies-relative-to-their_fig3_247769766

World Bank Group. (n.d.) *Blended finance.* https://ppp.worldbank.org/blended-finance

Greening at Scale: CATL's Path in Europe

ZHU Yanyu

Introduction

The discussion was on how Chinese companies can strategically "go global" in the era defined by green transformation. Among the many themes discussed, two topics stood out to me: technology internationalisation and patient capital for long-cycle investment. To delve deeper into these themes more concretely, I selected the case study of Contemporary Amperex Technology Co., Limited (CATL). As one of the leading Chinese battery manufacturers, CATL represents an outstanding example of how companies integrate technological export, local collaboration and patient investment.

Greening at Scale: China's Green Economy in Action

A clear message from the IMPACT WEEK speakers was that going global does not mean "grabbing market share" in the existing markets. Instead, it means co-creating markets with local partners in a variety of new industries across Europe, Southeast Asia and the Americas. Due to this reasoning, it is important to get help from partners and governments in the areas of operation. At the executing level, companies were told to work in integration with local channel systems and installers. As regulations and business laws vary greatly across countries, companies are encouraged to slowly build up channels and services in each "small market". This change in mindset was emphasised throughout the discussions.

Pertaining to the topic of speed and cost, speakers cautioned that replicating China's fast speed for industrial chain deployment in Europe is an unrealistic goal. The entire industrial chain needs to be mobilised to ensure effective supply and service.

Speakers defined the "goal of going global" as creating a new global industrial chain by exporting developed Chinese technologies to other countries, hence establishing global standards. Rather than crowding out other local players,

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

companies were encouraged to work with them to strengthen local competitiveness on a global scale.

The theme of a long-cycle development was repeatedly emphasised. Speakers stressed that the deliverables at each developmental stage should be met with positive capital feedback. To make long-term projects more manageable, they recommend employing clear roadmaps and objectives and splitting the project into measurable checkpoints. They noted that certain industries, particularly those with long technological life cycles, such as nuclear fusion, require specialised funding structures and patient funding structures rather than traditional ten-year funding structures.

One of the speakers highlighted CATL as an example, discussing how it went from being initially doubted to receiving policy incentives from the government and growing in value. This was viewed as an instance of "patient capital" at work and served as a reminder that access to capital has changed, which means that entrepreneurs need to improve the way they run their businesses and build strong organisations.

Official attendee gift pack at IMPACT WEEK held at Suntec Convention Centre.

This event connects directly to our course learning outcomes of linking frontline applications to strategic sustainability and governance.

Case Study of CATL

I selected CATL as a case study as the speaker, Mr Blake Niu, Lead Partner at Lochpine Capital, explained how market-oriented capital can accelerate global expansion in the new energy sector. Lochpine positions itself as a financial investor that utilises CATL's ecosystem to help generate financial returns.

Technology Going Global and Local Collaboration

CATL has become a prime example of a Chinese company exporting not only its technology, but also its industrial capabilities and practices. Instead of using low-cost advantages to gain market share, its goal is to become a "global co-creator of industry" rather than a "technology provider". To co-create with local partners, turn supply-chain transparency and traceability into day-to-day operating practice, not slogans.

Strategy and Execution

CATL's overseas expansion began in Europe. In 2019, CATL started construction of its first overseas factory in Germany. After purchasing the former property from Solarworld (a German company dedicated to the manufacturing and marketing of photovoltaic products), CATL initiated a new 23-hectare green field expansion to achieve 14GWh (gigawatt hours) production capacity of batteries by 2022 (CATL, 2019).

CATL's Thuringia plant.

Source: CATL, 2022c

CATL's first European plant obtained a production license for the commissioning of a new plant for battery cell production in Thuringia. Meanwhile, the plant partially powers itself via solar power panels on its rooftop as part of its commitment to sustainable production. With a total investment of €1.8 billion, CATL aims to achieve a production capacity of 14GWh and create 2,000 jobs in Germany in the future (CATL, 2022c).

That same year, CATL announced the construction of a 100 GWh plant in the eastern Hungarian city of Debrecen, the company's biggest overseas investment worth €7.34 billion euros (CATL, 2022b; Reuters, 2022). This strategy was not an isolated one. CATL had already signed multi-year supply agreements with German carmakers such as BMW and Mercedes-Benz to secure market demand prior to building the plant (CATL, 2022a; Mercedes-Benz Group AG, 2022). This strategy of "first securing downstream customers, then establishing production capacity" effectively reduced the uncertainty of initial investment.

CATL states on its website that it "responds positively to the UN Sustainable Development Goals (SDGs)" (CATL, n.d.). In 2024, Stellantis and CATL announced plans to invest up to €4.1 billion in building a battery plant in Spain, with a target production date of the end of 2026. The plant is designed to be fully carbon-neutral to achieve net zero emissions by 2038 (ESG News, 2024).

Through these initiatives, CATL not only promotes its global expansion at the technological and market levels, but also actively engages with the EU's ESG and carbon neutrality goals, aiming to enhance its legality and trust with local society and government.

Strategic advantages

In terms of technology and production capacity, the multi-site presence in Germany, Hungary and Spain has guaranteed high supply flexibility and resilience of supply for the company, which will increase its capacity to cope with regional fluctuations.

At the market level, CATL has hedged investment risk at its source by establishing long-term supply contracts with European automakers. Furthermore, in terms of systems and policies, the company supports the EU's ESG framework and carbon neutrality goals, to increase its recognition and legitimacy with the local society and governments. Finally, in terms of industry governance, CATL, based on its leading technology and mass production capacity, not only has market competitiveness but also leads the standard and regulatory system of the global new energy industry.

Together, these factors form the key strategic advantages which CATL relies on in the overseas expansion of its technologies. This expansion strategy means that CATL is no longer a passive competitor but is a key contributor in reshaping the new European energy industry.

Strategic limitations and potential risks

While the strategic layout adopted by CATL is forward-looking and provides competitive advantages, the rapid expansion strategy adopted by the company also poses several structural risks.

Firstly, at the policy level, the company is highly dependent on the electrification strategy of the EU and the green transition process. Any tightening of subsidies or regulatory changes can have a direct effect on its return on investment. Secondly, from a cost and efficiency perspective, Europe's relatively stringent regulations, high labour costs and low supply chain efficiency would contribute to higher operating costs and compressed profit margins. Thirdly, CATL not only needs to export the technology and management expertise to the European markets, but also has to adapt to and assimilate the local institutions and business culture, which raises higher demands for the company's organisational governance and collaborative capabilities. Finally, as global battery technology is rapidly changing, the breakthrough of new technologies such as solid-state batteries may generate uncertainties that may affect CATL's existing investment portfolio and technology roadmap. These structural risks must be meticulously managed to sustain CATL's long-term competitiveness.

Patient Capital and Long-Cycle Investment

Strategic necessity

New energy projects are usually defined by large capital investments and risks, and such strategic deployments cannot be supported only by short-term funding. CATL's expansion in Europe is a prime example: its European factory projects were undertaken over the years, from project approval to construction and deployment of capacity, and this required a stable capital structure and long-term financial patience.

Risks and limitations

While patient capital has been a long-term support for CATL's global expansion, the company's operations also faced various challenges. First, the new energy industry is characterised by long investment return cycles and slow cash flow returns, and market revenue and profit lag, which may cause higher liquidity pressure.

Second, there is a significant risk of a mismatch between the speed of technological iteration and the cycles of investment. If a new technology breakthrough occurs before building a factory, the existing investment portfolio could be weakened or devalued. Furthermore, geopolitical risks, such as changes in policies, trade barriers or public sentiments across various countries, will affect the capital returns directly. A multi-national presence also means dealing with greater managerial complexity, as companies must overcome coordination challenges caused by supply chain, legal and cultural differences.

Finally, ESG commitments, including ongoing investment in green energy, carbon emissions compliance, supply chain tracking and social responsibility, can generate persistent and unavoidable long-term costs, further increasing the investment burden on companies.

Summary

These combined factors illustrate that patient capital is not only a long-term strategic resource, but also a resilient yet high-risk funding model. CATL's experience shows that patient capital is not only a financing strategy; it is an integral ability forming the basis of its globalisation strategy. First, it enables firms to pursue strategic planning under high uncertainty, while having adequate capital resilience to pursue long investment cycles.

Second, patient capital does not function in isolation, and it needs to be complemented with other mechanisms, such as early order lock-in, sustained R&D investment and policy coordination, to establish a full, closed loop of capital, technology and market. This loop could provide a stable foundation for long-term investment.

In essence, patient capital is more than finances; it is a reflection of strategic vision, institutional resilience and organisational capabilities.

Concluding Reflection

I selected this session due to an ongoing trend of Chinese companies "going global". I also have an intense interest and a knowledge gap in understanding how companies can export products, capabilities and standards. During the event, I learnt more about the purpose and meaning of "going global"; it is not about "grabbing market share", but about building an ecosystem with local partners. The experience made me realise that ESG is not an overnight miracle for companies; rather, it is a process of education and accumulation.

References

CATL. (2019, October 18). *CATL starts construction of its first overseas factory in Germany.* https://www.catl.com/en/news/473.html

CATL. (2022a, September 9). *CATL and BMW Group reach framework agreement on cylindrical battery supply.* https://www.catl.com/en/news/1016.html

CATL. (2022b, August 12). *CATL announces its second European battery plant in Hungary.* https://www.catl.com/en/news/983.html

CATL. (2022c, April 6). *CATL's German plant receives approval for battery cell production.* https://www.catl.com/en/news/921.html

CATL. (n.d.). Sustainability. https://www.catl.com/en/about/sustainability/

ESG News. (2024, December 12). *Stellantis, CATL to commit €4.1 billion to carbon-neutral EV battery plant in Spain.* https://esgnews.com/stellantis-catl-to-commit-e4-1-billion-to-carbon-neutral-ev-battery-plant-in-spain/

Mercedes-Benz Group AG. (2022, August 12). *Mercedes-Benz expands battery supply partnership with CATL.* https://group.mercedes-benz.com/company/production/procuction-network/catl-partnership.html

Reuters. (2022, August 12). *China's CATL to build $7.6 bln Hungary battery plant to supply Mercedes, BMW.* https://www.reuters.com/business/autos-transportation/chinas-catl-build-new-756-bln-battery-plant-hungary-2022-08-12/

Integrating Blue Finance and Carbon Governance

WANG Ziyang

The panel session "Financing the Blue Shift: From Pledges to Regenerative Capital", held as part of IMPACT WEEK 2025 in Singapore, convened leaders from philanthropy, finance, academia, government and maritime industries to discuss building a sustainable and equitable ocean economy. The session highlighted philanthropy, impact investing and institutional funds in forming a coherent financial and policy framework with the capacity and commitment to drive the needed transformation at the necessary scale (World Bank, n.d.).

Different Types of Funds for the Oceans

From the start, several speakers recognised philanthropy as an accelerator of change. Philanthropic funding for the blue economy acts as a "pilot engine" that lowers the risks of early-stage investments and validates the feasibility of proof-of-concept models, which attracts downstream investment. Philanthropy enables international cooperation because ocean health transcends national borders. For example, initiatives in Indonesia show how philanthropic and public efforts can make ocean governance and biodiversity win together (Ocean Panel, 2025).

The most significant theme of the session was the emergence of systemic investing, a holistic approach that aligns philanthropic, public and private capital to drive system-level change. We need an "orchestrator" or a coordinating coalition that identifies the leverage points, addresses capital gaps, and align the different parts of the system behind shared goals. This model allows for blended-finance structures to combine different forms of capital to accelerate sustainable growth (World Bank, n.d.).

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Leadership, Data and Innovations

Speakers also discussed the influence on accelerated sustainability that could come from industry leadership. The Asian maritime powers, especially China, must lead in making sustainable shipping, port management and ocean stewardship a reality. Furthermore, family-owned maritime conglomerates are influential philanthropy-commerce actors in this space because they have the time horizons necessary to drive change in this sector (OECD, 2025).

A recurring focus was the interdependence of data, regulation and finance. Transparent and authentic regulation provides the predictability needed to attract capital and mitigate investment risks, while reliable scientific data transforms research into actionable insights. For example, the development of digital twin models, which simulate real-time ocean conditions such as temperature, salinity and coral health, is highlighted as a powerful tool for evidence-based investment. These data-driven innovations, combined with blended financing instruments that combine philanthropic, public and private capital, are reshaping how the blue economy is financed and managed (Giron, 2025).

Why Asia

Panellists repeatedly emphasised Asia's crucial role in Ocean Sustainability. Asia sits at the heart of the global blue economy, responsible for most of the global shipbuilding, port infrastructure and shipping capacity. According to the Ocean Panel (2025) report, countries like Indonesia, home to its vast archipelago and biodiversity-rich Coral Triangle, are both vulnerable to the effects of ocean pollution and crucial to global efforts to achieve ocean sustainability. Meanwhile, Singapore was recognised for its contributions to sustainable finance as well as its role as a convening hub for innovation and partnership in the Asia-Pacific region.

The concept of scaling from "millions to billions to trillions" encapsulated the primary goal of the forum, which was to progress from small-scale charity pilots to blended-finance mechanisms worth billions of dollars, and eventually to institutional investments worth trillions of dollars that can transform entire industries. This aligns with the Ocean Panel (2025) report, which predicted that preserving the health of the oceans throughout the world requires around US$550 billion in annual investments.

Need for Collaboration

Given that maritime concerns are intrinsically transnational, people from different countries and industries must work together. Through the demonstration of models that subsequently attract larger pools of capital, philanthropy plays a critical part in the process of risk reduction, to ensure accountability and provide investors with the opportunity to evaluate risks, disclosure and accessibility of data are essential. Both the governmental and industrial leadership of Asia play integral roles in the upward momentum of the world. The flexibility to connect financial success with ecological and social goals is often enabled by family businesses and investors with a long-term perspective. In conclusion, education, regulation and the process of establishing institutional capacity continue to be extremely important (OECD, 2025).

Themes from this session reflected broader global conversations held in 2025. At the Blue Economy & Finance Forum held in Monaco, blended-finance collaboration was emphasised. On the other hand, the report "The Ocean Economy to 2050" (OECD, 2025) forecast that the future of ocean sectors will be dependent on digitalisation, transparency and governance. At the same time, a commentary reiterated the notion that sustainability and profitability are mutually reinforcing (Giron, 2025), highlighting the trillions of dollars in potential value in sectors such as renewable energy, aquaculture and low-carbon shipping.

Insights from the blue economy discussion were complementary with those from another IMPACT WEEK session "From Carbon to Coherence: ASEAN's Leap into Regenerative Climate Economies".

Accelerating Decarbonisation

In this session, speakers first addressed the structural problem that carbon financing lacks a unified measure of success, comparable to the internal rate of return (IRR) or investment multiples commonly used by traditional investors. Impact measurement and verification remain fragmented, leading to risk aversion among capital providers ranging from philanthropies to sovereign wealth funds. Panellists advocated for concerted international efforts to improve, rather than dismantling, the existing system. Some market participants have expressed confidence in the development of carbon credits, believing they would become a standardised, tradable instrument capable of quantifying environmental impacts (Ecosystem Marketplace, 2025).

Throughout the panel discussion, it was highlighted that carbon markets are not ends in themselves but rather vehicles for systemic change. In conjunction with inclusive governance and technological advancements, they have the potential to support both adaptation and mitigation efforts. However, if communities are excluded from poorly designed markets, they risk exacerbating inequality or destroying biodiversity. Policymakers are required to ensure that carbon finance supports the creation of regenerative value in areas where forests, soils and marine resources are managed (United Nations Framework Convention on Climate Change, n.d.).

"From Carbon to Coherence: ASEAN's Leap into Regenerative Climate Economies" panel discussion.

The Case of the ASEAN Power Grid

The ASEAN Power Grid (APG) was highlighted as a prime model for regional decarbonisation and cooperation and for how cross-border infrastructure can achieve carbon and energy coherence. It would connect countries with diverse renewable resource endowments—such as hydropower in Laos, geothermal in Indonesia and the Philippines, and solar in Thailand and Singapore—into an integrated and resilient network. The implementation of this system would not only enhance energy security but also lay the foundation for equitable benefit sharing and a just transition. Panellists emphasised the importance of transparent governance, standardised standards and financing mechanisms that incorporate community development funds and fair pricing models to ensure the financial viability of such initiatives.

Overall Conclusion

In conclusion, both panel discussions reached a common consensus regarding climate action: systemic design is crucial. Whether addressing marine ecosystems or regional power grids, sustainability requires the successful coordination of finance, policy and society. One speaker noted that while large-scale infrastructure inevitably alters ecosystems, thoughtful, engaged and long-term design can also create "benefitting ecosystems". The ASEAN region exemplifies this concept, as countries move away from siloed national plans and towards comprehensive regional frameworks that link energy, land use, water management and community development. Only when carbon markets, ocean finance and energy systems operate according to shared principles—transparency, accessibility and fairness—can climate change governance achieve true coherence. Asia's leadership and influence, given its industrial strength, biodiversity and policy momentum, are crucial. The region has the potential to lead the world away from fragmented governance and towards an integrated system, linking blue and green finance into a holistic framework for sustainable growth (Giron, 2025).

References

Ecosystem Marketplace. (2025). *2025 State of the voluntary carbon market (SOVCM).* https://www.ecosystemmarketplace.com/publications/2025-state-of-the-voluntary-carbon-market-sovcm/

Giron, A. (2025, May 2). The business case for a sustainable blue economy. *Project Syndicate.* https://www.project-syndicate.org/commentary/ocean-economy-represents-high-potential-investment-opportunity-by-alfredo-giron-2025-05

Ocean Panel. (2025, June 6). *Ocean finance for the sustainable ocean economy.* https://oceanpanel.org/publication/finance-for-the-sustainable-ocean-economy/

OECD. (2025). *The ocean economy to 2050.* https://doi.org/10.1787/a9096fb1-en

United Nations Framework Convention on Climate Change. (n.d.). *The Paris Agreement.* https://unfccc.int/process-and-meetings/the-paris-agreement

World Bank. (n.d.). *Accelerating Blue Finance: Instruments, Case Studies, and Pathways to Scale.* https://documents1.worldbank.org/curated/en/099052925003028261/pdf/P180273-c31cabb1-1115-4cfa-9fda-4862ab3a6ecc.pdf

Silver Economy and Family Capital for Sustainability

LU Ian Teng

Setting the Stage

IMPACT WEEK 2025 in Singapore convened stakeholders from the public, private and philanthropic sectors for a five-day "well-being economy" festival and conference, based on practical collaboration rather than unidirectional keynotes. Held at Suntec Convention Centre, the week featured an Impact Conference with thematic labs, plenaries and partner sessions.

Scenes at IMPACT WEEK.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

The value proposition of the platform was twofold. To begin with, it put sustainability at the centre of an economy-wide reconstruction—resilience, inclusion and health—rather than as a compliance cost. Secondly, it deliberately brought together family offices, institutional investors, corporates, and civic organisations to match catalytic, adaptable capital with investable projects.

Singapore's positioning as a neutral, well-connected Asian hub also mattered. Global partners, such as Global Citizen, co-hosted sessions during 16–18 September at Suntec, reinforcing the city's ecosystem depth and convening power (Global Citizen, 2025). In brief, IMPACT WEEK functioned as a coordination device, compressing discovery, design and deal-making into a single platform aligned with SDG-relevant priorities and Asia's demographic realities.

An Impressive Talk on the Silver Economy

The session "Unlocking the Silver Economy: Asian Families Leading the Way" took place on Wednesday, 17 September 2025, at Impact Lab 2. The session addressed how Asian family capital could lead to solutions for an ageing society in assisted living, home- and community-based services, longevity tech, and consumer categories. The session was chaired by Ms Katy Yung, Chief Executive Officer at Sustainable Finance Initiative (SFi), a platform mobilising family offices to impact mandates.

The panel featured Dr Mary Ann Tsao, Chairwoman and Founding Director of the Tsao Foundation and Chair of the Tsao Family Office, a pioneer in community-based eldercare and healthy longevity policy in Singapore and the region (Milken Institute, 2024a; Singapore Women's Hall of Fame [SWHF], 2024); Mr Nathaniel Farouz, now leading Keppel's Senior Living Asia and Sindora Living, following a decade of building senior-living businesses across Asia (Milken Institute, 2024b); and Ms Rebekah Lin, co-founder of The Social Co., an Obama Foundation Leaders Asia-Pacific fellow whose youth-initiated movement "50 for 50" mobilised funds and support for elder-serving causes (Seow, 2016).

Panellists of the session "Unlocking the Silver Economy: Asian Families Leading the Way".

The thread of the panel is that family investors can cultivate operating models—

with patient and adaptive capital—balancing returns and impact as regulation and reimbursement evolve. The conversation underscored the localisation of services, quality standards and intergenerational involvement as prerequisites to scale in Asia's rapidly ageing, urbanising markets.

Mr Nathaniel Farouz's China Model: Why Nanjing Matters

My biggest takeaway was Mr Nathaniel Farouz's operating thesis: the development of upscale, lifestyle-focused senior living communities with resident-driven care, local design and profound community engagement—starting in Nanjing and duplicating in economically thriving urban centres. Sindora Living (Keppel) Nanjing Qixia is a purpose-built, data-informed building of around 19,846 sqm and 400 beds, integrating assisted-living hospitality and health management with personalised life plans (Keppel, 2024).

This route draws on Mr Farouz's initial China experience (e.g. Europe's nursing home operator Orpea's first Nanjing and Changsha footprint) and now forms Keppel's regional expansion strategy: operator-developer consolidation to standardise purchase, design and operations as well as localising services to family preferences. Why Nanjing? In addition to demographics, it has a huge middle-class catchment area, hospital chains and transport connectivity—prime drivers for private-pay assisted living that is predicated on family proximity and healthcare collaboration (Keppel, 2024).

What It Signals for Other Cities

Replicability seems to make most sense in the Yangtze River Delta (e.g., Suzhou, Shanghai belt, Hangzhou), in parts of the Greater Bay Area, and provincial capital cities with rising household incomes. China's eldercare expenditures are projected to grow sizably through 2035, implying a sustained need for mixed-revenue, quality-differentiated models (Han et al., 2023). Care and lifestyle productisation—wellness programming, social clubs, rehabilitation, memory care and tech-enabled security with membership-type pricing—displaces the value proposition of "nursing homes" with bespoke longevity communities. Family or strategic capital can seed lighthouse assets, develop operating data, and de-risk standardisation to institutional follow-on in such markets (UBS, 2024).

Additional Research and Japan–China comparison

As a proof-of-concept for the panel thesis, I researched on Japan for comparison. Japan is the world's prototype "super-aged" society (the number of people aged 65 and above is 36.23 million), where service markets and long-term care insurance have aged over decades (Cabinet Office, Government of Japan, 2024). Academics have highlighted how service integration, funding and policy models evolved to support ageing in place and rehabilitation (Nakatani, 2019). This "policy-and-market scaffolding" instigated diversification from institutional nursing homes towards longevity consumption and technology take-up (e.g., care information systems, robots and rehab integration) (Nakatani, 2019).

Why use Japan as a model for China? The answer lies in their shared demographic trends—both countries have low fertility rates and a rising life expectancy. They have maintained strong familial bonds regardless of urbanisation, reconfiguring household structures culturally. Economically, Tier-1 or 2 high-density cities in both countries mirror seniors' aspirations for access, autonomy and community, which aligns with city-proximate integrated living. China would see very fast-growing needs and expenditures on home or community-based services by 2035 (Han et al., 2023). Japan's curve shows that once consumers' basic expectations plateau, markets can extend their focus to seniors' lifestyles, disease prevention and wellness—a path China's cities may take if certain conditions are fulfilled (Cabinet Office, Government of Japan, 2024; Nakatani, 2019).

A Model for Respecting Life

My view on the Nanjing strategy mentioned by Mr Farouz is linked to a central takeaway from the Japan case study—respect dignity and life first, and introduce graduated care and data subsequently. For Tier 1 or 2 cities in China, the likely winners will be hyper-local, hospitality-grade, mixed-use and data-intensive operating models funded by patient capital to build talent and document partnerships with hospitals or insurers. That is precisely where cross-capital coalitions, such as IMPACT WEEK host organisations, can counteract execution risk and catalyse diffusion.

A Conversation with Dr Mary Ann Tsao

After the session, I spoke with Dr Mary Ann Tsao. She was thrilled to have a few National University of Singapore (NUS) students in the audience and emphasised that the silver economy expands at an accelerated rate with the participation of young people, not just as volunteers but as designers, analysts, entrepreneurs and investors who can expand elder knowledge with digital literacy and design thinking. Her organisation's eldercare model is based on the community, policy advocacy and a co-creation ethos with the elderly rather than designing absentia (Singapore Women's Hall of Fame, 2024).

Her comments steered my professional focus. Inter-generation teams recognise friction that others do not—interfaces, stigma, pricing or "friction of distance." Younger professionals can reformulate elder wisdom as product requirements (arthritis-friendly UX; social features to reduce loneliness), create affordability innovation (subscriptions, micro-insurance), and quantify preventive value (falls avoided, hospital days saved). This is precisely where family capital and impact funds can deploy seeds and growth capital, working together with operator partners to achieve measurable outcomes (UBS, 2024; Cambridge Judge Business School, 2024).

Unlocking Family Capital for Catalytic Philanthropy

Catalytic philanthropy refers to donors, often families, who activate ecosystems by setting agendas, assembling cross-sectoral partners, removing policy or market constraints, and employing a full suite of financial tools (grants, guarantees, equity) to achieve scalable impact. There are four defining practices: ownership of results, initiating campaigns, employing all the tools at hand, and producing actionable knowledge (Kramer, 2009).

Why Asian Family Capital Can Behave “Institutionally”

Across Asia, family offices are professionalising and expanding their capabilities to blend instruments and measure outcomes, often with longer time horizons than traditional institutional investors (AVPN, 2024; Cambridge Judge Business School, 2024). Survey evidence indicates that family offices globally (and in Asia Pacific) steward substantial pools of capital and are shifting allocations and governance to match risks and impact objectives (UBS, 2024; Xie, 2024). Singapore’s ecosystem—legal structures, managers, conveners—enables families to syndicate deals and co-create pooled vehicles, narrowing the gap with institutional processes (AVPN, 2024; Cambridge Judge Business School, 2024).

A Practical Playbook

A pragmatic approach starts with diagnosing system gaps such as eldercare workforce productivity, post-acute rehabilitation access and the funding of public goods (open data, curricula) with grants. Recoverable grants can support pilot programmes and deploy equity/credit for scale-ups once unit economics are proven (Kramer, 2009; AVPN, 2024). Institution-grade measurements, such as improvement in activities of daily living (ADL) and falls reduction, safeguard integrity (UBS, 2024). Organisations can also orchestrate coalitions through intermediaries (e.g., AVPN) to reduce transaction costs and align policy with market buildout (Cambridge Judge Business School, 2024).

A Singapore–Nanjing longevity portfolio could combine grants for geriatric UX patterns and fall-prevention curricula, as well as equity in an operator-developer platform scaling city-proximate assisted-living. The rationale aligns with Japan’s maturity curve and China’s growing expenditure projections, while leveraging

Singapore's family-office ecosystem to anchor governance and measurement (Cabinet Office, Government of Japan, 2024; Han et al., 2023).

Conclusion

IMPACT WEEK 2025 turned demographic inevitability into designable markets. The silver economy panel stood out because it showed how family capital can bridge policy aspirations and operational excellence through localised, data-enabled, hospitality-grade models such as Nanjing Qixia. The Japan–China comparison suggests a plausible path from coverage and standards to diversified longevity consumption.

Finally, governance and measurement are what let families act like institutions without losing speed. My next step is to integrate session transcripts into an investment memo for urban longevity communities. It will pair operator partners with blended instruments and hard outcome metrics—ready for institutional follow-on (Kramer, 2009; UBS, 2025).

References

AVPN. (2024, September 17). *Asia: A front-runner for social investment.* https://avpn.asia/resources/insights/asia-a-front-runner-for-social-investment/

Cabinet Office, Government of Japan. (2024). *Annual report on the ageing society [summary] FY2024.* https://www8.cao.go.jp/kourei/english/annualreport/2024/pdf/2024.pdf

Cambridge Judge Business School. (2024). *AVPN: The evolution of philanthropic ecosystem building in Asia (Case study).* https://www.jbs.cam.ac.uk/wp-content/uploads/2024/04/csp-case-study-avpn-2024.pdf

Global Citizen. (2025, September 13). *Global Citizen heads to Singapore for IMPACT WEEK 2025.* https://www.globalcitizen.org/en/content/global-citizen-heads-to-singapore-for-impact-week/

Han, Y., Xu, C., Zhang, L., Wu, Y., & Fang, Y. (2023). Expenditure projections for community home-based care services for older adults with functional decline in China. *International Journal for Equity in Health, 22*(1), 143. https://doi.org/10.1186/s12939-023-01954-y

Keppel. (2024, May). *Setting new benchmarks for quality elder care in Asia.* https://www.keppel.com/insights/feature-stories/setting-new-benchmarks-for-quality-elder-care-in-asia/

Kramer, M. R. (2009). Catalytic philanthropy. *Stanford Social Innovation Review, 7*(4), 29–35. https://www.socialventurepartners.org/wp-content/uploads/2018/02/Catalytic-Philanthropy.pdf

Milken Institute. (2024a). *Speaker bio: Mary Ann Tsao.* https://milkeninstitute.org/events/asia-summit-2024/speakers/mary-ann-tsao

Milken Institute. (2024b). *Speaker bio: Nathaniel Farouz.* https://milkeninstitute.org/events/asia-summit-2024/speakers/nathaniel-farouz

Nakatani, H. (2019). Population aging in Japan: policy transformation, sustainable development goals, universal health coverage, and social determinates of health. *Global Health & Medicine, 1*(1), 3–10. https://pmc.ncbi.nlm.nih.gov/articles/PMC7731274/

Seow, J. (2016, April 24). 50 For 50 campaign raises $4.5m for charity. *The Straits Times.* https://www.straitstimes.com/singapore/50-for-50-campaign-raises-45m-for-charity

Singapore Women's Hall of Fame. (2024). *Mary Ann Tsao.* https://www.swhf.sg/profiles/mary-ann-tsao/

UBS. (2024, May 22). *Global family office report 2024: balance is back.* https://www.ubs.com/global/en/media/display-page-ndp/en-20240522-global-family-office-report-2024.html

Xie, Y. (2024, May 22). Geopolitical risks top concern for global family offices—UBS survey. *Reuters.* https://www.reuters.com/business/finance/geopolitical-risks-top-concern-global-family-offices-ubs-survey-shows-2024-05-22/

The Blue Economy and The Silver Economy

GAO Jiaying

Introduction

Impact Week 2025 was a meaningful opportunity for me to explore how sustainability can be advanced through practical solutions and collaboration across different sectors. The event brought together leaders from business, government, philanthropy and civil society to tackle some of today's most urgent global challenges. As part of this learning journey, I attended two sessions that focused on different but equally important aspects of sustainability: the blue economy and the silver economy.

The first session, "Financing the Blue Shift: From Pledges to Regenerative Capital", explored how financial systems can be reshaped to support ocean protection and restoration. It highlighted the funding gap in the ocean economy and discussed how new investment models can better align capital flows with ecological needs.

Starting my journey at Impact Week.

The second session, "Unlocking the Silver Economy: Asian Families Leading the Way", focused on demographic change and how Asia's rapidly ageing population can be seen as an opportunity

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

rather than a burden. It showed how philanthropy, private capital, and community-based initiatives can help build more inclusive ageing systems.

I chose these two sessions because they represent two critical dimensions of sustainability: environmental protection and demographic transformation. They show how financial systems, social structures, and community action must work together to create lasting impact. This reflection explains what I learnt from both sessions, how they shaped my understanding of sustainability, and how these lessons connect to broader strategic sustainability concepts discussed in this course.

Learning Log 1 - Financing the Blue Shift: From Pledges to Regenerative Capital

Moderator

- Dr Alfredo Giron-Nava (Head of Ocean, World Economic Forum)

Speakers:

- Mr Mark Dalio (Founder and Co-Chief Executive Officer, OceanX)
- Mr Chavalit Frederick Tsao (Chairman, TPC (Tsao Pao Chee))
- Mr Tharald Nustad (Founder, Katapult)
- Dr Sarah Kapnick (Managing Director, Global Head of Climate Advisory, Commercial & Investment Bank, J.P. Morgan)
- Mr Ashok Adicéam (Chief Executive of Mission Neptune, Deputy Special Envoy for France UNOC 3)
- Ms Cherie Nursalim (Vice Chair, Giti Group)

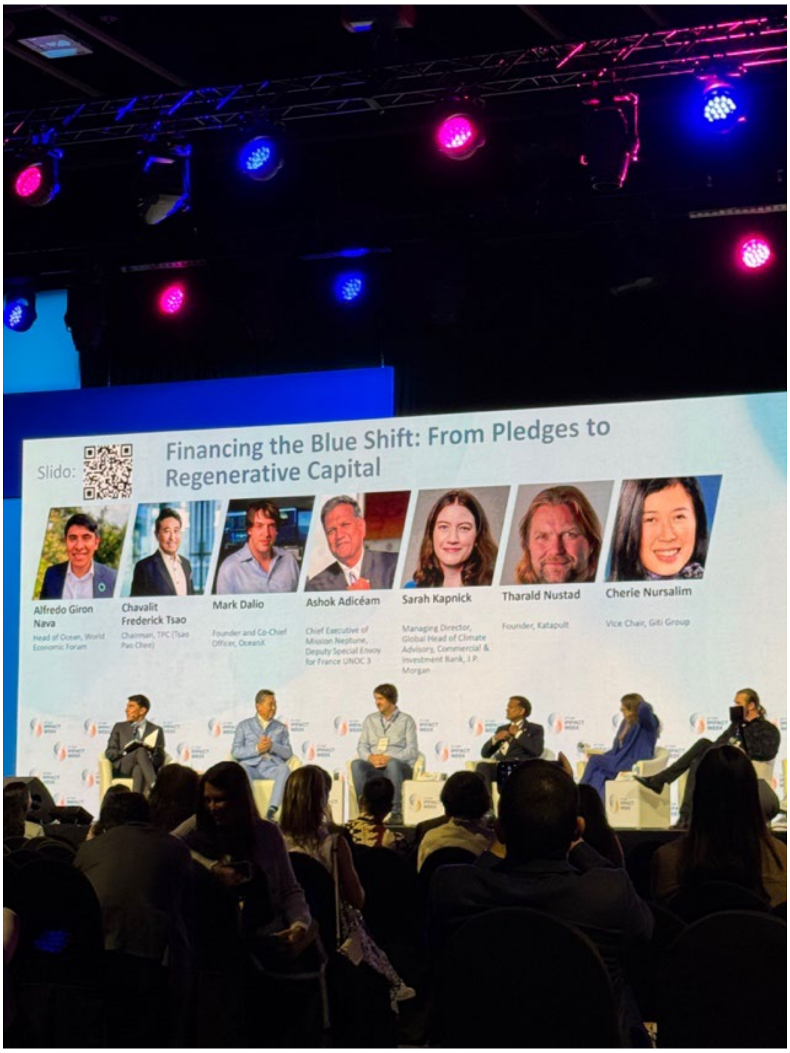
The blue economy transformation is one of the most crucial opportunities to contribute to our climate and nature goals. Our dependence on the ocean is evident: the blue economy itself provides more than 61.8 million jobs, and 80% of global trade relies on maritime transport. Beyond its commercial value, the ocean plays a crucial role in addressing climate change, not only absorbing approximately 25% of CO_2 emissions but also dissipating excess heat (Withers, 2025). This topic resonated with me given the ocean's critical importance for climate regulation, biodiversity, and economic resilience. However, I had not previously considered how financial flows influence ocean conservation. I was eager to explore: why is so little investment being made despite the significant role of the ocean? And how can this gap be bridged?

Ecological Assets Are Underestimated

The central issue is a massive mismatch between the importance of the ocean and the capital allocated to protect it. In 2023, only US$25 billion was invested in ocean-related initiatives, far below the US$175 billion needed annually. This funding shortfall reflects how traditional finance systematically underprices ecological assets. Marine ecosystems provide critical services such as carbon sequestration, biodiversity protection, and climate regulation, but these benefits are rarely captured in conventional investment models.

Current valuation frameworks fail to reflect long-term ecological value, and financial markets typically operate on short time horizons. As a result, natural assets are frequently excluded from capital allocation decisions, which reinforces the cycle of underinvestment.

From a strategic sustainability perspective, this challenge aligns with the Blue Economy concept, which views the ocean not only as a resource to be exploited but also as a living system capable of supporting regenerative growth. It also connects directly to Sustainable Development Goal 14 ("Life Below Water"), which calls for the conservation and sustainable use of the oceans.



The panel discussion on the blue economy.

Several speakers pointed out that investor reluctance and risk perceptions are major barriers to scaling up ocean finance. Despite the global significance of ocean projects, many traditional financiers view them as uncertain or too niche. Dr Sarah Kapnick from J.P. Morgan was directly asked: "If the ocean feeds everyone, why is so little capital flowing?" This question highlighted the disconnect between ecological realities and the financial system.

Restoration Initiatives and Regenerative Capital to the Rescue

Ms Cherie Nursalim shared several groundbreaking initiatives, including the Ocean 20 (O20) initiative launched in Indonesia during the 2022 G20 Summit, aimed at accelerating financing for ocean cooperation. She also discussed ongoing efforts in seagrass restoration, which plays a critical role in carbon sequestration and coastal protection. The meeting also noted that 65 out of 100 key stakeholders (G65) have committed to prioritising ocean initiatives, indicating some progress at the global level.

Other speakers emphasised the importance of regenerative capital models, which are integrative frameworks that combine the integration of philanthropic projects, mechanisms of privately funded investments, and policy incentives to promote scaled-up investment. Such a change has the potential to enable the coastal communities and maritime industries to actively engage in the process of developing solutions, as opposed to being mere beneficiaries of aid. This strategy would align with the Stakeholder Theory, which assumes that decisions must be made in an inclusive manner.

Effective Financial Structures and People Are Needed

Before attending this session, I saw ocean conservation mainly as an environmental or policy challenge. I now realise that it is as much a financial challenge. The issue is not a lack of awareness of the ocean's importance but rather the absence of effective financial structures to support long-term investment. Hearing how capital markets view ocean projects as "too risky" made me reflect on how financial narratives shape environmental outcomes. I was particularly struck by the concept of regenerative capital because it reframes financing as a tool for systemic change, and not just as a source of funding. Regenerative capital encourages partnerships between investors, governments and communities to co-create sustainable solutions.

I also learnt that projects like seagrass restoration are not isolated ecological initiatives but part of a broader financing strategy to build resilience. This session shifted my thinking: the blue economy is not a side topic but a core sustainability priority. To make ocean finance effective, governments, investors and communities need to be aligned, and investment structures must reflect the true value of marine ecosystems. It also made me realise that besides environmentalists or policymakers, finance professionals have a critical role in driving climate action.

Learning Log 2 - Unlocking the Silver Economy: Asian Families Leading the Way

Moderator:

- Ms Katy Yung (Chief Executive Officer, Sustainable Finance Initiative)

Impact Architects:

- Dr Mary Ann Tsao (Chairwoman, Tsao Foundation)
- Mr Nathaniel Farouz (CEO of Sindora Living; CEO, Asia Senior Living Keppel Ltd)
- Ms Rebekah Lin (Co-founder, Half)

Asia is ageing rapidly, and this demographic shift is creating major financial and social pressures. The proportion of people aged 60 and above in Asia and the Pacific is projected to be one in four by 2050. In this same region, the number of older adults is expected to increase to 1.3 billion in 2050, yet only around 30% currently receive any pension support (United Nations Population Fund, n.d.). As a result, families, healthcare systems, and national economies will face growing caregiving and financing burdens over the coming decades.

Sitting in at the panel discussion on the silver economy.

This demographic transition is not only a social issue but also a major macroeconomic challenge. Rapid population ageing affects labour force participation, strains healthcare systems, and creates pension sustainability pressures. It also alters consumption patterns and intergenerational wealth dynamics. Addressing these structural shifts requires collaboration across governments, the private sector, insurers, civil society and international actors. This reflects a coordination problem in sustainability transitions where fragmented incentives slow down systemic change. Bridging this gap will require not only capital mobilisation but also governance, regulatory innovation, and cross-sector alignment.

This issue is also directly connected to the Stakeholder Theory, as it involves governments, private investors, healthcare providers and families. It connects to impact investing, where capital is directed toward both financial returns and measurable social outcomes. At a broader level, it relates to Sustainable Development Goal 3 ("Good Health and Well-being"), which aims to ensure healthy lives and promote well-being for all ages.

The Silver Economy as a Silver Lining

This session regarded the longer lifespans as an opportunity rather than a crisis. It was aimed at gaining knowledge on how leaders in Asian families can use philanthropy, investment and collaboration to develop ageing systems that are both sustainable and inclusive. In addition, it was aimed at clarifying how this practice differs from the traditional emphasis on senior products.

Dr Mary Ann Tsao emphasised the need to shift away from seeing ageing as dependency and towards viewing it as longevity. She introduced the concepts of health span (years lived in good health) and agency span (years in which individuals retain decision-making power). This reframing allows new markets to provide age-friendly housing, wellness services, and financial tools that support independence rather than dependency.

Mr Nathaniel Farouz challenged the common "retirement resort" fantasy, pointing out that most older adults prefer to remain close to their families and familiar neighbourhoods. Sindora Living's model, including a 400-bed assisted living facility in Nanjing, places communities near hospitals, schools, and parks to respond to people's actual, and not assumed, behaviour. This reflects broader cultural shifts across Asia, where senior living is becoming more accepted.

Ms Rebekah Lin highlighted that loneliness is one of the most pressing yet least monetizable challenges of ageing. Her organisation, Half, focuses on creating safe spaces for conversations about mental health and ageing, giving older adults agency to express their needs. While difficult to finance through traditional models, tackling loneliness is central to designing meaningful eldercare systems.

Philanthropic Funding, Technology and Community Programmes Can Help

Dr Tsao illustrated how philanthropic funding can catalyse new models of care. In Singapore, community-based eldercare pilots funded by philanthropy later attracted government backing and private sector participation. Mr Farouz added that insurance-led senior housing models in China combine living facilities with health monitoring and financial products, an approach that uses layered financing to scale solutions over time.

The speakers agreed that technology cannot replace empathy but can free caregivers' time by handling routine administrative tasks. Digital health monitoring, IoT systems such as fall detection, and automated reminder calls allow caregivers to focus on what matters most: human connection and quality care.

The panel concluded that co-locating generations is not enough. Communities must intentionally create programmes and shared activities to build meaningful social ties beyond family networks. Intergenerational connection fosters belonging, dignity and mutual support.

I Changed My Perspectives

Before attending this session, I saw ageing mainly as a healthcare issue, associated with costs, dependency and a shrinking caregiver pool. This session fundamentally shifted my perspective. I now understand that ageing is not only a demographic challenge but also a strategic opportunity for innovation, finance and community design. The concept of agency spans particularly resonated with me. It reframes the discussion from "how to take care of old people" to "how to help people stay empowered as they age". I was also amazed by how urban planning and finance intersect with ageing. Mr Farouz's approach of embedding senior communities in vibrant, urban areas aligns with the idea that people want to stay connected to their environment. Likewise, Ms Lin's focus on loneliness revealed that social connection is not a "soft" issue but a structural element of ageing well.

The financing discussion opened my eyes to the potential of blended capital structures, where philanthropy, insurance and private investments work together. It showed me that sustainable ageing models are not just a social service. Instead, they can be financially viable if designed strategically. This has direct relevance to Singapore, where tight family networks coexist with limited caregiving capacity. Small community programmes, practical technology, and insurance mechanisms could significantly reduce pressure on families while preserving the seniors' dignity and independence.

Conclusion

Attending these two sessions deepened my understanding of how sustainability challenges are both systemic and interconnected. The blue economy session showed me that protecting the ocean is not just about environmental stewardship but also about restructuring financial systems to recognise ecological assets as essential capital. The huge gap between the current US$25 billion invested in the ocean and the US$175 billion needed annually is not just a funding problem—it reflects how the economy undervalues nature. Learning about regenerative capital models helped me see that solutions must involve not only governments and NGOs but also investors and coastal communities working together.

The silver economy session revealed that demographic change is equally complex. Asia's rapidly ageing population is often seen as a burden, but the speakers showed that it can become an engine for inclusive growth. I learnt that ageing is not a single category and that effective solutions must be tailored to different stages of later life. I also realised that caregiving systems need both human connection and smart financing, combining philanthropy, patient capital and innovation. This changed the way I view ageing. Beyond a healthcare issue, it is also a design and investment challenge that touches communities, families and future generations.

A clear theme emerges from the two sessions: finance is not neutral. How capital is structured and allocated shapes how societies respond to environmental and demographic changes. Whether it is funding the oceans or rethinking eldercare, long-term sustainability depends on aligning investment models with social and ecological priorities. This Impact Week has helped me move beyond seeing sustainability as a single-issue agenda. It has made me think more strategically about systems, stakeholders and financial architecture as well as how these elements must work together to create real impact.

References

United Nations Population Fund. (n.d.). *Ageing.* https://asiapacific.unfpa.org/en/topics/ageing

Withers, O. (2025, March 25). *Into the blue: Financing instruments to scale the blue economy.* Standard Chartered Germany. https://www.sc.com/de-en/2025/03/25/into-the-blue-financing-instruments-to-scale-the-blue-economy/

Unlocking the Silver Economy

ZHONG Shilin

Introduction

Nowadays, China is entering an era in which population ageing is accelerating dramatically as birth rates fall and life expectancy rises. This demographic transition is often discussed as a "challenge" or "problem," but it can also be understood as an opportunity for the market, giving rise to the silver economy (Zheng et al., 2013). The silver economy refers to the growing range of economic activities and opportunities driven by the needs and aspirations of older adults. It does not solely pertain to elderly care but involves an entire ecosystem, including healthcare, technology, and financial services, all of which must be designed to support an ageing population. In addition, research indicates that population ageing will influence every aspect of society, affecting not only seniors but also the broader community (Zheng et al., 2013). The silver economy, therefore, represents not merely a policy response but a broader vision of how societies can adapt gracefully to longevity, valuing wisdom, care and intergenerational connection as new pillars of progress.

Background

In Chinese, there is a term called "fa xin" (发心), which refers to one's intrinsic motivation or the inner intention behind an action, whether of an individual, an organisation or a policy. I believe that "fa xin" plays a crucial role in the processes of change, much like the foundation of a building that determines its stability. In our "Strategic Sustainability" class, Professor Loh once mentioned that sustainability is not merely a concept or a task for corporations to execute. Rather, it is a practice that should be deeply embedded within a company's culture and values. This insight resonated strongly with me. From my perspective, sustainability, like "fa xin", is not simply something to be done, but something to be driven from within.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

During my undergraduate studies, I also took a course on sustainability from a sociological perspective. The professor described sustainability as a responsibility shared by every individual in society. I still vividly remember his impassioned words, "If our only purpose in living is to breathe aimlessly for ourselves, that very act will eventually turn against us." At that time, I was deeply moved by his statement, though my understanding remained somewhat abstract. However, as I later explored the concept of the silver economy, his words gradually took on clearer meaning.

For instance, urban digitalisation seems almost flawless to me. It brings efficiency and convenience, which I, as a young person, benefit from daily. Yet I have come to recognise my responsibility to also see, understand, and analyse its downsides, even if I am not among those affected. One day, I will grow old and become part of the target population of the silver economy. By then, digitalisation may have become obsolete, replaced by new technologies that I may find alienating or difficult to navigate. In such a future, such innovations could exclude me from society, just as current digital technologies often marginalise the elderly today.

What truly matters is not merely the economic dimension of the silver economy, but also that older adults can reintegrate into society meaningfully. Since economic systems are inseparable from the social structure, a key question

Attending the panel discussion "Unlocking the Silver Economy: Asian Families Leading the Way".

arises: how can companies design their organisational structures, set goals, and comply with Economics, Environmental, Social and Governance (EESG) standards in ways that are both ethical and effective? Furthermore, many urban development plans unintentionally exclude older adults, even though cities—our shared homes—profoundly shape both our physical and mental well-being. Hence, I argue that certain aspects of our current social structures, policies and urban infrastructures are inherently discriminatory towards the elderly. In this paper, I will also reflect on these issues from the perspective of policymakers.

Normalisation: Inclusion and Human Dignity

In the silver economy, normalisation refers to the process of recognising ageing as a natural, valuable and continuous stage of life, instead of being viewed as decline and dependency. In many societies, older adults have long been socially marginalised—disregarded in the workplace, underrepresented in the media, and stereotyped as passive recipients of care. These perceptions not only undermine their dignity but also contradict the inclusivity that underpins sustainable development. Therefore, within the silver economy, normalisation does not mean simply treating older adults as "normal people", but also demonstrating a commitment to fostering an inclusive society. In this sense, the normalisation of ageing is a human rights imperative, ensuring that older adults are integrated into the mainstream of economic and social systems on equal terms with other demographic groups.

Connecting Normalisation to Economic Sustainability

Professor Loh's 3R framework—Return, Responsibility and Risk—offers a valuable lens to interpret the importance of normalisation for seniors. From the perspective of return, comprehensively recognising the diverse needs of older adults can help firms generate significant financial returns. Seniors possess stronger purchasing power and greater wealth accumulation than other demographics, especially within the Chinese money-saving culture. Ignoring the real needs of seniors could undermine a firm's financial performance. In addition, seniors possess more professional knowledge and entrepreneurial potential, which could be powerful sources of societal development.

At the same time, I am aware that many people in China perceive the older generation as not "trendy" or "fashionable" and unable to integrate into society. I raise this observation not to condemn or support this idea, but to illustrate that collaboration between different generations is essential for development. In Chinese, the saying "qu qi jing hua, qu qi zao po", emphasises learning from traditional culture by retaining its essence and discarding its shortcomings. People are shaped by dynamic social structures, and while a perfect social structure does not exist, every generation has its own strengths and flaws. Highlighting seniors as powerful sources of development aims to refine this discussion without leading to an extreme view.

Under the principle of responsibility, firms and policymakers have the duty to ensure equitable opportunities, such as flexible employment arrangements, lifelong learning initiatives and age-inclusive design. Businesses must avoid age exclusion or discrimination, while respecting the human rights and dignity of ageing populations. From a market perspective, operators should be responsible for truly understanding the needs of their target customers. Lastly, neglecting the normalisation of older people represents a significant risk, as it could exacerbate inequality, erode social cohesion, and create an unsustainable society. As mentioned earlier, ignoring one demographic group could lead to risks for the entire society, as one day, we will grow old. Hence, integrating normalisation into the silver economy and society is necessary to ensure that economic growth and social development are both inclusive, resilient and align directly with the ethical foundation of sustainability.

Overcoming Stereotypes and Advancing Inclusion

The normalisation of ageing requires overcoming deep-seated stereotypes that associate old age with weakness, technological illiteracy and social disengagement. During IMPACT WEEK, one panellist mentioned that the segmentation of the elderly is unclear; many policies and studies categorise all seniors aged from 60 to 100 together, assuming that all people within this age range possess the same capabilities, desires and needs. Such assumptions restrict the participation of seniors in innovation, digital transformation and policymaking. From an economic sustainability perspective, this discrimination represents a waste of human capital, which contradicts the core principle of resource efficiency that underlies a sustainable economy. The silver economy should challenge such biases and stereotypes to prioritise intergenerational collaboration. By reframing older adults as contributors rather than dependants, businesses and governments can transform ageing into an opportunity for inclusive value creation. This approach not only fulfils the "responsibility" dimension of the 3R framework but also reinforces return, ensuring that sustainability translates into long-term social stability and economic vitality.

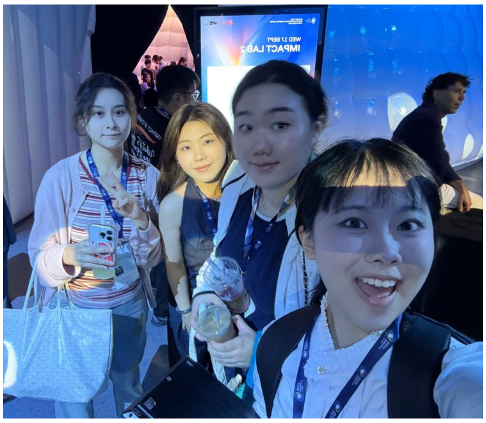
Conclusion

In essence, the future of China's silver economy depends not only on economic innovation but on the sincerity of its "fa xin", the inner intention that guides how society values ageing. Building an inclusive system for older adults requires more than policy adjustments or market expansion; it demands a cultural transformation that views ageing as an integral part of life rather than its decline. Normalisation, therefore, is both an ethical and developmental foundation: it reminds us that sustainability is meaningful only when every stage of life is respected and empowered. As China continues to modernise, the challenge is to ensure that progress does not create silent exclusions but rather bridges generations through empathy and shared purpose. The silver economy should not be an industry for the old, but a collective vision that celebrates longevity, preserves human dignity, and transforms the wisdom of age into a sustainable strength for society.

Example: Matlock and the Representation of Ageing

The American television series Matlock provides us with a meaningful example of how ageing can be normalised in social and cultural narratives. Madeline Matlock is an elderly, competent and principled lawyer who continues to thrive in her profession despite being underestimated because of her age. Rather than portraying old age as decline or dependence, the series highlighted maturity, wisdom and moral clarity as strengths that accompany ageing. Through this portrayal, Matlock challenges common stereotypes that associate old age with weakness or irrelevance, presenting an alternative image of active participation and lifelong contribution.

This representation resonates strongly with the core idea of the silver economy, that older adults should be viewed not as passive recipients of care, but as valuable, autonomous and productive members of society. By showing an older character who succeeds through skill and integrity rather than youth or privilege, Matlock reminds us that inclusivity begins with perception. Normalising ageing, as the series suggests, is about seeing older individuals as ordinary citizens whose experience enriches the social and economic fabric of sustainable communities.



Group photo with friends at IMPACT WEEK.

References

Zheng, Z., Feng, T., & Lin, B. (2013, December). *Ageing in China: Potential of silver economy of China* (Working Paper). Institute of Population and Labor Economics, Chinese Academy of Social Sciences. http://iple.cssn.cn/webpic/web/iple/upload/2014/04/d20140421093712835.pdf

Unveiling Asian Families' Strategies for the Silver Economy

DONG Han

Abstract

This paper is based on reflections and analysis from the IMPACT WEEK panel discussion "Unlocking the Silver Economy: Asian Families Leading the Way". Discussions centred on the vast silver economy market, catalysed by global population ageing trends. Traditional conceptual frameworks often categorise the elderly as a homogeneous demographic, an oversimplication that can result in significant mismatches between market supply and the diverse demands of consumers. This paper argues that we should move beyond age-based segmentation and redefine the needs of the elderly as the future requirements of "the ageing self".

Research indicates that older populations do not merely seek longevity, but healthy and high-quality longevity. Social health is a critical factor influencing longevity quality, encompassing issues of loneliness, which affects well-being and requires coordinated interventions.

Ultimately, the sustainable development path for the silver economy should focus on social connection as a core strategy, balancing economic growth with social welfare. Service standards should be strengthened through standardised quality frameworks and talent development mechanisms, while policy guidance, technological empowerment and business model innovation should be leveraged to build an inclusive economic ecosystem across all age groups. This requires broader corporate social responsibility and multi-stakeholder collaboration to elevate this field from survival-oriented care to developmental support, thereby creating shared value for an ageing society.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Reflections

"Silver" Market

The global population structure is shifting towards ageing, which has greatly accelerated the emergence of the silver economy. As someone with a background in marketing, I found that the forum prompted profound reflection on my existing consumer perception frameworks. Traditional marketing thinking habitually labels and segments consumers rigidly, simplistically categorising the extremely broad age group of 65 to 120 as the "silver population" and framing their situation as an "ageing crisis". Such rigid market segmentation carries significant risks as it misleads businesses into perceiving a heterogeneous group as homogeneous. Consequently, businesses may provide undifferentiated products and services, resulting in a clear mismatch between market supply and the genuine, diverse needs of the elderly. This superficial understanding may reduce commercial practices ostensibly framed as "social care" to mere marketing slogans devoid of substantive value.

During the forum, speakers proposed replacing the term "silver economy" with simply "economy", shifting focus from catering to the needs of the elderly to addressing the needs of "our ageing selves". A panellist's personal account was particularly striking to me. Although she has not yet met the conventional 65-year-old threshold for services, she proactively approached elderly care providers to prepare for future needs, only to be turned away on the grounds of age-based eligibility. She emphasised the importance of preparation for population ageing, which underscores a fundamental issue in the silver economy—the tendency to treat services as reactive responses to an "already aged" state, rather than proactive planning for the process of ageing.

This perspective prompted deeper reflection: as a society, we have failed to grant older adults greater autonomy, persistently framing them as vulnerable and lacking self-awareness. The reality is that what they may seek is not special treatment, but equal treatment and, most importantly, choice. Therefore, a shift in mindset is crucial. We must first view their needs as equal, redefine the concept of the "silver generation", and move away from narratives of an "ageing crisis" towards actively empowering "long-term life planning". This shift is fundamental to promoting social equality and enhancing societal well-being.

High-Quality Longevity

In exploring the core needs of ageing populations, the panellists revealed that their fundamental aspiration is not merely an extended lifespan, but achieving holistic well-being centred on "high-quality longevity". The forum highlighted that the greatest challenge currently facing the elderly is profound loneliness coupled with complex dependency on their children. In-depth research further indicates that loneliness and social isolation can trigger chronic stress responses within the body, leading to a decline in immune system function. This significantly increases the risk of diseases such as stroke, heart disease, dementia and depression, as well as the likelihood of premature death (Holt-Lunstad, 2024). This mechanism confirms that social health is a key pillar influencing the quality of longevity.

Examining Social Health

Traditionally, discussions have primarily focused on extending lifespan through improvements in psychological and physical health. However, true healthy ageing relies on the synergistic support of three dimensions: physical health, psychological health and social health. Importantly, loneliness is not an issue exclusive to the elderly. Data referenced at the forum indicated that 60% to 70% of Singapore's population experiences loneliness, illustrating that this challenge transcends age boundaries and has evolved into a societal public health concern.

Social well-being extends beyond superficial social engagement; it encompasses the capacity to maintain meaningful social connections, stable social roles and sustained participation in community life. Research suggests that active social interaction effectively promotes healthy habits and physical activity, thereby indirectly supporting physical health (Holt-Lunstad, 2024). Conversely, the absence of social ties and a sense of purpose significantly diminishes an individual's motivation to maintain physical and mental well-being. Loneliness should thus be understood as a systemic societal symptom associated with weakened interpersonal bonds within modernisation, affecting individuals across their entire lifespan.

Based on this understanding, addressing social disconnection among the elderly must transcend narrow silver economy frameworks, adopting holistic, systemic responses grounded in human needs. The social value generated by these approaches will ultimately benefit all age groups across society. Consequently, the silver economy sector should transcend traditional market service limitations, positioning the restoration of social connections as a core strategy for enhancing healthy life expectancy across the population, while proactively assuming broader social responsibilities.

Reference Framework for Social Connectivity

During the forum, Mr Nathaniel Farouz, CEO of Sindora Living and CEO of Asia Senior Living, Keppel, proposed a solution integrating spatial planning with social interventions. He advocated strategically locating elderly care facilities near social nodes such as parks, hospitals, and kindergartens. This approach extends beyond mere facility provisioning to create physical environments that naturally foster intergenerational exchange. Such deliberate spatial design could effectively reduce the physical barriers between age groups, generating informal, high-frequency daily interactions between older and younger generations and counter the isolation which stems from fractured social connections.

Furthermore, Mr Farouz emphasised that, beyond physical integration, systematic social cultivation is essential to strengthen these connections. He recommended providing dedicated intergenerational communication and care training for school and kindergarten staff. This would help instil accurate perceptions of ageing, empathy, and a sense of social responsibility in the younger generations from a young age. These educational and cultural interventions form the bedrock of building an inclusive social culture, nurturing intergenerational care norms at their source. This demonstrates how synergistic innovation across both spatial integration and cultural cultivation dimensions can more effectively address loneliness as a societal symptom. Not only can it directly alleviate social isolation among the elderly, but it also holds the potential to foster a more resilient and inclusive social connectivity network across society, thereby bringing benefits to citizens of all ages.

Risks and Considerations

Economic Growth and Social Security

Creating sustainable value from a demographic transition is crucial. However, a significant challenge lies in balancing the pursuit of high-quality longevity among the elderly with the need to ensure long-term, stable returns for social capital. This necessitates business models that not only prioritise profitability but also embed substantive support for societal well-being, creating a virtuous cycle between “living longer” and “earning longer”.

Service Management

As demand for elderly services grows, scaling operations require establishing standardised, traceable quality management systems. Enterprises must clearly define their legal liabilities and ethical obligations throughout service delivery. Robust oversight mechanisms and insurance frameworks must safeguard consumer rights, preventing systemic risks arising from service failures.

Staff Training and Benefits

Service quality depends on a professional, stable workforce. Enterprises must therefore invest in systematic training for care personnel, technical support staff, and management teams, ensuring they possess the expertise to address complex needs. Concurrently, establishing a fair remuneration structure and clear career progression pathways constitutes a vital mechanism for safeguarding employee rights while enhancing their professional belonging and work engagement. These mutually reinforcing elements collectively form the intrinsic foundation for elevating service quality. Ultimately, this high-calibre service provision benefits society by tangibly improving the overall well-being of elderly individuals and their families.

Technology

Forum speakers analysed technology's dual role within the silver economy from multiple perspectives. Technology should be regarded as a foundational tool for enhancing the quality of life, autonomy and dignity of the elderly, rather than an isolated solution. Its effectiveness hinges on three critical elements: data-driven early risk warning and proactive intervention capabilities; human-centred functional design based on genuine needs; and precise insight into industry bottlenecks.

However, technological application has clear limitations. Whilst the Internet-of-Things and intelligent algorithms can enhance service efficiency and coverage, they struggle to replicate the emotional value inherent in human interaction. Current rollout faces challenges, including insufficient user trust and high adoption barriers, necessitating cross-departmental collaboration to establish sustainable business models. The fundamental goal of technological advancement should be to enhance human autonomy and service accessibility, not to replace human care, thereby building a truly inclusive and sustainable support system for ageing societies.

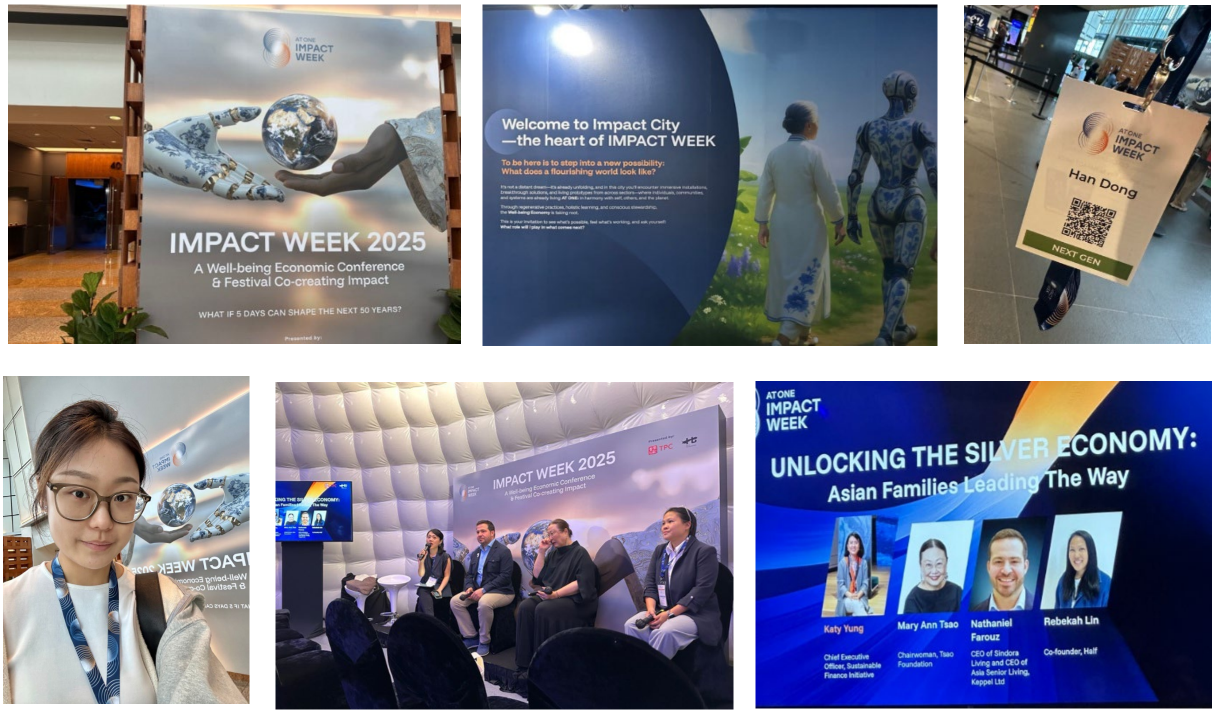
Business Opportunities

Cultivating an Age-Friendly Social Ecosystem

The core opportunity within the silver economy lies in transcending traditional elderly care frameworks to drive systemic innovation at the community level. As discussed during the forum, this involves developing intergenerational community facilities, such as integrated service complexes combining elderly care, healthcare, childcare and leisure functions. Such projects not only elevate seniors' quality of life but also reduce societal costs through resource-intensive operations. Additionally, governments could employ policy tools like land-use planning and fiscal incentives to attract private capital, while establishing community service standards and dynamic monitoring systems to ensure facility efficiency and service quality. Through scientifically designed governance structures, a balance between social value and commercial returns can be achieved. Investors secure long-term stable returns; consumers access high-quality, accessible services; community cohesion is strengthened; and enterprises enhance their sustainable development capabilities by fulfilling social responsibilities, thereby creating a virtuous industrial ecosystem.

Developing Smart Solutions

High-tech innovation can address challenges in scaling services. Examples include developing smart hardware (such as health monitoring devices and assisted living tools), building integrated digital platforms for care services, and utilising AI to deliver personalised health management plans. Enterprises must address multifaceted challenges, including technological accessibility, data security, and user trust, while collaborating with healthcare institutions to establish sustainable business models. Successful technological solutions not only generate economic value but also benefit broader demographics through enhanced service efficiency. This approach paves a new trajectory for growth in technology enterprises, while concurrently generating substantial returns in brand value.



Snapshots at IMPACT WEEK.

References

Holt-Lunstad, J. (2024). Social connection as a critical factor for mental and physical health: evidence, trends, challenges, and future implications. *World Psychiatry, 23*(3), 312–332. https://doi.org/10.1002/wps.21224

The People in Flourishing Systems

Creating flourishing systems relies on a collective effort. Family businesses, the philanthropy sector and social entrepreneurs are on board to develop circular food systems and value chains.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). Impact reimagined: Voices of the next generation for sustainability (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

A Holistic Solution for Food System Sustainability Development

WANG Zhaozhe

Introduction

Definition of Food System and Supply Chain

Food systems—the networks involved in food producing, processing, and delivering to customers (World Food Programme, n.d.), comprise all processes from food production to consumption. They can be regarded as mirrors of society, reflecting the ways people nourish and sustain themselves, govern resources and create employment. The food system includes various players from upstream to downstream of the supply chain. At the upstream level, farmers grow crops, which are processed and stored by food processors at the midstream (Agriculture Institute, 2023). Eventually, the food products are distributed and delivered to wholesalers and retailers, reaching consumers. Each player in the food supply chain plays a significant role in contributing to human society and the environment.

Importance of the Food System and Its Sustainability

Food is vital to human existence, significantly influencing the well-being, health and future of human beings and other living creatures (Su et al., 2023). Compared with other manufacturing products, disruptions to food security have severe consequences, making food system security a central societal concern (Su et al., 2023). According to the World Food Programme (n.d.), 783 million people globally suffer from hunger. At the same time, the scarcity of natural resources and climate change increase the burden and risks to food systems, indicating the urgent necessity for systemic transformation. A sustainable food system (SFS) ensures food security and nutrition for the present generation, without compromising the economic, social and environmental foundations for future generations' food security and nutrition (Food and Agriculture Organization of the United Nations, 2018). A sustainable food system can alleviate issues of

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

hunger, malnutrition and food waste, while food safety and nutrition levels may be enhanced. Moreover, income level, especially for smallholder farmers, may rise, helping to prevent poverty. Enhanced resilience within the food supply chain can confront unknown risks for climate change and natural disasters. Moreover, the ecosystem health will be improved through reduced environmental degradation and more efficient use of resources.

In response to the growing demand for more sustainable food systems, this report provides some suggestions based on the content of two IMPACT WEEK sessions in Singapore.

Main Contents in the IMPACT WEEK

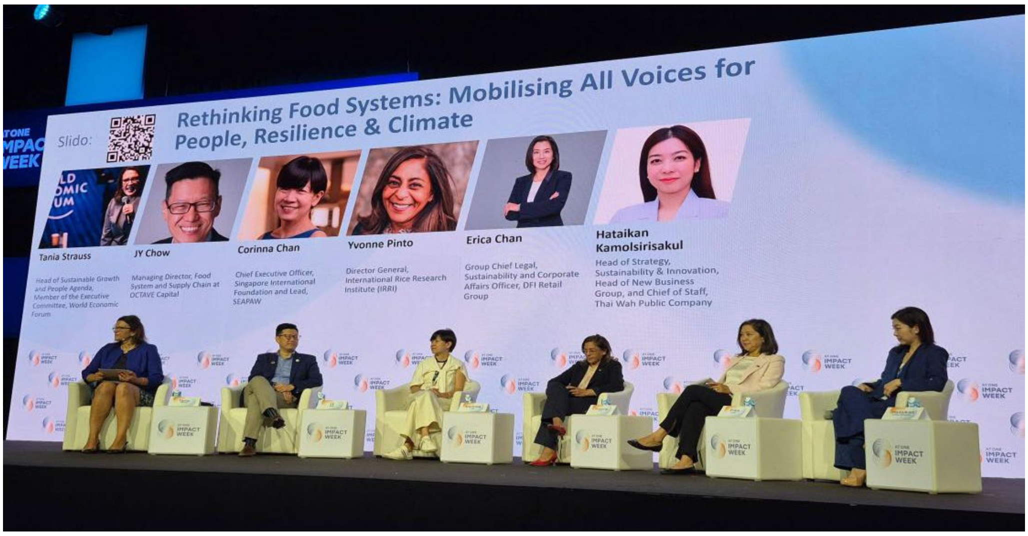
During IMPACT WEEK, I participated in two events about food systems. The first one is "Rethinking Food Systems: Mobilising All Voices for People, Resilience & Climate" and the second one is "Plant-Forward Food-as-Medicine: Prescription for Body and Planet".

Rethinking Food Systems: Mobilising All Voices for People, Resilience & Climate

In this session, six guests from different sectors within the food system were invited: Ms Tania Strauss from the World Economic Forum, Ms Corinna Chan from Southeast Asia Partnership for Adaptation through Water (SEAPAW), Ms Erica Chan from DFI Retail Group, Mr JY Chow from OCTAVE Capital, Dr Yvonne Pinto from the International Rice Research Institute (IRRI), and Ms Hataikan Kamolsirisaku from Thai Wah Public Company. Together, they presented a holistic vision about re-thinking and rebuilding the food system, guided by the topic "How can food systems be reimagined to truly support human well-being, ecological regeneration and societal resilience?"

Currently, the global food systems face a myriad of challenges. Climate change contributes to crop failures, while chemically intensive agriculture degrades the conditions for growing crops. Meanwhile, the global food market fluctuates significantly. Hunger and malnutrition persist across multiple regions. These conditions indicate rising unsustainability, inequality and vulnerability in existing food systems. Therefore, it is necessary to reimagine and rebuild the food system for human welfare and environmental protection.

The food system is closely embedded in every individual's daily life, contributing to 12% GDP globally. The key to reimagining these systems is to cultivate a holistic understanding of food systems, considering the benefits of different actors in the supply chain, as well as the environment and natural constraints. The speakers highlighted the importance of a collective shift by mobilising all the stakeholders to shape what people grow, eat and value. To illustrate this approach, rice was used as an example to demonstrate what different stakeholders can contribute to sustainable food system transformation.



"Rethinking Food Systems: Mobilising All Voices for People, Resilience & Climate" panel discussion.

From a research and development perspective, institutions can advance scientific research on breeding and genetics of crops to reduce resource consumption, enhance climate resilience, and improve yields. Meanwhile, transitions and improvements should be measured to track progress in crop breeding. Rice, which provides a primary caloric course for approximately 4 billion people, has negative influences on the environment, accounting for 30% of freshwater usage and emitting 1.5% of all greenhouse gases globally. According to Dr Pinto, IRRI is developing a type of heat-tolerant and water-efficient rice variant that guarantees yields and safeguards farmers' incomes, which can contribute to the sustainability of agriculture.

From the business perspective, retailers play a crucial role in selling sustainable food without charging a premium to consumers. Survey data indicate that while 45% consumers hope to be involved in sustainable consumption, 40% are unwilling to pay a premium for it. Educating consumers is necessary to help consumers understand the value and advantages of sustainable food to enhance demand and purchases. In the rice example, Ms Chan described how her retail group sold rice with 30% carbon emissions reduction in production without increasing prices, while promoting the product's contribution to sustainability to consumers. Now this rice reaches 22 million customers per week in 12 markets globally, indicating the effectiveness of this campaign.

For farming, a sustainable agriculture pattern should be implemented without imposing additional costs on farmers. In Thailand, rice production is transitioning from a transactional relationship with smallholder farmers into a strong supply chain that enables productivity improvements, while an eco-friendlier farming model is utilised at low costs for farmers, including reducing water usage and applying bio-fertilisers. Both economic benefits and environmental protection can be achieved with a sustainable agriculture pattern.

In terms of investors and financial institutions, it is vital to design financial solutions to meet the smallholders' demands, such as more flexible and tailored micro lending. Moreover, investors should not only consider the returns in finance, but also the returns on overall impact and integrations, such as achieving business complementarity and inclusivity in corporate values. These actions can effectively support food system transformation.

As for social organisations, creating platforms to facilitate effective collaborations across different sectors in the food system. For example, SEAPAW connects various stakeholders with knowledge, solutions, financing capabilities., to solve problems in Southeast Asia, including rice production. With platforms like SEAPAW, people can not only reach a consensus but also coordinate together to deliver holistic solutions for food systems, considering the balance between economic benefits, social impacts, and environmental effects.

To conclude, reimagining a more sustainable food system requires a holistic vision and coordinated solutions, with active participation from all stakeholders.

Plant-Forward Food-as-Medicine: Prescription for Body and Planet

The second session featured four speakers: Ms Gwendolyn Lim from Bridgespan Group, Mr Robin Willoughby from Tilt Collective, Mr Jeremy Nguee from OCTAVE, and TCM researcher Dr Frank Sha, exploring how plant-forward diets can contribute to individual and planetary health as well as strategies to encourage the transformation and adoption of a plant-rich diet.

There are three key benefits of adopting a plant-rich diet. Firstly, from a TCM perspective, consuming plants that are suitable for one's body condition can meet the body's needs and improve overall health and wellbeing. Secondly, according to Mr Jeremy, many ancient, traditional recipes are plant-rich. Exploring these recipes is a way of cultural inheritance in cuisine. Thirdly, a plant-forward diet is beneficial for the smallholder farmers and the planet. Globally, the production of red meat is monopolised by large corporations, such as Tyson and JBS S.A., while plants can be easily grown by smallholder farmers for income. Meanwhile, the greenhouse gas emissions of meat production are much higher than those of plants. Therefore, a plant-forward diet is a positive contributor to both society and the environment.

"Plant-Forward Food-as-Medicine: Prescription for Body and Planet" panel discussion.

The author (middle) with guests from the session on food as medicine.

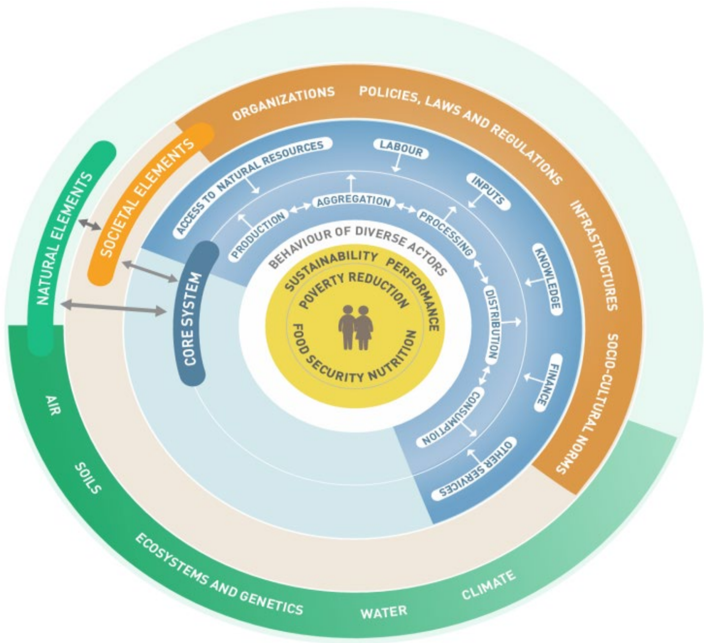
To encourage the transition to a plant-rich diet, all stakeholders must be collective to conduct systemic changes. Consumers should change their mindsets. Instead of viewing a plant-rich diet as a sacrifice with the need to completely modify their dietary habits, they can take small actions to contribute, such as exploring some delicious plant-rich food and recommending it to friends. Aside from that, policymakers could support the adoption of plant-rich diets through policies (e.g., tax reduction) and personal actions (e.g., buying plant-forward food) to spread public awareness of the benefits of plant-forward diets. Finally, financial support is a solid foundation for systemic transformation in promoting plant-rich food. Without capital, it is challenging to adopt systemic changes in food systems.

Overall, a plant-rich diet offers an effective approach to improve individual and planetary health, and different stakeholders can make efforts to encourage a plant-forward diet.

Reflection

The two sessions both suggested a holistic vision on food industry reimagination. That is, to construct a more sustainable food system, it is necessary to coordinate all stakeholders from different sectors to take unified action. As food systems are deeply intertwined with our daily lives, every individual has the capacity to influence their daily choices.

To better understand these two sessions, the Food System Wheel Framework from the United Nations Food and Agriculture Organization (FAO) can be applied. This framework is centred around FAO's goals, including poverty reduction, food



The Food System Wheel Framework.

Source: Food and Agriculture Organization of the United Nations, 2018 security and nutrition, which are embedded in the system performance evaluated by three dimensions of sustainability: economic, social and environmental aspects (FAO, 2018). With stakeholders' diverse behaviours occurring in the structure of the system (i.e., the core system, the social elements and natural elements), the sustainability performance is determined.

In the first session, the guest speakers drew a macro map of the current food system crisis and illustrated how different players can adjust the system through scientific research, farming pattern update, investment, retailing and collaboration platform building. These stakeholders' actions happen in the core system influenced by the social elements, and these actions will further affect each other, as well as benefit society and the natural environment.

While the first session focused more on the supply side in food systems, the second session supplemented it with a perspective on the consumption side in the core system in this framework, illustrating how consumers' eating habits (i.e. plant-rich diet) can influence the individual health, cuisine culture development and the ecosystem condition, as well as how to promote changes in consumption behaviours.

According to these two discussions, a more sustainable and resilient food supply chain (from farming to retailing) can reduce hunger and malnutrition, as well as enhance food quality and nutrition for consumers, while consumers' proper, sustainable eating habits (such as plant-rich diet) can promote the sustainability of food supply chain through influencing the type, amount and price of products. The social well-being will also increase from better individual health, growing farming income, and more job opportunities through this interaction supply and demand. Eventually, environmental health can be improved, and resources will be utilised wisely to support food system development.

Overall, it is a necessity to have a holistic and systemic view when re-constructing the food system, since all the elements are closely connected. To build a sustainable food system, stakeholder collaboration and actions can help to improve the economic, social and environmental performance in the food industry.

Conclusion

To conclude, this report summarises the main content of two sessions in the IMPACT WEEK, which are "Rethinking Food Systems: Mobilising All Voices for People, Resilience & Climate" and "Plant-Forward Food-as-Medicine: Prescription for Body and Planet". The former mapped how different stakeholders in the food supply chain can contribute towards the sustainability of the food system, while the latter presented ways of encouraging a plant-forward diet and its influence. Due to the crisis faced by the current food system, it is vital to reimagine the system holistically to build one that is sustainable for human beings and the planet.

The author at IMPACT WEEK.

References

Agriculture Institute. (2023, November 11). Major challenges in agricultural value chains: Upstream and downstream perspectives. https://agriculture.institute/farm-cost-mgt/major-challenges-agricultural-value-chains/

Food and Agriculture Organization of the United Nations. (2018). *Sustainable food systems – Concept and Framework.* https://openknowledge.fao.org/server/api/core/bitstreams/b620989c-407b-4caf-a152-f790f55fec71/content

Su, I. H., Wu, L., & Tan, K. H. (2023). The future of the food supply chain: A systematic literature review and research directions towards sustainability, resilience, and technology adoption. *Journal of Digital Economy, 2*, 303-316. https://www.sciencedirect.com/science/article/pii/S2773067024000074

World Food Programme. (n.d.). Food systems. https://www.wfp.org/food-systems

Between Philanthropy and Capital: Rethinking Impact

SHENG Jiadong

Motivation and Cause

In recent years, global issues have become increasingly prevalent. Climate and environmental degradation, structural issues brought about by the rise of artificial intelligence (AI), economic decline and the widening gap between the rich and the poor have all intensified. The emergence of these problems has made sustainability a topic of great concern, making its implications a question that every social actor must address. This is also the main purpose behind organising the IMPACT WEEK forums.

Prior to participating in the event, I briefly reviewed its background and programme. First, I found that the event featured a large number of physical exhibits, as well as activities similar to yoga and meditation, and numerous performances by local artists. While these programmes enhance the immersive experience of the event, for an event mainly focusing on "environmental protection", "social welfare" and "impact construction", it may appear to be more symbolic compared to truly driving change.

In addition, one of the organisers of the event, TPC (Tsao Pao Chee), founded the brand OCTAVE Institute. Based on my preliminary research, the brand's offerings include courses on quantum leadership and mindfulness (OCTAVE Institute, n.d.). This inevitably gave me a sense that complex issues were transformed into consumer products. So, this raised my suspicion—whether part of the motivation of this event includes transforming "social issues" into brand marketing consumerism.

Frankly, I did not have high expectations for this event itself. However, it did eventually provide some rational and critical discussions on social impact, which exceeded my expectations.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

On this basis, I chose to attend the lecture titled “Philanthropy vs. Capital Markets: Who Really Moves the Needle?”. For a long time, I have held a critically engaged attitude towards philanthropy. I believe that in ideal narratives, philanthropy can indeed fill institutional gaps and offer immediate relief. However, in real-world structures, it often fails in solving systemic inequalities. To some extent, it even delays the exposure of structural contradictions. Especially when corporations integrate philanthropy as part of branding strategies, their benevolent actions instead become tools for capital to regain moral legitimacy.

I do not wish to be confined by my own views and assumptions. I hoped to acquire more perspectives and voices to refine my understanding and avoid intellectual detachment. Through this lecture, I aim to hear different voices from the investment sector, foundations and the social innovation field, to observe how “capital” understands and participates in social change. I also aim to test whether my understanding of the concept of “systemic change” was sufficiently comprehensive.

Lecture Overview

This lecture “Philanthropy vs. Capital Markets: Who Really Moves the Needle?”, adopted a debate format and invited prominent representatives to discuss on the same stage. In an era marked with uncertainty, should philanthropy operate more like a business, or resist this market logic and continue to retain the traditional altruistic mentality?

The central core of the discussion lay in redefining the origin and attribution of “impact”. Some panellists emphasised that genuine social change originates outside of market constraints. Initiatives such as frontier research on technology ethics, climate justice advocacy and education projects for disadvantaged groups often rely on the support of unrestricted capital. Others argued that only the capital market can deliver sustainable and scalable resources. Emerging mechanisms such as ESG investment, green bonds and impact funds are practical paths to incorporate social goals into the economic system.

During the debate, several opposing views surfaced:

- Conflict between efficiency and justice: The investment community pursues quantifiable KPIs and ROI, while the philanthropic community emphasises unquantifiable dignity, fairness and meaning.
- Boundary between real change and symbolic action: Some have pointed out that if philanthropy degenerates into a brand narrative, its social function will be reduced, reinforcing my earlier viewpoint.

- Rebalancing between risk-taking and accountability mechanisms: Enterprises demand "result-oriented" approaches, while foundations advocate that philanthropy should serve as a supplement to institutional gaps.

Overall, this lecture did not reach a completely definite conclusion. Rather, it was a fusion and collision of viewpoints, which motivated me to continue exploring.

The Starting Point of Independent Exploration

Although the lecture framed its discussion around the comparison between philanthropy and capital markets, for me, it served more as an opportunity to rethink what "impact" actually means. The lecture raised questions, rather than offering answers. What truly interested me was a deeper structural concern. The discussion in the lecture was mostly centred on the contrast between capital and philanthropy, but in my view, philanthropy itself is actually part of capital. The lecture did not touch on deeper structural issues and drives the question: When social actions are reframed by the logic of capital, is the concept of the "public good" also being reshaped?

My inquiry began with a form of structural scepticism: In modern society, the power of resource allocation is strongly concentrated in the hands of capital. Mechanisms such as philanthropy and ESG only attempt to provide legitimacy to this structure under a humanised narrative. They all continue a seemingly progressive logic, but in fact often reinforce the existing framework. Problems are mitigated or postponed through smarter and more efficient flows of capital within the current institutional structure. However, this mode of thinking inherently excludes any fundamental challenges to systemic power relations.

Therefore, in my view, the study of "impact" cannot stay at the instrumental level; it must be re-examined from the perspectives of political economy and cultural capital.

Based on this line of thought, I seek to explore three more fundamental questions:

- Who constructs the discourse of "impact" in contemporary society?
- Can the logic of capital truly bear an ethical mission, or is it merely repackaging inequality?
- Is it possible for a form of social innovation to exist that detaches from market logic yet remains sustainable?

While these questions may not be answered in a single lecture, they provide a clear trajectory for my exploration. I hope to take this lecture as a starting point to independently explore more complex issues.

Core Theories

Social Capital and Symbolic Capital

Pierre Bourdieu's (2011) theory of capital highlights that capital in society is not limited to economic forms, but also includes social capital, cultural capital, and symbolic capital. Philanthropic behaviour often appears altruistic on the surface, but in reality, it often generates new social prestige and legitimacy to the actor, thereby reinforcing their position within the existing class structure.

Within this framework, philanthropy functions as an extension of the logic of capital. It transforms economic capital into symbolic capital, allowing power relations to persist within the framework of goodwill.

To me, this theory reminds me that when analysing any form of social impact, one must pay attention to the underlying power structures. True impact does not lie in public recognition and validation, but in whether it transforms social relations. On the surface, although philanthropy may solve many problems, it does not touch deep structural issues—instead, it becomes an extension of them. Just like a doctor treating a disease, philanthropy sometimes works like a painkiller. It can ease the symptoms, rather than cure the illness.

Critique of Philanthrocapitalism

Slavoj Žižek's (2009) critique of "philanthrocapitalism" further reveals the ideological dimension of modern philanthropy.

In his view, modern capitalism maintains its operation by "first creating problems, then selling solutions". For example, a company may cause environmental degradation through its supply chain but at the same time, establish a foundation to "save the Earth". Consumers who purchase a charity co-branded product are also gaining moral comfort through consumption.

This "atonement-style consumption" creates an illusion of goodwill, making people feel that problems are being solved, but in fact they are only deepening systemic dependency.

For me, the critique raises a question: when we talk about "impact investment" or "sustainable business", are we also repeating this logic of atonement? This may be replacing structural responsibility with action and offsetting real contradictions with symbols. Everyone becomes immersed in the emotional experience brought by the atonement logic, thereby neglecting to solve the real problems.

Scepticism Towards Corporate Social Responsibility

Milton Friedman (1970), in his famous assertion, pointed out that the only social responsibility of enterprises is to increase shareholder value, and any behaviour beyond this scope may harm economic efficiency.

From the general modern perspective, while this view may indeed seem controversial, it does reveal a persistent conflict: When enterprises, starting from the logic of profit, engage in "doing good", will they inevitably include social value within the cost-benefit calculation framework?

For our topic, although the practices of ESG and Corporate Social Responsibility (CSR) have formally expanded the scope of corporate responsibility, these practices could remain largely as market tools. Unless the mechanism of corporate performance evaluation and capital return is changed, social responsibility will remain marginalised.

I believe that this scepticism does not deny corporate contributions, but rather clarifies their institutional boundaries. We need to understand which problems can be internalised by the market and which must be borne by public mechanisms.

Blended Finance: Institutional Innovation and the Possibility of Reality

Beyond critical perspectives, I also studied pragmatic approaches, particularly the theory of blended finance.

This model advocates cooperation among governments, philanthropic funds and private capital, allowing social goals and market mechanisms to partially align. For example, public funds can bear early-stage risks, thereby attracting private capital to participate in projects with high social returns but low commercial returns (OECD, n.d.).

This mechanism does not solve the contradiction. Rather, it represents a form of strategic compromise—acknowledging the power of market logic while attempting to embed social intentions within it.

For me, the importance of this concept lies in recognising practical spaces beyond criticism. After all, mere criticism without seeking solutions is meaningless. We need to look for the possibility of fine-tuning within existing institutions. Perhaps we cannot completely escape the logic of capital, but we can redesign its incentive structures to direct them closer to "public good".

Understanding and Reflection

During this study, my understanding of "impact" evolved from rejection to reconstruction. Initially, I viewed philanthropy and capital critically, seeing them as mechanisms that perpetuate power structures in different forms. Philanthropy was transformed into symbolic capital, and capital took up a moral disguise. This structural analysis certainly has some truth, but it is also somewhat arrogant. It easily makes one disregard the complexity of real-world actions—criticising endlessly without offering practical solutions.

Through organising and reflecting on relevant theories, I developed a more nuanced perspective. Bourdieu illustrated the subtle operation of power, while Žižek sharpened my awareness of "atonement-style goodwill". However, Friedman and the concept of blended finance made me realise that reality is more flexible than theory. Indeed, market logic has inherent limitations, but it also provides powerful capacities for organisation and resource allocation. If utilised properly, they may not be entirely irreconcilable.

An old Chinese proverb states, "A gentleman judges deeds, not intentions." Even if enterprises engage in philanthropic actions motivated by market interests or brand reputation, they may still solve many problems, and such contributions should not be dismissed.

Rather than pursuing a morally perfect economic model, it is more productive to seek a dynamic balance within existing structures. For example, through blended capital mechanisms, both public and private capital can be included in social innovation. The issues of efficiency and fairness are difficult to solve completely; instead, it is better to achieve a collaborative mechanism, allowing efficiency and fairness to reconcile with each other within a certain range. This is the definition of impact—a kind of coordinating ability that enables fragmented mechanisms to work together.

Future Directions

This learning experience helped me understand that "impact" should not only be quantitative in evaluation indicators or social responsibility reports, but also a continuous path of practice, which is the ability to promote change within institutional gaps.

Deepening Research on the Capital–Society Relationship

I hope to further examine the operational logic of the "blended finance model" within the Asia context, especially how funds are allocated among risk, governance and responsibility in public–private partnership projects. Related topics may include impact measurement, public value accounting and policy-driven innovation mechanisms. More related subjects may emerge as the study progresses. I hope to analyse behavioural contrasts among different countries, which may reveal how "social finance" functions within local political and economic structures in non-Western environments.

Building Professional Reflection

Regardless of whether I enter academia, business or the policy field in the future (though I still prefer the policy field), I aim to maintain critical self-awareness. Impact is always accompanied by the reproduction of power, resources and narratives. Therefore, continuously reflecting on one's position within the system is more important than pursuing perfect goodwill. Perfect goodwill, at least from ancient times to the present, has never existed. True social innovation does not eliminate contradictions but coexists with them to promote gradual transformation within limited frameworks.

Overall, this learning journey, which began as a journey marked by scepticism, turned out to be a deeply rewarding exploration. Impact is not a static achievement but an ability to remain clear-minded and active within complex systems. I hope to continue to find my own place between clarity and action, in the future.

References

Bourdieu, P. (2011). The forms of capital. In *The sociology of economic life* (3rd ed., pp. 78-92). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9780429494338-6/forms-capital-pierre-bourdieu

Friedman, M. (1970, September 13). A Friedman doctrine—The social responsibility of business is to increase its profits. *The New York Times*. https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html

OCTAVE Institute. (n.d.). *Flourishing in the well-being era.* https://www.octaveinstitute.com/

OECD. (n.d.). *Mobilising private finance for development.* https://www.oecd.org/en/topics/leveraging-private-finance-for-development.html

Žižek, S. (2009). *First as tragedy, then as farce.* Verso. https://www.versobooks.com/en-gb/products/2100-first-as-tragedy-then-as-farce?srsltid=AfmBOopL8p7tCvGw0Lg_oC15TF077h_vjKt9PXV1vSWhs6nvuU_PRLbc

Closing the Loop to Form Asia's Circular Food System

QU Jing (Sabrina)

Introduction

When Professor Lawrence Loh first mentioned that we could attend an exclusive event called the IMPACT WEEK as delegates, I was immediately curious. With most of my prior knowledge on sustainability mainly coming from lectures and theoretical discussions, I saw this as a valuable opportunity to learn more about the topic in a practical and immersive way. Therefore, I went to the venue with an open mind, genuinely and eager to gain more perspectives and real-world insights, especially through the sessions I had signed up for.

IMPACT WEEK 2025 was a five-day-long "Well-being Economic Conference & Festival" which served as a platform where global leaders, visionaries and agents of change from sectors ranging from business, philanthropy, capital and community convened and explored new models for revitalisation, unity and collective well-being. Its mission was to shape these ideas and translate the discourse into collaborative, actionable change and long-term impact. From the moment we entered the Suntec Convention Centre, we were immediately greeted with the main goal of the IMPACT WEEK, reiterating its purpose to create a space for the participants and speakers to explore, exchange and re-imagine the possibilities and solutions to world issues, and to reflect on the roles in collective effort.

A banner at the main entrance stating the purpose of IMPACT WEEK 2025.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

The atmosphere within the main Impact Grounds was open and energetic. There was a variety of sessions across a wide range of topics being held at different Impact Labs. The main Impact Grounds served as an open-concept space, which encouraged us to move freely and explore solutions and collaborative efforts from diverse organisations.

A dedicated area explored the shared commitment to acting for the Six Pillars of the Well-being Economy, which outlines the key strategic areas where change needs to take place: Climate & Nature, Circular Economy, Energy Transition, Food Systems, Human Construct and Well-being. These pillars were operationalised through the Six Domains of Impact, each starting with a question and hopefully leading towards shared action. The Six Domains of Impact are, namely, Sustainable Finance, Corporate Philanthropy, Nature Restoration, Technology & AI, Future of Education and Partnerships. These domains serve as the foundation and common thread across the various forum sessions and workshops in IMPACT WEEK. Each domain of impact could be applied meaningfully to any of the six pillars, demonstrating the deeply intertwined and interwoven nature of challenges and solutions in building a well-being economy. Together, these pillars and domains of impact were aligned closely with the priorities of the United Nations Sustainable Development Goals but also provided a systematic framework for reflection and action throughout the week.

Roulette showing the Six Pillars of Well-being Economy.

Closing the Loop: From Waste to Wealth - Asia's Food Circularity Playbook

Given my personal interest in food security, food wastage and its intersection with the circular economy, I was very enthusiastic to have the opportunity to attend a particularly insightful theme panel titled "Closing the Loop: From Waste to Wealth - Asia's Food Circularity Playbook". This session focused on two specific pillars of the well-being economy, namely the Circular Economy and Food Systems, while analysing and examining their impacts through the lens of nature Restoration. The panel was moderated by Dr Koh Chaik Ming who is the Chairman of The Food Bank Singapore and the key speakers, also known as

Impact Architects, included Ms Lisa Moon (President and CEO of The Global Food Banking Network), Ms Deepa Hingorani (Partner and Head of Planetary Health Investments Asia, Novo Holdings), and Mr Louis-Alban Batard-Dupre (CEO of Yindii, a mobile app which connects local food businesses and supermarkets with quality excess food to consumers at affordable prices). Owing to the nature of their professions and backgrounds, Ms Moon and Mr Batard-Dupre primarily explored themes of reducing food wastage post-production through redistribution, while Ms Hingorani's investor-focused role provided a unique perspective on discovering new innovative firms and solutions that helped to tackle wastage and improve efficiency pre-production and up the value chain.

Session Overview

The session reframed food waste not just as a crisis and inefficiency, but rather as a catalyst and starting point for regeneration. It introduced and explored the concepts of how circular, inclusive and low-carbon food systems can turn waste into value from various angles, such as economic, social and environmental. Instead of presenting just one solution, the session showcased a variety of approaches, such as food redistribution, fermentation, bioconversion and circular logistics, which were possible due to the different expertise and perspectives brought by the Impact Architects. Each Impact Architect emphasised in their unique way that achieving circularity in food systems requires addressing waste not just at any one point but rather across the entire value chain. This means tackling issues across the entire food system, from improving production practices by using technology to produce food that is more disease-resilient upstream to reducing waste downstream through more

Theme panel of industry leaders and experts.

responsible consumption and effective redistribution. Jointly, these approaches helped to form the basis of an Asia-specific playbook for transforming waste into value. The Impact Architects also highlighted some key success stories across ASEAN that showcased the movement where waste is being turned into wealth, such as community food banks tackling hunger and disaster relief through surplus redistribution, bioconversion technologies converting food waste into biogas as sustainable fuel, and developing circular logistics systems to minimise transport waste and emissions.

Defining the Problem

As industry leaders and innovators in their various scopes in the food wastage and regeneration industry, the three panellists—Ms Moon, Ms Hingorani and Mr Batard-Dupre collectively agreed that the heart of the problem lies in the disconnect and paradox between abundance and access. In Asia, over 230 million tonnes of food are wasted annually, yet more than 375 million people in the same region remain undernourished. The disparity not only exacerbates social inequity but also contributes to greenhouse gas emissions, biodiversity loss and overall resource depletion.

Due to the nature of their work, Ms Moon and Mr Batard-Dupre explored reducing food waste after production through redistribution, while Ms Hingorani emphasised that losses occur “not just after consumption but even at the top of the chain during and even pre-production”. This is due to issues in crop genetics, disease resilience and inefficient production design. We can further break these issues and corresponding impacts down using the EESG framework:

- Economic: Billions of dollars in wasted resources and lost productivity
- Environmental: Carbon and methane emissions, biodiversity loss from landfills and overproduction
- Social: Ongoing and persistent hunger and inequity in food access
- Governance: Lack of proper supportive policies, weak incentives and potential liability risks that discourage redistribution

This exposes systemic flaws from fragmented supply chains to insubstantial policy incentives and underdeveloped waste collection infrastructure. Framed through the lens of systems, food waste is both a cause and consequence of inefficiency across production, distribution and consumption. Mr Batard-Dupre remarked that “nobody is hungry to save food”, exposing how food waste also lacks moral urgency compared to other sustainability topics. The challenge is thereby not just technical but rather structural and behavioural, which requires reframing the food waste narrative from guilt when wasting food to feelings of pride when saving food. This also further emphasises the involvement needed across diverse stakeholders, from government agencies and agricultural businesses to households, local communities and consumers.

Themes and Solutions Discussed

Circular and Inclusive Models

Ms Moon mentioned how food banks have evolved from a simple redistribution network to a comprehensive community supporting disaster resilience, nutritional access and community cohesion. In countries with well-established food bank networks, such as Singapore and Thailand, these organisations have positioned themselves to become first responders during natural disasters and times of crises, helping to distribute relief efficiently due to existing logistics systems and trusted networks.

Mr Batard-Dupre recounted his experience setting up his food redistribution start-up, Yindii, across Singapore, Thailand and Hong Kong, and teased plans to launch in South Korea soon. His approach emphasised a “win-win-win” model where businesses can reduce waste and save costs, while consumers can gain quality food at an affordable price, helping the environment through reduced emissions and resource wastage.

To encourage active participation, Mr Batard-Dupre’s organisation leverages gamification and positive reinforcement to transform food-saving behaviours into engaging experiences. For example, “surprise bags” would be offered at bakeries and sold at a discounted rate. Consumers can also compete for early access, some even going the extra mile, waking up early just to get “first dibs”. This approach helped to shift the narrative and positioning of these leftovers as value-added fun, while tapping into humans’ ego rather than guilt-tripping and shaming them.

Technological and Scientific Innovation

Ms Hingorani underscored how science-based innovations are key to building circular systems. She mentioned that food circularity begins even at the genetic level, where it is important to reduce wastage by producing foods that are more resilient while also ensuring nutrition. She gave a wide range of examples from mushroom genetics to AI-enabled supply chain management; and highlighted an impressive and innovative use of bioconversion and biotechnology in Norway, which deployed a laser-based solution targeting the sea lice on salmon farms to remove parasites without hurting the fish. This innovative solution has helped to save up to “€6 billion of salmon annually”. These examples further showcase how technology can reduce losses before they occur, emphasising that circularity is not just about recovery but also prevention.

Policy and Economic Levers

Another recurring theme was the role of governance, especially in the realm of policy and incentive structures. Ms Moon noted that businesses are being disincentivised to donate food; this is especially true for some Asian countries. This can come in the form of liability risks, which makes food disposal a cheaper and simpler alternative than redistributing. However, there have been some positive developments, especially in Singapore, in the form of the Good Samaritan Law, which was recently enacted. With this law, donors are offered protection from liability for any death or personal injury arising from the consumption of donated food.

On the topic of governance and policy support, the panel also requested stronger “carrot-and-stick” mechanisms, such as increased tax incentives for food donations and greater penalties for avoidable waste. Mr Batard-Dupre mentioned that Singapore and the countries in the region could take inspiration from the policy passed in France in 2016, which banned the disposal of edible food. He also emphasised the importance of celebrating “champions” who are taking real action and tackling the problem to inspire more individuals to act and participate. This was also echoed by Ms Hingorani, who mentioned that clearer policies, regulatory reforms, infrastructure support and increased public awareness are vital to innovation.

Downstream Circularity and Energy Recovery

Beyond redistribution, Ms Hingorani also explored the idea and theme of regeneration, such as converting food waste into biogas, suggesting the possibility of Singapore doing more for biogas, especially in the hospitality or hotel industry. She pointed out successful pilots where hotel waste was collected and processed through digester plants to generate energy for on-site use. However, she did note that collection might be a bottleneck and issue in Singapore due to the lack of effective systems to separate and transport this organic waste in a streamlined manner. As such, she advocated and suggested potential collaborations between established organisations such as Food Bank Singapore and large hotels, such as Marina Bay Sands, to explore this possibility. However, she reiterates that she is aware of the limitations of biogas due to the logistical gaps. This further exposes the infrastructure gap, which can only be bridged through proper coordinated governance, as circular ambitions will not be able to move past the implementation stage without clear collection systems, incentives and standards.

Summary and EESG Linkages

This session solidified and showcased how the EESG framework could work as an integrated system for sustainable transformation. The discussion strengthened the concept that governance coordinates sustainability by ensuring profit motives, social outcomes and environmental management are aligned. As Mr Batard-Dupre pointed out insightfully, "Use business to save food." There is a need to create market-driven solutions that can help reduce waste, redistribute surplus and transform discarded food into value-added products that are beneficial to the economy, society and environment. Upon reflection, this reinforces my understanding that a sustainability strategy cannot rely on just technology or altruism. Rather, it needs to be done through intentional institutional design, building on rules, norms and incentives to make circularity the rational and easy choice.

Conclusion and Takeaways

Overall, IMPACT WEEK provided an engaging and immersive experience that provided insights into how theories and concepts of sustainability could translate into real-world actions across diverse industries. Besides the new technical knowledge and expert insights that I have gained regarding the topic of Food Systems during the panel session, there was something that Mr Batard-Dupre mentioned that truly resonated with me. He called for individuals to start acting and to encourage one another, for people to rally together and to push those around us and in our community to contribute by modelling our actions after those who are doing it right. This also echoed with the sentiment and call to

IMPACT WEEK poster on change that reminds the importance of reflection.

action from the IMPACT WEEK organisers, where it was aptly summarised that "change starts from within". It is important for us to acknowledge that before we can shape our version of a thriving world, we must first look inward and ensure that we have the right mindset and values before approaching these issues. Real change and transformation are not just a solo pursuit but rather require the entire village and community to be on board and act together. We can only create real, tangible impact if we are aligned and work towards a common shared purpose—to protect our planet, and ensure that all people enjoy health, justice and prosperity for all, without leaving anyone behind.

Cultivating Change in Food Systems and Circular Value Chains

SONG Guozheng Gregory

IMPACT WEEK - Participants and Community

Launching IMPACT WEEK, Mr Desmond Lee, Singapore's Minister for Education, called upon the contributions and actions of the wider community. Indeed, the purpose of the five-day conference, held in September 2025 at Singapore's Suntec Convention Centre, extended beyond a social or business gathering to a platform to convert thoughts into reality. Participants included thought leaders and organisational representatives congregated by a common vision of driving meaningful change for future generations.

The presence of leaders from various fields was particularly significant. Leadership often plays a crucial role in shaping an organisation's sustainability efforts. When leaders recognise the long-term benefits of sustainability, they are more likely to invest in sustainability initiatives. They would be committed and motivated to launch a concerted attempt to achieve the targets. The aggregated impact from these cumulative efforts will contribute to global sustainability progress.

IMPACT WEEK was centred around six pillars of the well-being economy and six impact domains of strategic focus areas that would pave the way for change. Two panel discussions on food systems and circular economy, though dissimilar in nature, both called for community building and cultivating change. This report is a reflection of the insights from these panels. It will examine key impact areas and investigate the ways organisations can improve planetary health.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Reflection on Panel Discussion "Rethinking Food Systems: Mobilising All Voices for People, Resilience & Climate"

A discussion on food systems.

Panellists:

- Ms Tania Strauss - World Economic Forum
- Mr JY Chow - OCTAVE Capital
- Ms Corinna Chan - SEAPAW
- Dr Yvonne Pinto - International Rice Research Institute
- Ms Erica Chan - DFI Retail Group
- Ms Hataikan Kamolsirisakul - Thai Wah Public Company

Meeting Basic Needs as a Foundation for Building Trust

The panel highlighted that smallholder farmers are generally more concerned about immediate benefits and economic security for their families than about long-term safety and sustainable farming.

Smallholder farmers typically manage small plots of land and produce either for household survival or the local markets. Despite producing over 70% of the world's food, they often face financial challenges, with a single poor harvest posing severe risks to their livelihoods (Kumar, 2024). These farmers toil for long hours in the fields with minimal social and economic protection, and the returns can be highly uncertain.

When these basic needs are unmet, it would be unrealistic to expect farmers to have the time or energy to explore new business perspectives. To educate these small-scale farmers and increase their yield to meet global demands, there is a need to first establish trust and give them an incentive to change their methods. There are dozens of initiatives to help workers in the agri-food sector. Organisations like the International Fund for Agricultural Development (IFAD) and CARE International strive to ensure social and economic equity by improving work conditions, living wages and human rights protection (International Fund for Agricultural Development, n.d.). Their initiatives include offering low-interest loans and grants to enhance resilient and reduce climate susceptibility for smallholder farming businesses with food system transformations. An example is the climate-smart agriculture (CSA) approach, which enhances the capacity to grow food in uncertain climate conditions (International Fund for Agricultural Development, 2022).

Harnessing Data Science to Optimise Productivity and Yield

Once improved yields are sufficient to give farmers peace of mind, they can think ahead for their businesses. Panel participants suggested that data analytics would be important to aid their decision-making. Information on what to sell, who to sell to, where to sell, and optimal price points can guide farmers toward a more targeted approach by aligning supply and demand mechanisms.

Predictive market data models benefit farm owners by helping them determine their crop size, resource allocation, and reducing food waste from unsold products. The demand models correspond with pricing, allowing farmers to predict their profitability. Another benefit of education and leveraging data is the ability to optimise farming practices. Over time, the integration of big data can identify correlations between weather patterns, soil conditions, irrigation methods and harvesting frequency to provide the most optimal farming practices for the various crop types.

While all this paints a beautiful picture for the future of agriculture, in reality, governments would require substantial investments to facilitate the modernisation of the industry. Many rural regions lack the infrastructure which limits the data available. Most farmers do not have the capacity to go digital immediately, hence, governments must co-create a roadmap with the stakeholders for digital transformation.

Co-creation as a Catalyst for Collective Efforts and Community Building

Engaging farming communities may be met with scepticism initially, hence, sustainable food system transitions are a long-term and multi-layered transformation journey.

Farmers, who possess valuable local knowledge can contribute to the long-term research outcomes and roadmap. Knowledge sharing can reduce the learning curve for everyone involved, including on the scientific front. Farmers are ultimately primary decision makers in adopting agroecological farming practices. They must be engaged from the beginning, rather than regarded as passive recipients of technology.

The engagement should also be an ongoing, iterative process so that they feel supported throughout the transformation journey towards improved food production and resilience. Transparency about intentions and expectations would be crucial to building credibility and sustaining collaborative partnerships between farmers and communities.

Reflection on Panel Discussion “Redefining Value: From Extraction to Regeneration across Global Flows”

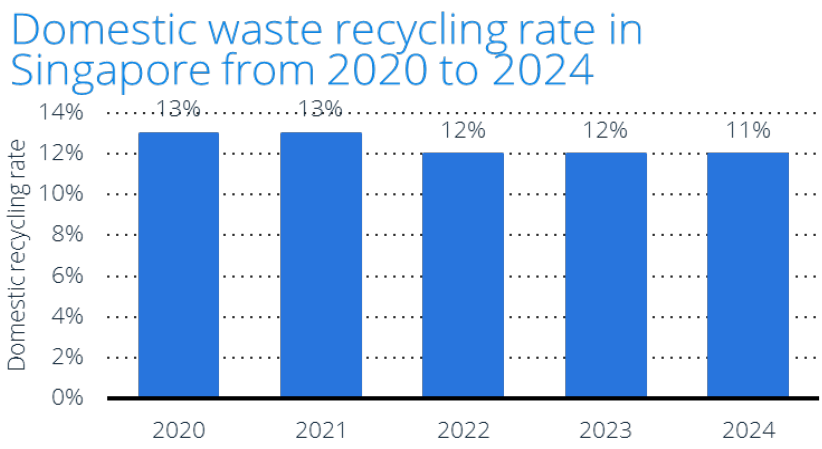
A discussion on value creation.

Panellists:

- Mr Kiro Reich - Entrepreneur & Impact Investor
- Mr Rob Kaplan - Circulate Capital
- Mr James Ong - Tsao Pao Chee
- Mr Michael Smith - Regeneration. VC
- Mr Chris Southgate - Microsoft

Unlocking Resource Efficiency: Value Creation from a Circular Economy

With our world in peril from mining and the extraction of non-renewable resources, this community conversation on the circular economy should reach wider audiences. The panellists expressed their perspectives on the circular economy, agreeing that a large part of pollution is made up of resources that the world is failing to reclaim and reuse.

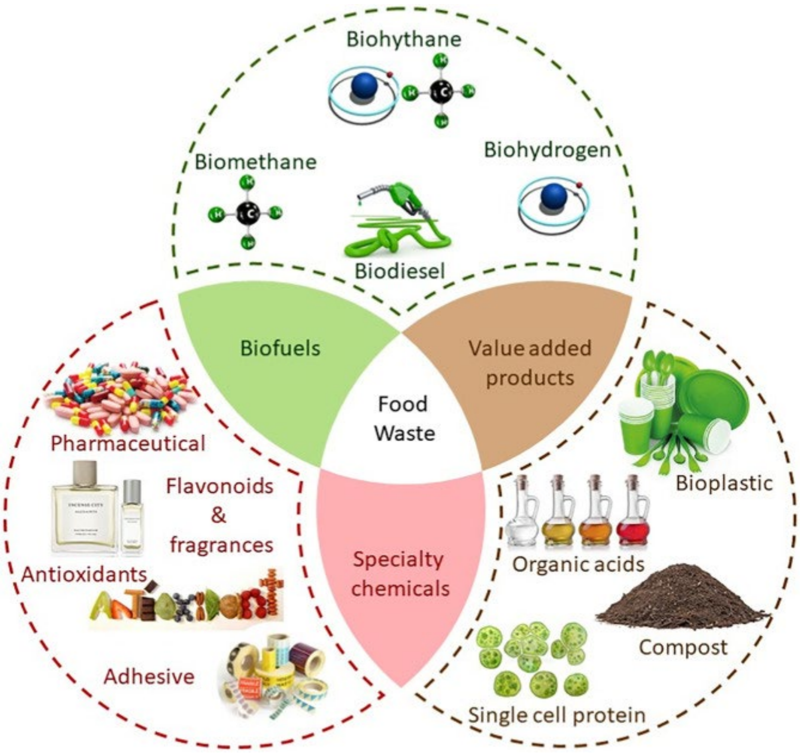


Domestic recycling rates in Singapore.

In Singapore, the domestic recycling rate has remained consistently above 10% since 2020 and has been declining. The daily domestic waste generated per capita decreased from 0.88 kg in 2023 to 0.85 kg in 2024 (National Environment Agency, 2024). This recycling rate means that 90% of solid waste generated by consumers is incinerated, including food scraps, paper products, textiles, electronics and household appliances, which have the potential to be salvaged and repurposed into new products.

The first step towards an effective circular economy is proper collection to reduce waste going to landfills or incineration plants, followed by sorting and treating it for a new lease of life.

For example, the food waste valorisation business is currently booming. Apart from traditional compost and fertilisers, the fragrance industry is adopting the use of citrus fruits, coffee grounds and carrots to make organic perfumes. What is lucrative is the US$2 billion industry of Chitosan. It is traditionally harvested from the shells of crustaceans from the ocean, but with concerns about the environmental impact and chemical-intensive extraction methods, has increasingly turned to the larvae of the Black Soldier Fly as a sustainable long-term alternative. From its larvae, Chitin is extracted and processed into Chitosan, a valuable resource that is also used in the pharmaceutical industry for wound dressings or as a drug binder. Known for its healing properties, Chitosan is also used for weight and cholesterol control. The versatile biopolymer even has extended purposes in haircare products and facial creams. With such a wide range of applications, it pushes for more Black Soldier Fly farms to be built around the world in countries like Vietnam and China, with food waste fuelling the pathways to Chitosan production.



Food waste valorisation.

Source: Kannah et al., 2020

Similarly, energy demands can also be met using food waste. There is a massive US$50 billion industry for potential new energy types like biodiesel, which can power cars, trucks and diesel engines. Major automotive players like Chevrolet and Ford have already begun adapting some of their product lines to consume biodiesel.

Electronic waste recycling is equally crucial because most of them contain rare earth metals. These are used in computer screens, cell phones and many of the advanced technological products in the market. As there are currently no substitutes, higher frequencies of rare earth mining would be required to meet growing demand (Wayman, 2023). However, miners must excavate huge amounts of ore to obtain these elements. Mining often happens in ecologically rich areas like dense forests, mountainous regions or close to water bodies, which results in the destruction of natural habitats, biodiversity loss, soil degradation and contamination of water sources (Farmonaut, n.d.). Emissions from fossil-fuel-powered machinery should necessitate the recycling rare earth metals directly from devices.

In Singapore, electronics that are not sorted at the point of disposal will find their way to the incineration plants. While REMEX, a recycling company which has operations in Singapore, operates a metal recovery facility which handles incinerated bottom ash (IBA), the process is undoubtedly complex and expensive, as compared to the direct extraction of components. As the methods are still under development, it is also unclear how much of the rare earth elements can be recovered this way.

The circular economy plays a major role in resource conservation, but there is a long journey ahead as the world fully adopted this concept. This is partly due to the costly nature of recycling, from collection to extraction and eventually repurposing products.

Optimising Design with Material Circularity

There is a need to simplify the repurposing of materials at the product end-of-life stage. This process could actually begin at the product design stage. The panel cited the example that 92 million tonnes of apparel would end up in landfills yearly, due to the current fast fashion trends (Igini, 2023). These garments are a source of microplastics because many contain nylon and polyester, which are durable and cheap. In addition, supply chains involving plastic packaging exacerbate the issue of environmental pollution.

Mr Kaplan highlighted the use of PLA, a widely used polymer due to its versatility. The material was commercialised at scale by large corporations. While PLA is marketed as being “compostable”, breaking down PLA requires energy-intensive conditions for biodegradation, such as high heat and pressure

(Swiftpak, 2023). Many major cities do not even have suitable facilities for this process. As such, PLA is often discarded and goes to landfills.

An example of a company that has thought ahead in environmentally friendly product design is Levi Strauss & Co. Their WellThread collection makes use of materials that are 100% recyclable. Threads, tabs and even buttons are made from a single material—cotton, reducing the need to segregate components.

Levi's WellThread collection.

Furniture giant IKEA's shift to plant-based packaging facilitates waste reduction and contributes to the circular economy, replacing EPS polystyrene with a type of mushroom composition for insulation and shock absorbency. In addition, their famous Flatpack cardboards are made of fibre. The result is 92% of their 900k tonnes of packaging are now fibre-based.

Nano-mushroom farming seen at IMPACT WEEK. Could mushrooms be the future for the packaging industry?

The ripple effect of large companies investing in new materials research is significant, and signals to green start-ups that there is a viable market for materials engineering. This could create a whole new economy in the coming years.

Although the benefits of material circularity may only be evident decades down the road, there is an immediate need to prevent further leakages into the environment and promote the idea of designing for the future.

Infrastructure & Economic Gaps Affect Universal Targets

The pursuit of a global circular economy is not without challenges. The panel discussed that some regions struggle with meeting necessities, and those priorities could come before saving the planet.

In 2024, Yale published a scale of countries' waste management performance, which corroborates this observation (Buchholz, 2025). With the exception of Europe and East Asian regions like Japan, Taiwan and Singapore, most of the world performed poorly on the index—particularly the South American regions, central African and Southeast Asian nations.

The state of global waste management according to the Yale Environmental Performance Index in 2024.

Source: Buchholz, 2025

When this data is overlaid with the GDP per capita index, a clear correlation is seen between a nation's wealth and waste management difficulties. Developed nations can do more to support nations without the ability to improve their waste management infrastructure, both in terms of financial aid and technical knowledge. Without it, the weak links can risk undermining the rest of the collective efforts.

The Importance of Building Sustainable Global Supply Networks

Microsoft's Mr Chris Southgate emphasised that organisations must look beyond their own operations, to build a sustainable supply network. With high computing demand and AI on the rise, Microsoft has embarked on green projects with its data centres, such as using green materials, reducing transportation and even reducing energy usage by reducing the number of hops between its servers. Beyond meeting their internal ESG commitments, Microsoft has reached out to their supply network to help them identify sustainability practices as well. Mr Southgate noted that shared learning within a community enables collective success.

Supplier commitment and support are important to make climate initiatives a success. Unilever has a supplier climate programme where they collectively commit to reducing greenhouse gas emissions and reducing product carbon footprint (Unilever, 2024). Suppliers receive guidance and feedback, which helps accelerate their transition to more climate friendly operations.

Organisations often face conflicting interests in their bid to reduce their Scope 3 emissions. Sustainable sourcing incurs higher costs, which impacts the profitability of companies. On the other hand, green efforts can serve as a differentiating factor, making it challenging to balance these considerations.

The benefit of building collaborative networks is that organisations do not have to bear the burden themselves. Mr Kaplan suggested that organisations should focus on what they do best and let their expert partners focus on other aspects, such as packaging. He cited Coca-Cola's collaboration with PlantBottle™ as an example, with Coca-Cola sticking to its domain of producing beverages while its partner produced bottles with plant-based biomaterials (Coca-Cola, 2023). The successful implementation has even triggered the formation of the Plant PET Technology Collaborative, where others like Heinz have followed suit to use the plant-based packaging technology for their food products.

Who Risks Getting Left Behind?

The panel discussed that five years ago, the consumer markets were very enthusiastic about idea of regeneration and sustainability, but in recent years, the momentum and excitement has plummetted. The push for sustainable offerings has not reached the critical mass needed to drive widespread adoption and behavioural change. Although consumers report positive attitudes towards eco-friendly products and services, the reality is that few follow through with action. Despite encouraging sustainable consumption for years, contradictory consumer behaviour can make it frustrating for businesses.

When asked about the current outlook, the panel was unanimous in their conclusion that there is a need to influence more people with the ideology, as consumers control the power to drive action through demand, forcing organisations to jump on the bandwagon. The World Economic Forum reports that 75% of millennial respondents surveyed said they would consider sustainability when making a purchase. This claim aligns with Deloitte's 2024 report, which found that Gen Z and Millennials are willing to pay more for products or services that have a positive impact on the environment, such as electric vehicles (Deloitte, 2024).

To close the gap between intent and action, businesses need to engage their target customers, particularly the Gen Z and millennial climate-conscious groups. An article in Harvard Business Review suggested using social influence, shaping habits and making an emotional appeal (White et al., 2019). All of these factors are interconnected. A social campaign could gain traction amongst groups, making it the "cool" or "fun" thing to do, and eventually lead to cultivating habits in the long-term.

It is not a distant dream, change can happen today.

Once the new age of consumers has signalled their intent, organisations that do not adapt and move towards sustainability will risk getting left behind.

Closing Thoughts on IMPACT WEEK

The event was insightful and thought-provoking, with many leaders discussing difficult topics. Our food systems and material flows need a jumpstart in many areas before vision can become reality. The massive economic potential in this area needs to be unlocked not just with technical fixes but also with a cultural shift, which begins with trust-building and action.

As one wall panel puts it, making an impact to create a flourishing world is not a distant dream; it is already unfolding. The gathering of stakeholders to exchange best practices, learn from one another and make calls to action represents a big step forward.

When we see individuals, communities and systems work together, scalable solutions can deliver lasting impact.

References

Buchholz, K. (March 17, 2025). *The state of global waste management* [Digital image]. Statista. Retrieved October 24, 2025, from https://www.statista.com/chart/31449/waste-management-score-on-the-yale-environmental-performance-index-by-country/

Deloitte. (2024, May 17). *Deloitte's 2024 Gen Z and Millennial Survey finds these generations stay true to their values as they navigate a rapidly changing world.* https://www.deloitte.com/southeast-asia/en/about/press-room/gen-z-millennial-survey-finds-generations-stay-true-to-their-values.html

Farmonaut. (n.d.). *Environmental impacts of rare earth mining: 7 challenges*. https://farmonaut.com/mining/environmental-impacts-of-rare-earth-mining-7-challenges

Kannah, R. Y., Merrylin, J., Devi, T. P., Kavitha, S., Sivashanmugam, P., Kumar, G., & Banu, J. R. (2020). Food waste valorization: Biofuels and value added product recovery. *Bioresource Technology Reports, 11*, 100524. https://www.sciencedirect.com/science/article/abs/pii/S2589014X20301456

Kumar, D. (2024, April 23). Industry government collaboration on agritech can empower global agriculture. *World Economic Forum.* https://www.weforum.org/stories/2024/04/heres-how-we-protect-smallholder-farmers-and-food-security/

Igini, M. (2023, August, 21). *10 concerning fast fashion waste statistics.* Earth.Org. https://earth.org/statistics-about-fast-fashion-waste/

International Fund for Agricultural Development. (2022). *Climate-smart agriculture – A synthesis of experiences and lessons from the NEN region*. https://www.ifad.org/documents/48415603/49773949/csa-studies-nen.pdf/09208c5e-019d-8394-f2ca-83a670b43e01?t=1726642358943

International Fund for Agricultural Development. (n.d.). *Decent Work for Equitable Food Systems Coalition*. https://www.ifad.org/en/initiatives/decent-work-equitable-food-systems-coalition

National Environment Agency. (2024). *Waste statistics and overall recycling*. https://www.nea.gov.sg/our-services/waste-management/waste-statistics-and-overall-recycling

Packaging Gateway. (2023, April 4). *Coca-Cola's 100% plant-based bottle.* https://www.packaging-gateway.com/projects/coca-cola-plant-based-bottle/

Swiftpak. (2023, October 24). *Why is PLA not sustainable?* https://www.swiftpak.co.uk/insights/why-is-pla-not-sustainable

Unilever. (2024, September 5). *Supporting our suppliers to take bolder climate action.* https://www.unilever.com/news/news-search/2024/supporting-our-suppliers-to-take-bolder-climate-action/

Wayman, E. (2023, May 4). Recycling rare-earth elements is hard — but worth it. *Science News Explores.* https://www.snexplores.org/article/recycling-rare-earth-elements-hard-reuse-greener-technology

White, K., Hardisty, D. J., & Habib, R. (2019, July–August). The elusive green consumer. *Harvard Business Review.* https://hbr.org/2019/07/the-elusive-green-consumer

From Family Values to Future Visions

SUN Kaiqi

Introduction: Arriving at IMPACT WEEK

When I arrived at Suntec Convention Centre, the atmosphere of IMPACT WEEK immediately drew me in. The venue buzzed with voices of entrepreneurs, scholars, students and thought leaders. They engaged in discussions on how to shape a well-being economy, one that balances prosperity with people and the planet. To be honest, this was the grandest occasion I have ever attended. Although my participation lasted only one day, the sessions I joined left a deep intellectual impression on me.

The journey at IMPACT WEEK begins.

As a student of strategic analysis and innovation, I have often questioned how business, education and technology can truly create value beyond financial profit. Thus, when I attended the sessions on the themes of Family Business & Capital, Future of Education, and Technology & AI, I recognised a connection directly to these questions.

In particular, the panel titled "Education as a Living System: Cultivating Consciousness for Systemic Change" featured distinguished speakers such as Mr Chavalit Frederick Tsao, Professor Peter Waring, Professor Sibrandes Poppema, Professor Omid Aschari, Mr Chandran Nair, Professor Lawrence Loh,

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Mr Alexis du Roy de Blicquy. Their perspectives on family businesses, the role of education, and the impact of AI helped me rethink what it means to learn and lead in today's increasingly complex world.

(From left) The panel comprised moderator Mr Chandran Nair, Founder & CEO of Global Institute for Tomorrow; and panellists Mr Chavalit Frederick Tsao, Chairman, TPC; Professor Omid Aschari, Senior Advisor, Principles of Responsible Management Education, UN Global Compact; Professor Lawrence Loh, Director, Centre for Governance and Sustainability; Professor Sibrandes Poppema, President & Vice-Chancellor, Sunway University; Professor Peter Waring, Pro Vice Chancellor of Transnational Education, Murdoch University; and Mr Alexis du Roy de Blicquy, CEO, Family Business Network.

Exploring the Meaning of Family Business

The day began with a talk on family capital and the future of family enterprises, led by Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee), and Founder of the OCTAVE Institute. Mr Tsao is a fourth-generation business leader who has transformed his family's shipping enterprise into a purpose-driven, multi-sector enterprise centred on well-being and human consciousness. Mr Tsao explained that family businesses accounted for approximately 70% of global businesses and contribute over 60% of global Gross Domestic Product (GDP) and employment. These statistics alone demonstrate how crucial family enterprises are to the global economy. Yet their true power lies not only in scale, but in their values-based culture that emphasises trust and continuity.

Mr Alexis du Roy de Blicquy, the Chief Executive Officer of the Family Business Network (FBN), highlighted that family businesses must evolve from profit-driven entities into purpose-driven communities that nurture human consciousness to maintain a long-term healthy state. He emphasised that family enterprises possess a unique advantage in long-term thinking as they define success across generations, rather than financial quarters.

Mr Tsao's leadership philosophy integrates Eastern wisdom with Western management. Through the OCTAVE Institute, he promotes mindfulness and self-awareness as tools for leadership transformation. He argues that without inner balance, even the most successful organisations can risk losing direction. I found this deeply meaningful as it reminded me that businesses, like families, thrive on relationships, trust and shared intention. From an economic point of view, family firms are distinctive because they integrate ownership, management and legacy—a combination that often leads to stability but also poses challenges such as succession and innovation.

The Purpose of College Education: Nurturing Whole Humans

The panel subsequently shifted its focus to a discussion on the purpose of higher education in a rapidly changing world. Professor Sibrandes Poppema, President and Vice-Chancellor of Sunway University, argued that universities must function as "living systems of learning"—evolving ecosystems that integrate science, ethics and social responsibility. One of his assertions was particularly striking. He suggested that the best universities in the world are not necessarily elite universities and Ivy League universities but universities that provide access to large and diverse student populations every year without restrictive admission policies. He argues that the essence of education does not lie with academic performances or institutional prestige, but in enhancing one's understanding of the world. Upon careful consideration, I found it both profound and worth reflecting upon, as students are often consumed by academic pursuits without fully comprehending the deeper purpose of education and learning.

Drawing from his long academic career, including his tenure as President of the University of Groningen, Professor Poppema highlighted that the mission of education must go beyond producing employable graduates. It should aim to develop global citizens who are conscious of their impact on people and the planet. He emphasised that higher education must cultivate critical thinking, empathy and systems awareness. These qualities prepare students to navigate complexity and collaborate across cultures—skills that are increasingly essential in the AI-driven future.

Professor Peter Waring, Pro Vice-Chancellor (Transnational Education) at Murdoch University Singapore, expanded on this theme by discussing the changing nature of education in the digital age. He explained that universities should not only transmit knowledge but also equip students with the ability to learn continuously and remain adaptable as industries transform. From his background in corporate governance and human resource management, Professor Waring noted that education must align with the values of responsibility and transparency, like how family businesses sustain governance across generations. Nowadays, the knowledge learned in many universities may sometimes lag behind industry practices. However, the essence of learning itself is to improve one's learning ability and develop a path suitable for one's career growth.

Mr du Roy de Blicquy connected these ideas directly to family enterprises by emphasising succession—how the FBN community spans over 65 countries and supports family firms in passing down not only assets but also values and governance frameworks. He argued that education serves a similar purpose: it passes down wisdom and integrity to new generations. Mr du Roy de Blicquy emphasised that both universities and family businesses must focus on succession of values, not just knowledge. "Legacy," he said, "is not what you leave behind, but what you live and teach every day." This statement made me reflect on how my own education can become a form of legacy-building in shaping not just my career, but my character.

Professor Lawrence Loh, Director, Centre for Governance and Sustainability at NUS Business School, reinforced the idea that education should prepare students to tackle real-world challenges, rather than solely focusing on theoretical knowledge. His approach to teaching connects academic learning to current affairs and student experiences.

An Evolving Education

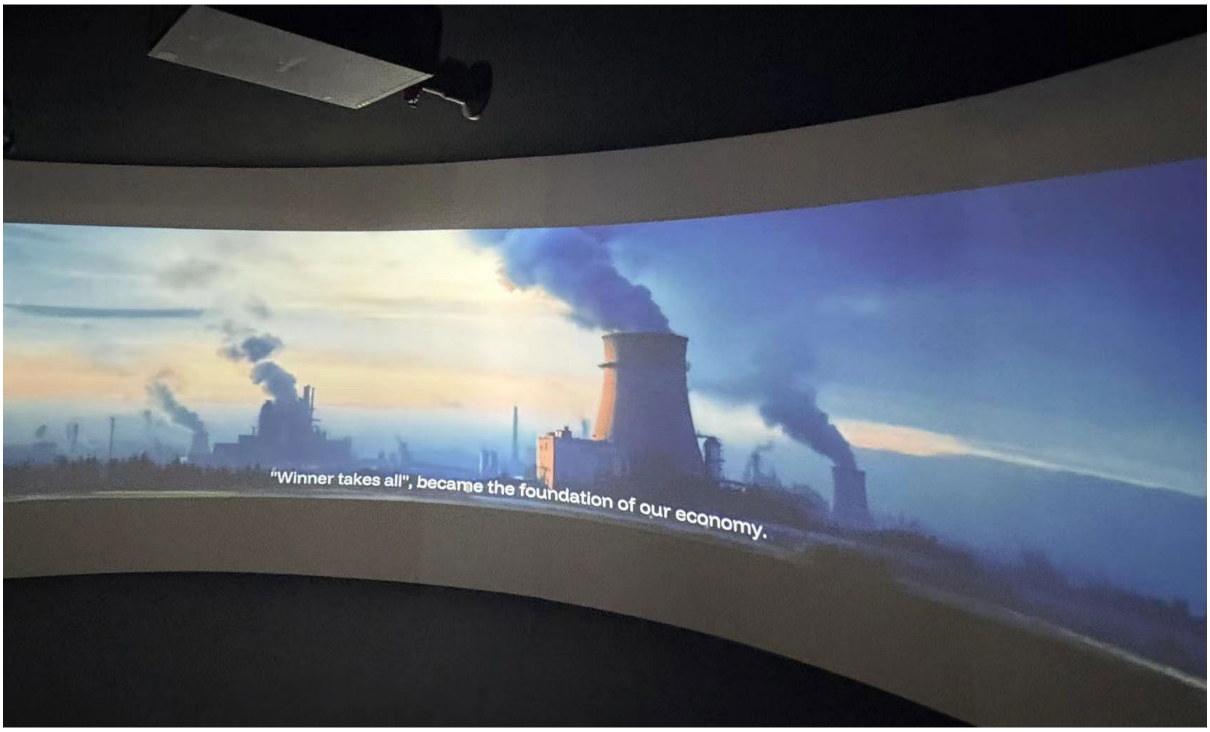
Professor Loh believes that education should have a clear purpose, which is to create a positive impact. He follows an "impact framework" that links learning to three factors: students' questions, current affairs and real-life situations. He highlighted that education can connect theoretical knowledge to real problems in society or business, allowing students to learn better and develop stronger critical thinking skills.

He articulated that education must evolve as the world changes. With technology, AI and sustainability issues becoming more prominent globally, schools and universities evolve in response to these global trends. Students should be adaptable to these global changes, because success in the future depends on being flexible and possessing a forward-thinking mentality. For example, business students should understand how AI can improve sustainability and how digital tools are reshaping industries.

Collectively, the panel underscored that education must remain human-centred, cultivating creativity, compassion and providing opportunities. Learning should not end with graduation; it is a lifelong process of developing awareness of one's role in society and in the wider system of life.

AI and the Future of Work and Learning

Towards the end of the forum, the discussion turned towards AI and its potential to redefine both business and education. I realised how AI represents both a challenge and an opportunity for human values.



A curved video wall at IMPACT WEEK which spurs the audience to rethink the past and future economies

For family businesses, AI can be a tool for innovation and long-term survival. It enables data-driven decision-making, predictive analytics and operational efficiency. However, Mr Tsao cautioned that technology must remain "in service of humanity, rather than supplementing human purpose. If technology overtakes human purpose, businesses risk losing their moral compass and ethical grounding.

Professor Waring discussed how universities are increasingly integrating AI into learning environments, from personalised education to automated assessments. Yet he emphasised the need to couple technical literacy with ethical reasoning, ensuring students understand both the capabilities and limitations of AI.

Professor Poppema echoed this sentiment, suggesting that AI can support sustainability and innovation when guided by human judgment and ethical governance. He cited how Sunway University collaborates with technology companies to advance research in sustainable systems while maintaining a strong commitment to social impact.

As a master's student, I found this discussion both inspiring and humbling. I realised that while AI can enhance productivity, the qualities that truly define us—creativity and ethical judgment—cannot be automated. The responsibility for my generation, is to use technology wisely and compassionately, aligning innovation with human purpose.

Personal Reflection and Commitments

Attending IMPACT WEEK for even one day redefined my understanding of what it means to live and learn with purpose. I realised that both business and education are human endeavours—processes of growth, connection and self-awareness.

Listening to Mr Tsao's views about family businesses as living systems reshaped my understanding of value creation. I realised that the essence of sustainability is not only about managing resources wisely but also about nurturing relationships, and trust—values that family enterprises have safeguarded for generations.

A mark of attending IMPACT WEEK.

The conversation on education with Professor Poppema and Professor Waring also prompted me to reflect on the purpose of my university journey. I began to view education not merely as preparation for employment, but as a lifelong process of developing awareness—learning how to think, how to relate, and how to contribute meaningfully to the world around me. The emphasis on critical thinking, adaptability and ethical awareness made me reflect on how I engage with my academics and the kind of learner I aspire to be.

Conclusion

Although my experience at IMPACT WEEK lasted only one day, it profoundly influenced my understanding of business, education and technology. I learnt that the strength of the global economy lies in family businesses, which represent most enterprises worldwide and embody values of trust, resilience and continuity.

Education, meanwhile, serves as a bridge between tradition and transformation—a space where consciousness evolves, and knowledge becomes action. AI, when guided by ethical values, can amplify our capacity to create a fairer, more sustainable world.

As Mr Tsao emphasised, the future economy must be an economy of well-being, built upon love, awareness and collective growth. This message continues to inspire me to approach learning and leadership as acts of service to humanity.

IMPACT WEEK 2025: Integrating Science, Strategy and Society in Food Systems Transformation

ZHANG Jingyi

Sustainability as a Strategic Reality

Over the past decade, sustainability has shifted from an ethical essential to a strategic reality that increasingly defines competitiveness and legitimacy in the global markets. Businesses that once viewed environmental protection as a virtuous add-on now recognise it as integral to operational resilience, consumer trust and long-term profitability. The shift is evident in multiple sectors, particularly in food and agriculture. The Roundtable on Sustainable Palm Oil (RSPO), for instance, now certifies over 4.9 million hectares of production area across 23 countries, establishing standards for deforestation-free sourcing (RSPO, 2023). Similarly, the Rainforest Alliance certification has become a key benchmark for the agriculture industry, promoting traceability and livelihood support for smallholder farmers in regions such as West Africa and Latin America (Rainforest Alliance, 2024). These frameworks demonstrate that sustainability is not only about regulatory compliance, but also about market access, investor confidence and brand integrity. The hospitality industry reflects this transformation through initiatives such as the Michelin Green Star, introduced in 2020 to recognise restaurants that

The emcee at IMPACT WEEK.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

integrate low-waste operations, local sourcing and ecosystem regeneration into their culinary philosophy (Michelin Guide, 2022).

These examples highlight that environmental stewardship, ethical sourcing and innovation are no longer siloed practices, but interdependent elements of a modern business strategy. As a student with a background in Food Sciences, it was particularly striking how principles once confined to laboratory research, such as nutrient retention, soil health and food safety, now shape boardroom discussions on market growth, risk management, and consumer engagement.

Against this global scenery, IMPACT WEEK 2025 presented a holistic exploration of how food systems can be reimagined to serve both people and the planet. Rooted in the framework of a Well-being Economy, the event examined how climate, circularity, energy, food, human development and well-being intersect as pillars of prosperity. The food systems pillar resonated most strongly with me, not just because of my academic background, but because it bridged technical knowledge with strategic vision, transforming abstract sustainability goals into actionable business models.

Reimagining the Global Table: Systems Thinking in Agriculture

The first major insight I gained came from the session "Rethinking Food Systems: Mobilising All Voices for People, Resilience & Climate", which explored how global agriculture must adapt and evolve under the combined pressures of population growth, resource depletion and climate volatility. The discussion emphasised a truth often overlooked in sustainability discourse: food systems are not isolated supply chains, but dynamic ecosystems influenced by policy, technology, markets and culture.

Panellist Ms Tania Strauss, Head of Sustainable Growth and People Agenda, Member of the Executive Committee, World Economic Forum, contextualised the issue by highlighting that a part of global greenhouse gas emissions stems from food production and consumption, yet at the same time, the same systems leave many undernourished. This paradox of abundance and scarcity coexisting reveals that inefficiency is not purely technical but structural.

Speakers such as Ms Erica Chan, Group Chief Legal, Sustainability and Corporate Affairs Officer, DFI Retail Group, illustrated the human dimension of this challenge. Her work with rice farmers in Thailand showed how traditional smallholders, often unaware of long-term ecological consequences, overapply chemical fertilisers to maximise short-term yield. This practice results in soil degradation, water pollution and economic vulnerability. The initiative she presented focuses on farmer education, translating sustainability concepts into relatable practices, such as soil nutrient balancing and alternate wetting-and-drying irrigation. By strengthening understanding, these interventions foster ownership and behavioural change. What stood out to me was that sustainability was not imposed from top down, but co-created through empathy and accessible knowledge, from the bottom up.

The panel discussion "Rethinking Food Systems: Mobilising All Voices for People, Resilience & Climate".

From a technological standpoint, Dr Yvonne Pinto, Director General of the International Rice Research Institute (IRRI), discussed advances in developing rice varieties that are both drought-tolerant and high-yielding. Given that traditional rice cultivation is water-consuming, such innovation could potentially reduce freshwater stress significantly. The research aligns with a broader global effort to enhance the climate resilience of staple crops, ensuring both productivity and resource efficiency. However, scientific innovation alone is insufficient without market mechanisms and financing. As Mr JY Chow, Managing Director, Food System and Supply Chain at OCTAVE Capital, noted, regenerative agriculture and sustainable food systems are increasingly seen as attractive investment opportunities. This convergence of capital and conscience represents a fundamental moment, where impact and profitability reinforce, rather than compete with each other.

This discussion deepened my appreciation of the systems-thinking approach to sustainability. The food system operates as a living network, where policy decisions influence consumer behaviour, consumer demand shapes production methods, and production choices alter ecological health. Meaningful transformation must therefore require the simultaneous engagement across all nodes—producers, processors, retailers, investors and consumers, each sharing responsibility for outcomes. It reminded me of my earlier exposure to Bangladesh's Golden Rice project, which successfully addressed vitamin A deficiency through biofortified crops. While that initiative showed scientific triumph, the sessions at IMPACT WEEK revealed that systemic sustainability depends equally on governance, financing and education.

The Body as Ecosystem: Redefining Health and Consumption

While the previous session examined sustainability through the macro lens of agriculture, the following forum on "Plant-Forward Food-as-Medicine: Prescription for Body and Planet" shifted the focus to the individual. It explored how dietary choices shape not only personal health but also ecological balance. The session was grounded on the premise that the body itself is an ecosystem, interconnected with the natural systems that sustain it. The discussion merged ancient wisdom with modern evidence, demonstrating that sustainable eating is both a nutritional and ethical practice.

One of the session's distinctive aspects was its emphasis on Traditional Chinese Medicine (TCM) principles. A practitioner led an exercise through self-diagnosis techniques such as observing tongue characteristics, linking physical indicators to dietary balance. When I was assessed as having "yingshi" (internal coldness), likely due to excessive fruit consumption, it illustrated a broader insight: our daily diets reflect our lifestyles and environmental interactions. The message was clear that health and sustainability begin with self-awareness.

Scientifically, the case for plant-forward diets is well established. Those who had plant-rich diets had lower mortality risk than omnivores (Willet et al., 2020). Yet, as the panel discussed, cultural perceptions often hinder adoption rates. In many Asian societies, meat remains a symbol of wealth and celebration, implying that dietary transformation requires cultural re-engineering, not just nutritional advocacy.

The speakers argued that business and policy must jointly drive this change. Retailers can promote plant-forward diets by repositioning them as aspirational rather than restrictive through attractive packaging, culinary innovation and pricing strategies that reflect environmental externalities. Food sustainability cannot be achieved by scientific logic alone; it must resonate with identity, culture, and pleasure.

This reframing from guilt to empowerment mirrors a broader social evolution by suggesting that systemic transformation begins at the most personal level. When consumers understand that health, taste and planetary well-being are intertwined, they become active participants in the sustainability journey. In that sense, the plant-forward movement operates as a bridge between the environmental concerns raised in the first session and the behavioural realities shaping consumption. It embodies the idea that sustainability must be lived, not merely legislated.

People, Gender and Innovation in the Field

The third discussion I attended, "From Seed to Table: Building Resilient Food Chains, One Ingredient at a Time", focused on the human and technological drivers of agricultural transformation. This session provided a contrast to the high-level narratives of policy and finance by grounding the conversation in the realities of smallholder farmers. Ms Beverley Postma from Grow Asia highlighted a critical yet often underrepresented perspective: gender inclusivity in agricultural development. Women constitute a substantial portion of the agricultural workforce in developing countries, yet they often lack access to credit, land rights and training. By establishing inclusive programmes that support women farmers through microfinance and cooperative models, Grow Asia has shown that inclusivity is a productivity strategy.

Complementing this perspective, Mr Digvijay Singh Kathiwada, an Indian social entrepreneur and Chairperson, Kathiwada Foundation, offered a reimagined perspective of agriculture—"making farming sexy". His initiative employs drone technology to enhance precision, monitor crop health, and reduce labour intensity. Beyond efficiency, his narrative emphasised dignity and pride, challenging the societal perception of farmers. By positioning agriculture as a technologically sophisticated, future-facing profession, his work aims to attract youths into an industry increasingly abandoned for urban livelihoods. This approach aligns with the broader theme of IMPACT WEEK: reimagining systems by reconnecting dignity, purpose and innovation.

From a strategic perspective, these examples illustrate how sustainability thrives and gains momentum when it becomes aspirational. Empowering women and youth in agriculture not only strengthens food security but also diversifies innovation. Technological adoption, whether through drones, data analytics or regenerative methods, depends on cultural acceptance and economic viability. The session revealed that transformation requires more than technology transfer; it demands a social infrastructure that values participation and inclusivity. For businesses, this insight underscores the importance of designing supply chains that are not only efficient but equitable, where all stakeholders, from producers to consumers, share in both the risks and rewards of change.

This idea resonated with corporate examples discussed earlier. Just as the RSPO and Rainforest Alliance depend on verified inclusivity in sourcing, initiatives like Grow Asia's female farmer programme, GrowHer, demonstrate that ethical and efficient supply chains should complement each other. They reaffirm that sustainability, when executed holistically, yields a competitive advantage by aligning ecological goals with social justice.

Closing the Loop of Value: From Waste to Wealth

If the first three sessions explored how to design sustainable production and consumption, the final one, "Closing the Loop: From Waste to Wealth—Asia's Food Circularity Playbook", addressed the post-consumption stage of the food system. The session's underlying message was simple yet profound: food waste is not just a logistical inefficiency; rather, it is a moral, social and environmental failure.

Dr Koh Chaik Ming, Chairman of The Food Bank Singapore, described how surplus food can be redirected through digital logistics and partnerships with retailers to reach vulnerable communities. Likewise, Mr Louis-Alban Batard-Dupre, Chief Executive Officer of Yindii, presented a digital platform connecting consumers with discounted surplus meals from restaurants and supermarkets, effectively converting food waste into opportunity. These initiatives illustrate that circularity is not a niche experiment but a scalable business strategy.

Ms Deepa Hingorani, Partner and Head, Planetary Health Investments Asia, Novo Holdings, expanded this perspective to the upstream end of the food chain, noting that innovation in aquaculture and biotechnology plays a vital role in reducing losses before food reaches the markets. Novo Holdings recently invested in an underwater sonic device developed for salmon farms in Norway, designed to eliminate sea lice parasites without chemicals or antibiotics. By preventing parasitic outbreaks that typically cause massive fish mortality, this technology not only protects animal welfare but also reduces resource wastage across feed, water and energy inputs. This approach reflects how sustainable investment can tackle inefficiencies at multiple nodes of the value chain, from pre-harvest to post-consumption. Ms Hingorani also highlighted that food waste innovation is attracting increasing investor interest, particularly in upcycling technologies such as transforming by-products into high-value ingredients or compost.

What inspired me most was the integration of inclusivity and innovation. Circularity is not only about efficiency; it is about redesigning ownership in value chains. Community kitchens, composting startups, and redistribution networks all thrive when underpinned by trust and cooperation. During the conference, Bettr Coffee, a Singapore-based social enterprise, exemplified this principle. Their transparent supply chain from single-origin sourcing to barista training for marginalised groups embodied how circular thinking extends beyond materials to human potential. As I enjoyed multiple cups of their piccolo coffee made with oat milk, I realised how even a small consumer action can reinforce broader ecosystems of sustainability when transparency and ethics align.

Coffee from the social enterprise Bettr Coffee.

From System to Self: Linking Scales of Change

A defining feature of IMPACT WEEK 2025 was its emphasis on integration, demonstrating that sustainability operates along a spectrum, from systemic reform to personal transformation. The food system begins with the soil and ends on the plate, but it also cycles back through waste recovery, policy reform and education. The four sessions collectively illustrate how every stage of this cycle demands alignment between science, governance and culture.

At the macro level, corporate accountability and technological innovation shape what is possible. RSPO's palm oil traceability, IRRI's drought-resistant rice and regenerative investment funds all push the frontier of sustainable production. However, their success depends on human adoption, farmers' willingness to learn, consumers' willingness to choose differently, and institutions' willingness to coordinate. At the meso level, inclusivity initiatives such as the female farmers programme GrowHer and Mr Kathiwada's technology-driven rebranding of agriculture show how local agency translates global ambition into practice. And at the micro level, lifestyle choices such as plant-forward eating and food waste reduction internalise sustainability as a habit rather than rhetoric.

This progression from a global to personal level underscores an essential insight: sustainability cannot be achieved through isolated interventions. Rather, it must be embedded as a shared mindset that permeates markets, policies and everyday life. In that sense, IMPACT WEEK 2025 is a model for systemic coherence. By convening actors across business, science and civil society, it demonstrated that change occurs not in silos but in networks of collaboration.

Designing Coherence for the Future

Reflecting on IMPACT WEEK 2025, I realised how my understanding of sustainability has matured from a purely technical concern to a multi-dimensional strategy for resilience and value creation. My Food Science background taught me to analyse food systems at molecular and functional levels, such as starch retrogradation, protein denaturation, and nutrient fortification. But through the conference, I began to see that the same analytical precision applies to systems thinking; every factor, decision and feedback loop contributes to the larger structure of sustainability.

The author at IMPACT WEEK.

The journey from production to consumption, from waste to regeneration, and from science to society revealed that sustainability is not a final state but a continuous process of alignment. It involves balancing short-term incentives with long-term well-being, integrating technology with empathy, and embedding ethics into economics. Whether through IRRI's innovation in rice genetics, DFI's farmer education, or Yindii's digital circularity model, each initiative reinforced that progress depends on coherence between purpose and practice, vision and execution.

For me personally, the conference bridged my scientific foundation with my current focus on strategic innovation. It showed that real impact lies not in isolated discoveries but in systems designed for cooperation. The transformation of global food systems requires cross-sector literacy, where scientists who understand markets, investors who respect ecology, and consumers who act with awareness. The challenge is significant, but as IMPACT WEEK 2025 demonstrated, so is the opportunity: to redesign the way we grow, trade and consume food in service of both people and planet.

Sights at IMPACT WEEK: There are opportunities in redesigning the way we grow and consume food in service of both people and planet.

References

Michelin Guide. (2022, August 2). *What is a MICHELIN Green Star?* *https://guide.michelin.com/qa/en/article/features/what-is-a-michelin-green-star-dubai*

Rainforest Alliance. (2024). *Annual report 2024*. https://www.rainforest-alliance.org/annual_report/2024/

Roundtable on Sustainable Palm Oil. (2023). *Impact update 2023*. https://rspo.org/wp-content/uploads/Impact-Update-2023.pdf

Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., Jonell, M., Clark, M., Gordon, L. J., Fanzo, J., Hawkes, C., Zurayk, R., Rivera, J. A., De Vries, W., Majele Sibanda, L., Afshin, A., … Murray, C. J. L. (2019). Food in the Anthropocene: The EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet, 393*(10170), 447–492. https://doi.org/10.1016/S0140-6736(18)31788-4

Insights into Food Waste

ALHARTI Faisal Ibrahim J

Introduction

This document is presented as a learning journey log from my participation in IMPACT WEEK 2025, an event held in Singapore from 15 to 19 September 2025. It connected businesses, capital and community to collaborate in transforming ideas into actions for a Well-being Economy. There are six pillars of Well-Being Economy, which are: Climate & Nature, Circular Economy, Energy Transition, Food Systems, Human Construct and Well-Being.

My learning journey was motivated by an initial curiosity to understand the food waste context. This learning was subsequently deepened through research and reflection.

Defining the Problem of Food Waste

The Asian case, specifically in the context of the food system, presents an interesting paradox. The continent possesses all the components of food security: extensive agricultural land, sufficient labour and easy access to water resources, yet it faces a food security challenge. Approximately 70 per cent of the world's malnourished children live in Asia (Merckel, 2015).

In addition, Asia wastes more than 230 million tonnes of food annually (IMPACT WEEK, 2025). This contradiction clearly indicates that the problem is certainly not related to the production capacity, but rather, a gap in the way companies, individuals and governments manage food systems.

The issue lies in the way food is handled. Given the complex and multifaceted nature of this problem, responsibility cannot be pinned to a single actor. What this paradox reflects is long periods of inaction in balancing the commercial objectives of companies with society's interests.

The following perspectives highlight the misalignments in interventions:

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

"The cost is lower than the revenue; therefore, I will just continue my food production methods." — This is the perspective of commercial entities.

"I buy food and throw away what remains; I paid for it with my own money, and I am free to do as I wish." — This is the perspective of the consumers.

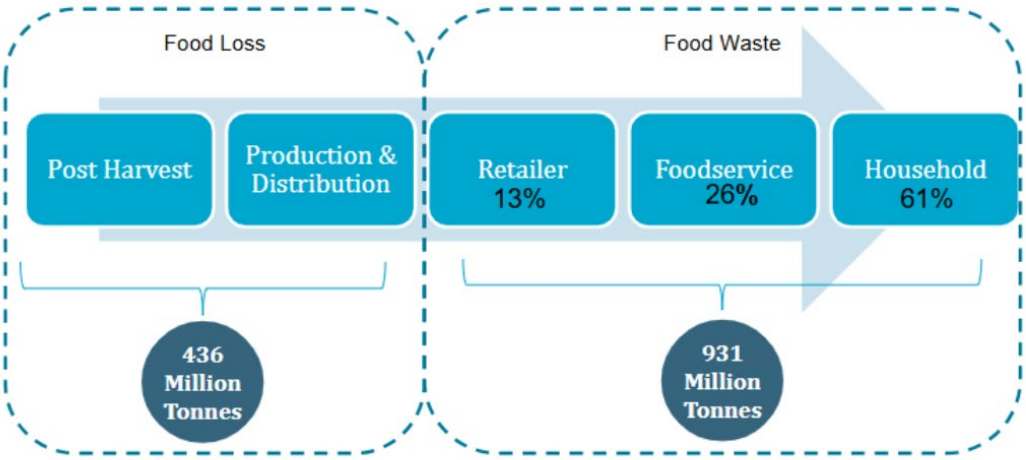
"Companies pay taxes, and there is economic activity; there is no need to take any actions as these are good indicators." — This is the view of governments.

These perspectives reflect a fundamental conflict: the excessive pursuit of economic goals has resulted in the neglect of millions who face a daily struggle to access food. 375 million people across Asia remain undernourished (IMPACT WEEK, 2025).

While food waste is often attributed to the loss of social justice, it is also an economic problem related to the mechanisms of resource allocation. This report will examine the interconnection between the environmental, social, economic and governance dimensions of the food waste issue.

Issue Overview

Evaluating the food waste issue requires a value chain analysis, which is the processes a product passes through from creation to end. In the food system, food starts at farms and ends with consumers.



Food value chain.

Source: Euromonitor, 2022

There is a clear distinction between food loss and food waste. Food loss occurs before it reaches the consumer, while food waste occurs after the food reaches the consumer. Each occurs for different reasons. Food loss occurs due to a lack of knowledge or resources to manage food at this stage. Meanwhile, food waste is attributed to multiple factors. For example, restaurants tend to waste food due to inaccurate demand forecasting. Based on the data provided by Euromonitor, the amount of food waste is roughly double the amount of food loss. Compared to retailers and food service, households accounted for a major stake (approximately 61%) of total food waste (Euromonitor, 2022).

With a clear understanding of this global food waste system, the next section explores a specific IMPACT WEEK case and assesses how solutions can help to combat food waste in Asia.

Case Study: Yindii

Yindii is a digital platform that allows consumers to purchase discounted surplus food from restaurants, in an attempt to combat the issue of food wastage. From a business perspective, this initiative addresses two issues. First, it allows restaurants to recover value from food that would otherwise be discarded and result in losses due to unsold ingredients. Secondly, it offers consumers access to food at a lower price, reducing affordability issues. Overall, this model tackles these issues in tandem.

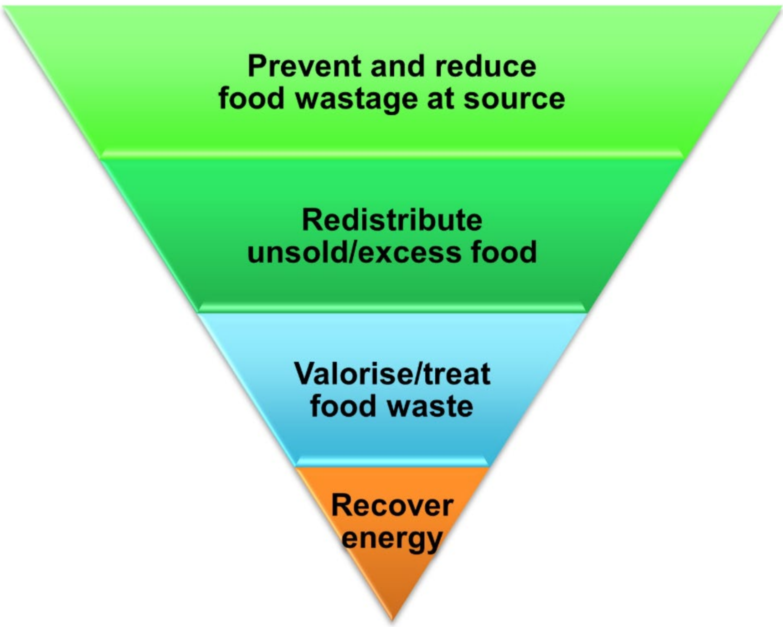
Yindii is expanding its operations into the Singapore market. As its co-founder and chief marketing officer Mahima Rajangam Natarajan stated, Singapore is a "forward-thinking city with a growing focus on sustainability and reducing food waste". The app launched in 2020 and also operates in Hong Kong and Thailand. Since then, the company has offset more than 500 tonnes of carbon dioxide emissions (Andres, 2024).

Within the food waste value chain, Yindii operates in the foodservice sector, which accounts for 26% of food waste (Euromonitor, 2022). While its contribution is significant and impactful in the foodservice sector, it could inadvertently increase the amount of household food waste as promotions and low prices may drive the behaviour of over purchasing. A study conducted by Boston Consulting Group concluded that excess purchasing by consumers is stimulated by promotional pricings (Hegnsholt et al., 2018).

In my perspective, Yindii offers a great economic solution to the food waste problem. It not only reduces guaranteed economic losses for restaurants but also enhances food affordability for consumers. This initiative enhances the social benefits, particularly in letting low-income groups afford relatively more lavish products at a lower price. However, there may be undesirable environmental implications. After reading about this case, I downloaded the Yindii app and found that the café brand Paul is also on it. I used to buy from Paul every weekend when I was employed. Now as a student with limited disposable income, this platform allows me to access more expensive products that I would normally avoid.

What is the Singapore Government Doing?

Singapore's approach to addressing the issue of food waste is guided by the National Environment Agency (NEA), a government entity in Singapore that promotes a clean and sustainable environment, and its food waste management hierarchy table addresses some of my concerns.



Food waste management hierarchy.

Source: Information from National Environment Agency, n.d.

NEA's emphasis on the food waste management hierarchy is a holistic framework which stresses the importance of reducing food waste at the source.

In order to combat food waste, the Ministry of Sustainability and the Environment launched the Zero Waste Masterplan in 2019, targeting a 30% daily waste reduction that goes to landfill. They identified three types of priority waste streams, of which food waste is one of them (National Climate Change Secretariat, n.d.). When considering the prevention and reduction of food waste, the government identified a lack of knowledge as a major contributor to household food waste. Hence, they provided suggestions on meal planning guides, advice on food storage, and tips on recipes using leftover ingredients. NEA also launched the "Say YES to Waste Less" campaign which promotes a sustainable lifestyle (National Environment Agency, n.d.).

The government collaborates and engages with various stakeholders, offering tailored solutions for them. An example is the Clean & Green Singapore initiative for schools, businesses and organisations.

Laws for Protecting Food Donors

At the second level of the management hierarchy is redistribution, where partners such as Food Bank Singapore facilitate the process of food donation through food collection points and food drives. In this regard, the government has adjusted the law to protect food donors, notably through the Good Samaritan Food Donation Bill which was passed in Parliament on 7 August 2024.

My perspective is that determining the effectiveness of a food waste reduction initiative depends on a simple question. When dealing with excess food, which option provides higher utility: discarding it or donating it? Many factors play a role in the decision, such as cultural norms. For example, a Spanish dish, “Paella”, is based on leftover food.

How the Saudi Arabian Government Appeals to Citizens’ Beliefs

Another factor is belief systems. For example, some religions, such as Islam, emphasise non-wastage. One piece of guidance from Prophet Muhammad is “Peace be upon him, do not waste, even if you are on a river”. Drawing reference from Saudi Arabia, when the government observed that there was high food waste per capita, it approached food distribution in a way that resonated with the public’s belief system. The Saudi Arabian government advocated the “Preservation of Nima’a”, where Nima’a is a religious term meaning blessing, which in this case refers to food. The reasoning is “when I donate food, I avoid committing a sin, and I gain a spiritual reward, which is a better option than wasting food”.

Innovation to Convert Food Waste into Useful Products

The third level of the hierarchy applies when food waste has passed the first two stages and must still be managed. There are mainly two types of processing in Singapore. The first is to encourage all stakeholders to convert food waste into compost and soil fertilisers. Secondly, combine the waste with sewage to produce biogas, which will enhance biogas production efficiency (National Environment Agency, n.d.). The idea of turning food waste into an input for another production line is key to the circular economy. Nevertheless, in my view, there are opportunities for more to be done in this area. For example, a South African start-up AgriProtein had come up with an interesting innovation to allow fly larvae to feed on waste to produce other products such as animal feed (Burwood-Taylor, 2016).

In the food waste management hierarchy, the final level relates to Waste-to-Energy plans.

Personal Takeaways

This learning journey has significantly deepened my knowledge about food waste and sustainability in general. I also learnt that the Singapore government has undertaken significant efforts to deal with this challenge. It made me recognise that Saudi Arabia also has this issue of landfill and is currently in a transformation to reduce the percentage of food waste that goes to landfills. This prompts me to consider the possibility of the country developing a plant similar to AgriProtein. Another takeaway is that sustainability challenges are not separate from economic activities, rather, they are interconnected.

I am inspired by the role of education in addressing Economics, Environmental, Social and Governance (EESG) challenges. Saudi Arabia's food waste reduction efforts sparked my curiosity to understand people's belief systems, which could influence how they engage with policies or initiatives.

This report reinforced my view that food waste is attributed to inefficient design, or what I call "the way of dealing with food". Singapore's approach reflects efforts to redesign this system through governance, education and innovation. This assignment, which combined experiential learning with the freedom to explore a topic of interest, has been intellectually engaging and enjoyable.

The author at IMPACT WEEK.

References

Andres, G. (2024, October 27). New app lets S'pore diners buy unsold food at big discount, helps cut food waste. *The Straits Times*. https://www.straitstimes.com/singapore/diners-can-use-new-phone-app-to-buy-unsold-food-at-a-big-discount-and-help-cut-food-waste

Burwood-Taylor, L. (2016, December 1). AgriProtein raises $17.5m to build second waste-to-insect protein factory and license tech. *AgFunderNews*. https://agfundernews.com/agriprotein-raises-17-5m-to-build-second-waste-to-insect-protein-factory-and-license-tech

Euromonitor. (2022). *The fight against food waste.* https://www-portal-euromonitor-com.libproxy1.nus.edu.sg/analysis/tab

Hegnsholt, E., Unnikrishnan, S., Pollmann-Larsen, M., Askelsdottir, B., & Gerard, M. (2018, August 20). *Tackling the 1.6-Billion-Ton Food Loss and Waste Crisis.* Boston Consulting Group. https://www.bcg.com/publications/2018/tackling-1.6-billion-ton-food-loss-and-waste-crisis

IMPACT WEEK. (2025). *Closing the loop: From waste to wealth—Asia's food circularity playbook*. https://impactweek.com/programmes/closing-the-loop-from-waste-to-wealth-asias-food-circularity-playbook/

Merckel, K. (2015, November 2). *Asia hunger facts*. World Hunger Education Service. https://www.worldhunger.org/asia-hunger-facts/

National Climate Change Secretariat. (n.d.). *Waste and water*. Prime Minister's Office, Singapore. https://www.nccs.gov.sg/singapores-climate-action/mitigation-efforts/wasteandwater/

National Environment Agency. (n.d.). *Food waste management strategies*. https://www.nea.gov.sg/our-services/waste-management/3r-programmes-and-resources/food-waste-management/food-waste-management-strategies

Introspection on Family Businesses

CHEN Linhui

Introduction

The forum I attended during IMPACT WEEK 2025 focused on how the next generation of Chinese family business leaders can ensure their companies achieve sustainable development, innovation and global expansion. At the beginning of the forum, the host, Mr Terry Cao, General Partner, ZQ Group, emphasised that Chinese family businesses are currently undergoing a critical period of "handover between the first and second generations". The invited speakers included Ms Poppy Chen, Chief Sustainability Officer, Shanghai M&G Stationery Inc; Ms Yiwen Hao, Executive Director, Landun Xumei Foods; Associate Professor Winnie Qian Peng, Director, Roger King Center for Asian Family Business and Family Office, Hong Kong University of Science and Technology (HKUST); Dr Teresa Chuang, Executive Vice President, Sustainable Development Committee, Beijing International Exchange Association; and Mr Will Li, Vice President & Chief Strategy Officer, Monband.

The panel discussion "Reimagining China's Future Through Next-Gen Innovation".

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Different Ideas about Sustainability

The discussion began with the speakers' different interpretations of sustainability. To Dr Chuang, sustainability is about living in accordance with the laws of nature; in Chinese, it is described as "harmony between man and nature". She recounted a conversation with an American company owner who explained that their company evaluates the impact on future generations before making major decisions. The essence of sustainability should take on an ecological perspective: decisions should account for their impact on society, others and the natural environment.

The Multiple Dimensions of Inheritance

Subsequently, Professor Peng shared her views on sustainability. Rooted in her studies and expertise in family businesses and family offices, she argued that the core idea of sustainability is inheritance, which has multiple dimensions. The first dimension is the inheritance of the family business entity. The second dimension is the inheritance of family wealth. The third dimension is the inheritance of harmonious family relationships. Further, the fourth dimension is the inheritance of family values and influence. These four dimensions are dissimilar—while the first two may be tangible, the latter two are intangible but more critical and challenging to sustain. She pointed out that there are very few century-old family businesses, especially century-old Chinese family businesses. Professor Peng cautioned family businesses against entering three industries. The first is asset-intensive industries, where assets cannot be quickly sold during difficult times. The second is industries with significant cyclical volatility. The third is high-tech and cutting-edge industries, which constantly attract new technologies and talent. These industries can dilute family control. Subsequently, she emphasised the importance of stable policies.

National Conditions and Integration Affect Sustainability Extent

As the third generation of a family business, Ms Hao highlighted that the most important factor for sustainability is the national conditions. She believes that not every generation can rely on inherited prosperity, as the Chinese proverb says, "wealth does not last beyond three generations". In her view, any business, including a family business, ultimately belongs to society.

Ms Chen emphasised that sustainable development should be integrated into every stage of the entire value chain of the enterprise rather than being limited to charitable donations.

In addition, Mr Li shared about Monband's experience in developing water-soluble fertiliser. Compared to traditional fertilisers, they act faster and achieve higher utilisation rates. In his view, given that the fertiliser industry depends heavily on non-renewable sources of energy such as petrochemicals, Monband strives to increase utilisation rates to represent a form of sustainability.

Professor Peng concluded her discussion by citing Lee Kum Kee, a century-old Hong Kong sauce company. Lee Kum Kee's senior management emphasised that its vision for a "millennium" is based on shared values within the family and society, rather than personal gain. The company has broken down traditional hierarchies, empowering frontline employees with greater authority while the board of directors takes on a supporting role. The company also prioritises employee well-being, for example, by establishing a "Happiness Index" system that monitors health, family and work, providing care and intervention for employees with low scores (Lee Kum Kee Group, 2024).

Difficulties in Expanding the Family Business

The speakers shared their perspectives on the difficulties faced by family businesses during expansion. Ms Hao reiterated that succession is not about inheritance, but rather a "second entrepreneurship".

Ms Chen highlighted three prominent obstacles: conflicts between personal ambitions and family expectations, communication barriers with her parents and the difficulty of self-awareness, team building and resource integration. Dr Chuang also discussed the challenges of being a Taiwanese in mainland China. Mr Li initially perceived the fertiliser industry as uninspiring, but later derived purpose and meaning from it.

Identity Dilemma

From a psychological perspective, the sharing pointed to the issue of "identity dilemma" faced by the next-generation successors as they are both children of the founders and regarded as independent leaders. For example, some successors expressed uncertainty in terms of their identity as heirs or real entrepreneurs. However, parents can help their children develop a sense of identity by allowing them to observe the business, articulate their vision, and share their stories. A study had shown that building identity, and not simply the transfer of titles, is crucial in family business succession (Li et al., 2025). However, conflicts between power and communication often happen between generations. In the case study of Metersbonwe and Youngor, how the founders transfer power to the next generation affects the family business' competitive advantage (Xu, 2025). The younger generation often wants to express their thoughts and collaborate, but recognises the difficulties in changing old habits. Hence, power concentration could become a source of conflict.

The Difficulties of Going Overseas

As Ms Chen mentioned, M&G Stationery's expansion overseas has three stages: product export, supply chain export and brand export. The company mainly focused on Southeast Asia and Africa. However, during its brand expansion, M&G faced serious problems in Indonesia: its local partner registered the brand trademark without permission, making it costly and time-consuming to recover. These types of intellectual property disputes are common in Southeast Asia, where trademark systems often adopt a first-to-file principle. Therefore, a lack of understanding of local laws and policies can easily lead businesses into trouble (Chow, 2022). She also highlighted Singapore's labour law, which discourages job ads that require "fluent Chinese and English", as this can be seen as discriminatory.

Ms Hao said her company expanded by building local supply chains. This approach localises production and shortens transportation. However, she advised firms to avoid investing large sums of money initially but instead leverage on technology or expertise as equity and choose trustworthy partners to jointly implement the business. This approach can shorten the shipping cycle and be closer to the market.

Legal, Cultural and Political Risks

In the context of Globalisation 2.0, companies face increased geopolitical risks. Many businesses (this article focuses on domestic family businesses) struggle to strike a balance between global standardisation and localisation. There are many legal, cultural and political risks. Jessie Poon argues that Globalisation 2.0 has led to "friend-shoring" and trade barriers (Poon, 2024).

In this climate, standardisation can maintain brand consistency, control quality and improve efficiency; however, excessive standardisation can create obstacles for companies in different markets. For example, policies applicable in Europe may not be suitable for the culture and labour regulations of Southeast Asia. Localisation can help companies better adapt to local social values, consumer habits and legal systems. Successful multinational companies can adopt a method that unifies core values and brand standards globally while maintaining flexibility in local operations.

At the same time, geopolitics is also a big challenge. Zhu's research found that companies with more dispersed supply chains are more resilient during times of political tension, while companies that rely on a single market are more vulnerable. As such, manufacturing companies are beginning to establish regional supply centres rather than relying on a single global hub (Zhu et al., 2024). Hence, this drives the point that local sourcing enhances flexibility and helps companies cope with trade protectionism.

Institutional risk is also a key issue. Roscoe noted that many companies experience changes in local laws after investing overseas, leading to mismatches in labour, tax or certification standards (Roscoe et al., 2022). For example, a company adhering to European food labelling standards may experience customs delays when exporting to Africa due to different label formats. Therefore, understanding the diverse local laws and culture has become an essential component of a company's internationalisation strategy.

Innovation and Industrial Upgrading

During this discussion, Ms Hao highlighted her company's innovation in diversifying products made from potatoes, such as packaging and facial masks. Mr Li discussed the transition from water-soluble to microbial fertilisers. Ms Chen voiced her aim to integrate Environmental, Social and Governance (ESG) into her company's production chain.

When a family business transitions from the first generation to the second, a "window of innovation" often opens. Research on Chinese family firms illustrates this. When the second generation joins the management, the firm's innovation grows. The effect is stronger if the successor has opportunities to train overseas (Huang et al., 2019). However, innovation does not always mean breaking away from tradition. Strikingly, many successful firms retain their heritage, local practices and values, and leverage them to maintain brand trust. The second generation adds new product ideas or sustainability features. The result is both preserving tradition and product innovation. Some heirs prioritise sustainable innovation, valuing long-term returns, while others prefer complete change. I believe that how the second generation makes decisions closely depends on family values, external pressures and the legal and institutional environment.

The Debate Between Values and Speed

At the end of the forum, Professor Peng provided a contrast that many century-old family businesses in Japan are relatively small. The key factor is conscious commitment to growth control. Otherwise, they risk falling into debt crises and other challenges. In contrast, Chinese entrepreneurs always strive to be large and powerful, but their success is short-lived. This raises the question of the speed of sustainable business growth. Professor Peng believes that Chinese businesses are generally growing too quickly, and family succession should not only consider technical aspects but also the family's soft power—its overall values and harmonious family relationships. Returning to the previous topic, is it necessary for every company to expand overseas? Is it necessary to maintain a very high growth rate? Professor Peng believes that AI and big data are currently very prevalent, but fails to consider other aspects. At the same time, with all the money being invested in these areas, people need to be vigilant.

Meanwhile, Mr Li argued that through rapid development and obtaining market share, ethical companies can extend their reach and impact, instead of leaving room for unethical companies to grow. Therefore, Professor Peng's philosophy should be applied on a case-by-case basis. Each field and industry has different development considerations. Not all industries require fast development. For example, the soy sauce industry does not require exceptionally fast development, but that may not be the case for the AI industry.

Growth Rates Do Not Predict Future Success

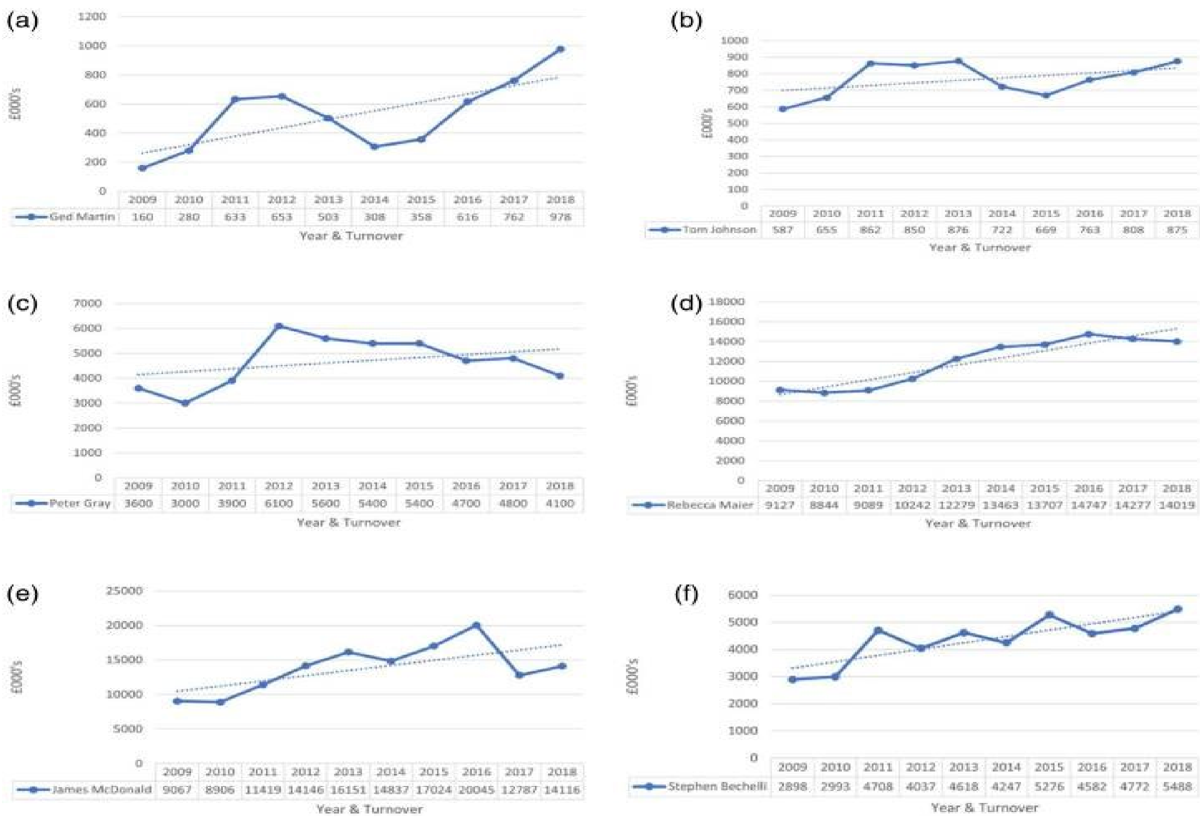
I agree with Professor Peng's point, which reiterates that when family businesses enter a generational transition, opportunities for innovation and growth often arise. However, not all companies need to grow at a fast rate. Many companies that once grew rapidly subsequently failed to maintain growth, indicating that past growth rates are not a reliable predictor of future success.

A study by Freel and Gordon (2022) illustrated the growth of six businesses. In the graph below, I focused only on companies 'b', 'c' and 'd' because they are all family businesses. In Figure 'b', Freel's interviews with the entrepreneurs revealed that in 2011, the company's sales reached £862,000, a 32% increase over the previous year and more than double compared to its 2008 sales. Employee numbers peaked at 37, followed by two years of stability and then two years of decline.

Figure 'c': In the mid-2000s, the company moved to new premises, hired 35 people, and saw rapid sales growth. A second store opened in another part of the UK, and the company expanded into equipment rental and sales. The company almost doubled in size in 2011 and 2012 but shrank slightly over the next decade.

Regarding Figure 'd', Rebecca Maier and her husband joined the family dairy in 1989, when its turnover was £250,000, and it employed only five people. The staff soon grew to eight, and soon after, the turnover grew to £400,000. With the expansion of the packaging business, turnover grew, reaching £7.5 million by the end of the 1990s, with continued rapid growth each year. Growth in the 1990s necessitated a larger facility, and the company purchased a second production facility off farm. This move doubled the company's overheads, while sales did not, leading to several years of decline (Freel & Gordon, 2022). Companies B and D are both food-related, and Company C is an engineering company.

Overall, high-growth companies inherently have many uncertainties, and external factors, such as the economic conditions of the era and consumer behaviour, can also impact a company's sustainability. Therefore, growth should not be the sole evaluation criterion. Furthermore, as a company ages and scales, maintaining high growth becomes increasingly difficult.



Firm sales performance over the years.

Source: Freel and Gordon, 2022

Future Issues and Some Thoughts

In today's world, family businesses face critical challenges regarding artificial intelligence, digital tools and green technologies. While these tools impact their reputation and legacy, they can bring forth benefits, improving quality, reducing waste and accelerating decision-making. However, it can also be harmful, potentially isolating privacy, inducing bias or being misused. Hence, clear rules and ethical guidelines are essential in mitigating harm. Family businesses often differ from publicly traded companies, as many use AI sparingly and prioritise "social-emotional assets" such as family control, reputation and legacy.

In addition to the topic of AI, the article "Family Firms and Carbon Emissions" researched the differences in environmental performance between family and non-family businesses, referencing data from about 6,600 companies between 2010 and 2019. The study found that family businesses generally emit less carbon than non-family businesses, particularly after the 2015 Paris Agreement (Borsuk et al., 2024). I believe this phenomenon is mainly because of a long-term mindset. Entrepreneurs hope to pass their businesses on to the next generation, investing in projects that create long-term value. Green technologies and clean production help mitigate risk and maintain a company's long-term competitiveness.

Second, reputation is important to family businesses. Many family owners consider the company name as part of their personal identity. Investing in green R&D not only protects the brand image but can also strengthen public trust. Third, some family control structures allow for more flexible decision-making so that they can drive innovation more quickly. Finally, family values often include a sense of social responsibility, making it easier for them to invest in green R&D and apply for green patents.

However, the article also points out a problem. Although family businesses emit less, they often get a lower score than the other companies. This is because many family businesses do not publicly commit to emission reduction targets and lack detailed sustainability reporting. Hence, when company control transfers from family to external managers, emissions tend to rise, while environmental scores may improve. The authors believe this reflects a trade-off between "image" and "substantial action".

Conclusion

IMPACT WEEK 2025 provided valuable insights into sustainability, succession, innovation and globalisation in family businesses. After listening to many speakers share their experiences, I have gained deeper insights into the topic of "family business". Finally, I would like to express my gratitude, and I feel very honoured to attend this forum.

References

Borsuk, M., Eugster, N., Klein, P.-O., & Kowalewski, O. (2024). Family firms and carbon emissions. *Journal of Corporate Finance*, *89*, 102672. https://doi.org/10.1016/j.jcorpfin.2024.102672

Chow, K. M. (2022, May 11). Entering into Indonesian market: IP risk management strategies. *Mondaq*. https://www.mondaq.com/china/trademark/1191996/entering-into-indonesian-market-ip-risk-management-strategies?

Freel, M., & Gordon, I. (2022). On the consequences of firm growth. *International Small Business Journal: Researching Entrepreneurship*, *40*(6), 684–709. https://doi.org/10.1177/02662426221074053

Huang, H., Lyu, C., & Zhu, X. (2019). Second generation involvement and corporate innovation: evidence from China. *Nankai Business Review International*, *10*(4), 526–545. https://doi.org/10.1108/nbri-03-2019-0008

Lee Kum Kee Group. (2024, November 21). *An exclusive interview of Lee Kum Kee Group by Harvard Business Review China.* https://www.leekumkeegroup.com/an-exclusive-interview-of-lee-kum-kee-group-by-harvard-business-review-china

Li, G. M., Ge, B., & Dou, J. (2025). Like father like son: How perceived parental mentoring strategies shape successors' entrepreneurial identity in Chinese family businesses. *Management and Organization Review*, *21*(2), 287–312. https://doi.org/10.1017/mor.2024.50

Poon, J. (2024). The geoeconomics of globalization 2.0. *Environment and Planning A: Economy and Space*, *57*(1), 144-148. https://doi.org/10.1177/0308518x241269366

Roscoe, S., Aktas, E., Petersen, K. J., Skipworth, H. D., Handfield, R. B., & Habib, F. (2022). Redesigning global supply chains during compounding geopolitical disruptions: The role of supply chain logics. *International Journal of Operations & Production Management*, *42*(9), 1407–1434. https://doi.org/10.1108/IJOPM-12-2021-0777

Xu, R. (2025). Power Transfer, Cultural Integration, And Professionalization in Family Business Succession: A Comparative Study of Metersbonwe and Youngor. *Highlights in Business Economics and Management*, *48*, 7–14. https://doi.org/10.54097/dy8d6k45

Zhu, M., Miao, S., Lam, H. K. S., Liang, C., & Yeung, A. C. L. (2025). Navigating through geopolitical risk: the role of supply chain concentration. *International Journal of Operations & Production Management*, *45*(5), 1032-1065. https://doi.org/10.1108/ijopm-03-2024-0248

Key Insights from Sustainable Food Systems and Bettr Group's Practices

YU Jinna

Introduction

I am extremely honoured to have participated in this IMPACT WEEK event. This valuable experience has allowed me to gain in-depth exposure to and engage in discussions on important issues in several key areas. During this event, I explored topics spanning multiple fields, including the impacts of environmental changes and the awareness of global citizens regarding the optimisation of technological governance. Each session was intellectually stimulating, and the speakers' insights, rooted in both their work and personal experiences, presented very impressive and innovative perspectives.

The layout of the venue also reflected a strong sense of modern technology. At the same time, there were various plant exhibits displaying new cultivation methods, adding green elements to the blue-toned venue.

Plants at the venue.

Notably, nearly every participant sampled coffee from the on-site coffee booth, which later became the subject of my article.

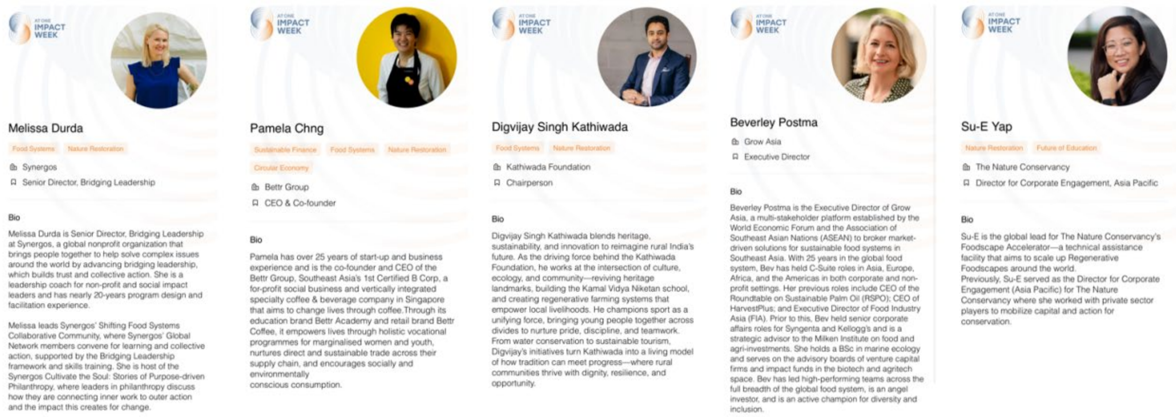
Panel Session Overview and Reasons for Attending

I first encountered the coffee company, Bettr Group, through a session titled "From Seed to Table: Building Resilient Food Chains, One Ingredient at a Time". Every meal we consume represents a journey from the farm to the table—a journey shaped by both local systems and global supply chains, directly

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

impacting the well-being of both humans and the planet. However, many key ingredients still come from agricultural systems that damage ecosystems, undervalue farmers, and put rural communities at risk. To address this issue, the conference invited Impact Architects who hail from enterprises, farmers' cooperatives and non-governmental organisations to examine the obstacles and explore solutions.



Panellists from the session "From Seed to Table: Building Resilient Food Chains, One Ingredient at a Time". From left: Ms Melissa Durda, Senior Director, Synergos; Ms Pamela Chng, CEO & Co-Founder, Bettr Group; Mr Digvijay Singh Kathiwada, Chairperson, Kathiwada Foundation; and Ms Beverley Postma, Executive Director, Grow Asia; and Ms Su-E Yap, Director for Corporate Engagement, Asia Pacific, The Nature Conservancy.

Source: Author-combined screengrabs from IMPACT WEEK, 2025.

This panel discussion aimed to highlight practical solutions, such as regenerative food facilities and inclusive retail models, to these problems.

My motivation for attending this session was deeply intertwined with my professional and entrepreneurial journey—one that has been consistently rooted in the food and beverage (F&B) sector, fostering a genuine passion for exploring how food systems can become more resilient, inclusive and sustainable. These experiences not only shaped my curiosity but also aligned perfectly with the session's mission to address supply chain challenges and drive collaborative changes.

F&B Internship Exposure to Supply Chain Equity

During my internship in the Marketing Department at Budweiser APAC, I exposed myself to the F&B industry's core dynamics—from analysing consumer trends for non-alcoholic beer to evaluating competitor strategies and conducting SWOT analysis on Budweiser 0.0. This experience made me acutely aware that a brand's success is inseparable from its upstream supply chain: the quality of raw materials, the fairness of sourcing practices and the ability to balance market needs with long-term sustainability. For instance, when exploring improvements for Budweiser 0.0, I realised that enhancing consumer trust required looking beyond product packaging or flavour. Instead, it meant understanding how ingredients are sourced and how suppliers are supported. This insight sparked my interest in the "seed-to-table" journey and left me eager to learn how global brands and social enterprises alike tackle supply chain inequities.

Food Chains Thrive When Every Stakeholder Is Valued

My entrepreneurial ventures further deepened this interest. As the Marketing Lead at Mingji, a student entrepreneurial team, I led the "Youth Tea Affairs" brand project and helped develop the "Shared Tea Garden" initiative to revitalise the tea industry by connecting tea farmers directly with urban consumers. Through this experience, I witnessed the struggles of small-scale agricultural producers, including limited access to fair markets, transparent pricing or resources to adopt sustainable farming practices. We worked to bridge this gap by using storytelling, which not only built brand loyalty but also empowered rural communities. This experience taught me that food chains thrive when every stakeholder, especially primary producers, is valued—a principle I later saw reflected in Bettr Group's commitment to direct, fair trade with farmers.

Previously, I also founded Xiaofu, a community e-commerce platform focused on local speciality foods. In this venture, I managed end-to-end operations: curating over 100 product Stock Keeping Units (SKUs), negotiating with local suppliers, most of which were smallholder farms or rural artisan workshops, and building a 400+ member consumer community. A key lesson from this venture was that inclusive supply chains drive both business success and social impact. By directly partnering with marginalised producers, we not only ensured improved product quality but also helped to support local livelihoods. This hands-on experience made me passionate about finding scalable solutions to the "production-sales disconnect"—a pain point the panel aimed to address through multi-stakeholder collaboration.

These experiences, from a global F&B brand like Budweiser, to building my own start-ups centred on tea and local specialities, left me eager to learn from industry pioneers. The panel session, which connected enterprises, farmers' cooperatives and NGOs to discuss regenerative food systems and inclusive retail, felt like the perfect space to deepen my understanding.

In particular, Bettr Group's identity as Southeast Asia's first B Corp, its work to empower women facing marginalisation through Bettr Academy, and its commitment to direct trade with farmers resonated deeply with my own aspiration of merging business with social good. Therefore, I collected some materials and documents and presented a case analysis and reflection on the company.

Overview of Bettr Group

Established in 2011, Bettr Group is Southeast Asia's first Certified B Corp, a social enterprise and vertically integrated speciality coffee & beverage company in Singapore (Bettr Group, n.d.). Through its education brand, Bettr Academy, and retail brand, Bettr Coffee, it empowers lives through holistic vocational programmes for marginalised women and youth, nurtures direct and sustainable trade across its supply chain, and encourages socially and environmentally conscious consumption.

The slogan on Bettr Group's website.

Source: Bettr Group, n.d.

Investment in Education—Bettr Academy

Bettr Academy, the region's largest SCA (Speciality Coffee Association) Premier Training Campus, offers a range of courses in making beverages and skills like customer service (Bettr Group, n.d.). Its courses are suitable for beginners and experienced coffee baristas while placing strong emphasis on ESG practices.

Furthermore, Bettr Academy has offered more than 2,200 courses to over 14,900 trainees from more than 30 countries, highlighting student diversity (Bettr Academy, n.d.).

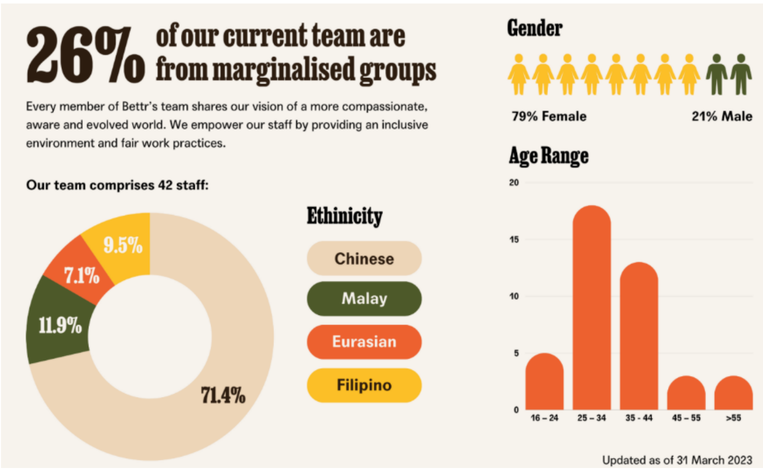
Bettr Coffee's Supply Chain

"Our aim is to provide more people with more equitable access to opportunities and resources through our coffee value chain," goes a statement on Bettr's website (Bettr Coffee, n.d.). This implies that the company emphasises establishing long-term and sustainable cooperative relationships with farmers. Bettr also strives to pursue partnerships with smallholder farmers and other Rainforest Alliance or B Corp-certified companies (Bettr Coffee, n.d.). Trading directly with its partner farms helps to maximise the commercial benefits those farms receive and impacts their extended communities.

The coffee sourced from these avenues reaches consumers through various forms, such as mobile coffee kiosks (similar to the coffee corners during this IMPACT WEEK) and physical coffee shops.

Emphasising Social-Oriented Corporate Governance

Bettr Group's governance framework prioritises people-centric values. Specifically, in the recruitment process, the company emphasises diversity. The company has been committed to creating more job opportunities for women. For Bettr Academy, women make up 79% of its workforce. 26% of its team are from marginalised groups (Bettr Academy, 2023). Its workforce's age group ranged from 16 to over 55, with the majority being the young group aged 25 to 34, emphasising an



The employee composition of Bettr Academy.

Source: Bettr Academy, 2023

open and inclusive company culture.

Furthermore, the company pushes for a better working environment through fair and inclusive employment, redefining disability, and building a diverse workforce.

Bettr's pillars for its workplace.

Source: Bettr Academy, 2023

In-depth Reflection on ESG in the Agricultural Sector

Bettr's practices revealed to me how agriculture, one of humanity's oldest industries, can advance in the Environmental, Social and Governance (ESG) field to make the world a better place.

Supply Chain Fairness

Through sourcing from small-holder farmers or certified sustainable sources, Bettr addresses the industry pain point of the "separation of production and sales". Agriculture, as an industry that relies on primary producers, has over 2.5 billion people worldwide relying on small-scale farming for their livelihoods (Food and Agriculture Organization of the United Nations, 2016). However, traditional middlemen add layers of markup, resulting in farmers receiving a small portion of the revenue. Fair procurement would enable smallholder farmers to receive a larger revenue share in the value chain and stabilise production expectations through long-term contracts.

Accelerating Social Inclusive Development

Bettr Academy has trained 14,900 international students, and 79% of its employees are female (Bettr Academy, n.d.). This shows the social value of agricultural ESG. In general, the agricultural industry can provide employment and empower marginalised groups.

In addition, social recognition of the agriculture sector can also attract young people to farming in rural areas, hence reversing the brain drain in these areas.

Integrating Technology for Higher Efficiency and Transparency

Multiple panellists emphasised the powerful role of technology in empowering agriculture. Specifically, Mr Digvijay Singh Kathiwada, Chairperson, Kathiwada Foundation, said, "Having technology on your side is very helpful, especially in terms of communication. Apps like WhatsApp work tremendously well, which is a big plus and a major leap forward. You wouldn't imagine how effectively a single app like that, along with the additional layers of functions added to it, can actually benefit farmers in aspects such as optimal management and many more things." Additionally, Ms Beverley Postma, Executive Director, Grow Asia, shared insights into how farm management apps can help reduce costs, increase yields, and improve efficiency in agricultural production.

Additionally, blockchain technology can be introduced to achieve full-chain traceability from farm to table, making the supply chain more transparent and further enhancing management efficiency.

Paths to Implementing Sustainable Agricultural Measures

The above represents the exploration of some specific measures. However, how can these measures be implemented?

Ms Su-E Yap, Director for Corporate Engagement, Asia Pacific, The Nature Conservancy, highlighted that a major initiative is connecting communities of stakeholders and building a common, shared consciousness. This means that everyone should shift from a zero-sum game mindset to a win-win approach, truly upgrading in terms of ideology and culture, and proactively collaborating with other stakeholders to support sustainable choices.

The transition from traditional agriculture to a more sustainable agricultural model cannot be achieved without financial support and incentives. Only 1.7% of climate funds go to smallholder farmers, according to Ms Postma. Hence, nations must work harder to achieve their fiscal priorities, including those relating to sustainable agriculture.

Conclusion

My participation in IMPACT WEEK—from exploring cross-field topics to diving into the "From Seed to Table" discussion and learning about Bettr Group—has not only enriched my understanding of sustainable food systems but also reinforced my belief in merging business with social good. Bettr's model, as Southeast Asia's first B Corp, proves that agriculture and F&B can be forces for equity.

The panel discussion also opened my eyes to the gaps and opportunities ahead. As someone eager to work in the F&B sector, this experience has established a clearer roadmap: to continue advocating for ESG in agriculture, bridging the gap between producers and markets, and supporting models that value both people and the planet.

IMPACT WEEK may have concluded, but the conversations and insights it sparked will guide my future work. Whether it is promoting conscious consumption, supporting smallholder farmers, or empowering marginalised communities, Bettr's story and the panellists' collective wisdom have shown that sustainable change is possible—one seed, one cup, and one collaborative step at a time.

References

Bettr Academy. (2023, March 31). *Our people make us bettr.* https://bettr.academy/impact/people?srsltid=AfmBOooiJgorUnr6t1679tj2yc31-XSpHRq_y-AgkjUC4l2lUhGz3bKr

Bettr Academy. (n.d.). *Taught by professional, made for everyone.* https://bettr.academy/

Bettr Coffee. (n.d.) *Coffee made right.* https://bettr.coffee/pages/impact-coffee-farmers

Bettr Group. (n.d.). *Bettr.* https://www.bettr.group/

Food and Agriculture Organization of the United Nations. (2016). *Increasing the resilience of agricultural livelihoods.* https://openknowledge.fao.org/server/api/core/bitstreams/39e74ba2-e33d-45bc-a199-1668d92d908f/content

IMPACT WEEK. (2025). *From Seed to Table: Building Resilient Food Chains, One Ingredient at a Time.* https://impactweek.com/programmes/from-seed-to-table-building-resilient-food-chains-one-ingredient-at-a-time/

Redefining Sustainability in Family Businesses

ZHANG Ruobing

Introduction

IMPACT WEEK 2025 was held on 15-19 September at the Suntec Convention Centre in Singapore. Under the theme "At One", the event convened leaders and changemakers to reimagine systems that serve a well-being economy.

I focused primarily on sustainability-related activities, which aligned closely to my academic interests and my CFA Certificate in Sustainable Investing. This experience allowed me to learn beyond the classroom and exchange ideas directly with experts working at the forefront of the industry.

The author at IMPACT WEEK.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Learnings and Reflections

During IMPACT WEEK, I attended several panel sessions, among which the China-focused forums offered me the deepest insights. These included “Reimagining China’s Future Through Next-Gen Innovation”, “Greater Bay, Greater Purpose: Integrating China’s Business Ecosystems with Global Impact” and “The Green Leap Forward: How China is Reinventing Prosperity for a Sustainable World”. Given my intention to pursue a career in Asia, and China’s leading position both regionally and globally, I paid particular attention to the cases and concepts raised by the speakers and engaged in further reflection.

The audience at IMPACT WEEK.

The session that left the strongest impression on me was “Reimagining China’s Future Through Next-Gen Innovation”. This panel featured several successors of family businesses as well as scholars specialising in family enterprise research. Their discussion centred on the sustainability of family business transformation and international expansion. What struck me most was the realisation that family business succession itself is also deeply intertwined with sustainability—a connection I had not previously considered.

Redefining Sustainability in Family Businesses

Sustainability's Definition

The first theme addressed was the varied interpretation of sustainability. Associate Professor Winnie Qian Peng from Hong Kong University of Science and Technology argued that, in the context of family businesses, sustainability fundamentally refers to continuity—whether through the transmission of family values or the preservation of family wealth. She highlighted three types of industries that are particularly difficult to sustain across generations: asset-heavy industries, industries characterised by strong cyclical volatility, and high-tech frontier industries.

Although Professor Peng did not elaborate extensively on the reasons behind succession difficulties in these industries, I developed my own reflections. First, asset-heavy industries often involve large, immobile assets with low liquidity. This rigidity makes it hard for successors to pivot strategies quickly, causing them to overlook emerging opportunities. In times of adverse market or policy shifts, such heavy assets may even become liabilities, for example, in the case of real estate regulations or the global energy transition.

Second, industries characterised by strong cyclical fluctuations pose significant intergenerational risks. One generation may benefit from economic expansion, while the next may inherit the business during a downturn. Success in these industries requires acute sensitivity to macroeconomic trends, supply–demand dynamics and geopolitical shifts. Without sufficient experience, next-generation leaders may misjudge the cycle, leading to rapid losses in both wealth and reputation. Also, such volatility can easily derail succession.

Finally, high-tech frontier industries face the challenge of short-lived competitive advantages. Technological leadership can be disrupted within a few years, and successors who lack deep technical expertise may struggle to maintain the company's edge. Moreover, the core assets in these industries often lie not in capital but in human capital—research teams and leading scientists. In such cases, family ties do not guarantee professional continuity, making intergenerational succession far more fragile.

At the same time, I realised that within the context of family businesses, sustainability carries a different meaning from the traditional notion of environmental or ecological sustainability. Instead of focusing solely on resource conservation or environmental protection, family business sustainability emphasises continuity of ownership, governance and values across generations.

Nevertheless, both perspectives share a common goal: ensuring the ongoing progress of human development.

This broader interpretation was also highlighted by Ms Poppy Chen, Chief Sustainability Officer of Shanghai M&G Stationery. She described “sustainability” as an umbrella term, suggesting that it should not be confined to a narrow or rigid definition. In her view, the strength of the concept lies precisely in its inclusiveness, allowing it to encompass a wide range of issues and approaches.

The panel discussion “Reimagining China’s Future Through Next-Gen Innovation”.

Speaker’s Actions

To gain deeper insight into the speakers, I explored their contributions both as second-generation family business leaders and as pioneers in sustainability.

The “carbon-neutral stationery” initiative led by Ms Chen at Shanghai M&G Stationery involves integrating sustainability into product design and production. A key practice is the large-scale use of recycled plastic sourced from discarded food delivery containers collected through Meituan’s “Green Mountains Plan”. These materials replace virgin plastics in everyday stationery items such as pen barrels, thereby reducing upstream emissions. To adapt to the physical differences between recycled and virgin plastics, the company conducted nearly 20 rounds of mould redesigns and production tests, ensuring product performance and quality.

In parallel, energy efficiency and carbon reduction measures were implemented across manufacturing facilities, including the deployment of photovoltaic systems, waste plastic recovery during production, and low-carbon packaging and logistics solutions. Full life-cycle carbon accounting, verified by the third-party agency Carbonstop, ensures that any remaining emissions are offset, enabling the products to achieve certified carbon neutrality (Carbonstop, 2023).

The initiative has produced measurable environmental benefits and inspired ambitious strategic goals. Each carbon-neutral pen reduces emissions tied to approximately 2.3 grams of virgin plastic, while in 2022 alone, M&G reported recycling around 7,200 tons of waste plastic for production and generating more than 8.8 million kWh of electricity through on-site photovoltaic systems (Shanghai M&G Stationery, 2023). At the strategic level, the company's 2022–2025 sustainability roadmap established four pillars—sustainable products, climate action, sustainable supply chains and empowerment of employees and communities. Looking further ahead, M&G has committed to 2030 targets, aiming to incorporate sustainable design principles in at least 20% of its product portfolio, and for ESG evaluations to cover about 80% of its supply chain (Yicai, 2025). These quantifiable outcomes not only demonstrate short-term impact but also reinforce the company's long-term alignment with global sustainability goals.

Integrating Altruism into Corporate Culture

Ms Yiwen Hao, Executive Director of Landun Xumei Foods, shared that during the process of preparing to succeed in the family business, she never perceived her work as being solely for her family. At one point, she even contemplated giving it up altogether. Yet, when she entered the factory and saw the faces of the workers, she realised that succession was not simply about preserving a family's legacy—rather, it was about contributing to society, guided by a deep sense of responsibility.

Building on this idea, Professor Peng argued that the longevity of family enterprises depends greatly on altruism. A business that pursues profit alone, while disregarding its wider social impact, is unlikely to endure. She cited Lee Kum Kee's core value of "Si Li Ji Ren"—benefiting others while pursuing one's own interests—as a powerful illustration.

I find this perspective particularly compelling. While it is widely accepted that ESG initiatives must rest on foundations of economic viability and profitability, financial returns by themselves can only sustain short-term success. They cannot guarantee resilience over the long run. True continuity requires businesses to shoulder broader social responsibilities beyond profit-making.

In my opinion, this is not merely an issue for family enterprises, but one faced by all organisations in today's environment. Confronted with climate change, demographic transitions, and widening social inequalities, profit-driven models alone are no longer sufficient. Companies need to embed altruism into their core values and culture, weaving social responsibility into strategic decision-making and consistently reinforcing the importance of sustainability among employees. Only when employees internalise and align with the company's social mission can its vision and values truly take root.

In practice, this requires companies to take proactive measures such as reducing carbon emissions throughout their production and supply chains to tackle global environmental challenges, protecting employee rights while investing in community well-being, and integrating sustainable innovation into products and services to meet changing consumer demands. Such actions not only enhance a company's positive impact on society but also foster long-term trust and brand reputation, providing the resilience and continuity needed to thrive across generations in a competitive landscape.

There are also numerous examples demonstrating that neglecting environmental protection or focusing solely on economic gains can ultimately drive a company into bankruptcy. One prominent case is the 2010 BP Deepwater Horizon oil spill. To reduce costs, BP overlooked critical safety and environmental risk controls, resulting in one of the largest marine oil spills in history. The incident inflicted massive ecological damage and incurred the company approximately US$20 billion in fines and compensation, while its reputation and market value declined sharply (CFA Institute, 2025, p. 31). This case clearly illustrates the severe consequences of disregarding environmental responsibility.

Reflection on Supply Chain Transparency

Inspired by Professor Peng's reference to Lee Kum Kee's century-long history and culture, I explored the factors behind its longevity, focusing particularly on its supply chain, as I believe the supply chain plays a crucial role in the global success of any F&B-related company. However, my research revealed that the company discloses very limited information about its supply chain, with most details available only on its United States website. This observation led me to reflect on a broader issue—many Asian, especially Chinese, companies still fall behind in terms of supply-chain transparency.

In contrast, Western companies such as Nestlé, Patagonia, Unilever and L'Oréal are often cited as leading examples of transparent supply chain management. This perception can be traced to historical factors—sustainability awareness and development emerged much earlier in Europe and the United States than in most Asian regions. Western nations have long enforced stricter sustainability reporting standards and stronger compliance systems, while consumers there tend to place greater emphasis on corporate accountability. These pressures have encouraged firms to embed traceability and ESG disclosure into their core operations. Conversely, many Asian enterprises have traditionally prioritised cost efficiency and large-scale production, viewing transparency more as an administrative requirement than a strategic advantage.

Structural challenges

In addition to these historical differences, structural challenges further complicate progress in Asia. The region's supply chains are often fragmented, with complex networks of small suppliers and intermediaries that make tracking and monitoring difficult (Depoux et al., 2025). Moreover, regulatory oversight and consumer demand for transparency remain relatively weak in many Asian markets. Consequently, transparency in supply chain disclosure is still commonly regarded as a compliance task rather than an opportunity to build trust, competitiveness and long-term value.

However, a positive example from China is Yili Group, a leading dairy and F&B company that has made notable progress in supply chain transparency. It has committed to sourcing deforestation-free palm oil and joined the Roundtable on Sustainable Palm Oil (RSPO) to strengthen responsible procurement practices. The company also plans to increase its purchase of Identity Preserved (IP)-certified palm oil—fully traceable to plantations—each year until 2030. In addition, Yili has achieved 100% traceability of raw milk to the farm level, ensuring complete visibility and accountability across its dairy supply chain (Yili Group, n.d.).

Yili Group's commitment to responsible sourcing and supplier management process forms a closed-loop system to ensure transparency and sustainability. It begins with supplier admission, where Yili communicates its eight core procurement principles (Yili Group, n.d.). Qualified suppliers advance through competitive evaluation and contract signing, where ethical and responsible sourcing clauses are formalised. Ongoing supplier management includes questionnaires and on-site audits to enforce tiered supervision. High-performing suppliers are prioritised for renewal, while noncompliant ones face an exit mechanism. This integrated approach strengthens supply chain control and promotes continuous sustainability improvement across Yili's network.

Yili's example reflects a broader shift in which more Chinese enterprises are beginning to emphasise supply chain transparency and sustainability. In recent years, the Chinese government has also strengthened regulatory frameworks and ESG disclosure requirements, encouraging companies to adopt responsible sourcing and traceability practices. This dual push—from both corporate initiatives and national policy—indicates that supply chain transparency is becoming a key pillar of China's sustainable development agenda. As leading firms like Yili Group set new benchmarks, they not only enhance their own global competitiveness but also inspire wider industry transformation towards openness, accountability and long-term resilience.

Political Impact on Sustainability

Sustainability today is shaped not only by markets and technologies but also by political dynamics that influence both organisations and individuals. Policies define the conditions for business operations, while political sensitivities shape how people participate in global sustainability conversations.

This tension is evident in the experiences of Dr Teresa Chuang, Executive Vice President of the Sustainable Development Committee at the Beijing International Exchange Association. She is often questioned on whether her organisation's funding comes from the Chinese government—questions that prompt her to reflect on political perceptions and reaffirm the principle of a shared human destiny. In an era of worsening environmental challenges, she emphasised that sustainability must transcend political boundaries. As someone with Taiwanese origins who grew up in mainland China, she has also encountered political constraints in her professional work, reinforcing her hope that future discussions on sustainability will move beyond such barriers and focus on humanity's shared future.

Similar sentiments were echoed by Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee), who highlighted the importance of ecosystems and invoked the maxim that "the rise and fall of the world is the responsibility of every individual". Other similar leaders are working to create platforms that unite people with ambitious sustainability goals, fostering collaboration across borders and sectors. At the same time, entrepreneurs addressed the biases Chinese companies face when expanding overseas. As one panellist, Mr Will Li, Vice President & Chief Strategy Officer, Monband, explained, his company deliberately avoids overemphasising either its identity as a Chinese enterprise or the quality of Chinese products, choosing instead to let performance and impact speak for themselves.

Such accounts underscore how political dynamics shape sustainability-related activities not only in China but also globally. The United States offers a salient illustration, often cited for its policy inconsistency in environmental and climate governance. Under Clinton (1993–2001), the administration promoted clean energy and signed the Kyoto Protocol, whereas Bush (2001–2009) withdrew and prioritised fossil fuels. Obama (2009–2017) advanced the Paris Agreement, which was subsequently abandoned by Trump (2017–2021) before Biden (2021–2025) rejoined and introduced substantial clean energy investments. Trump's return to office in 2025 and the subsequent second withdrawal once again underscored the volatility of US climate policy, creating considerable uncertainty for firms seeking to pursue long-term sustainability strategies.

This inconsistency has had tangible consequences across industries. For instance, Murray Energy, once one of the largest private coal companies in the US, filed for bankruptcy in 2019 amidst market decline and fluctuating regulatory expectations (Gearino, 2019). More recently, US Magnesium filed for bankruptcy in 2025, citing decades of disputes with environmental regulators and the escalating burden of environmental compliance (Yerak, 2025).

In sum, sustainability efforts are inseparable from the political environments in which they unfold. Both individual experiences and corporate outcomes show that political boundaries and policy volatility can constrain collaboration and undermine long-term strategies. At the same time, initiatives like those highlighted at IMPACT WEEK demonstrate the potential of shared values and cross-border cooperation to overcome such barriers. Ensuring policy stability and fostering dialogue that transcends politics will be essential for building a more sustainable future.

Reflection on Environmental Protection in Everyday Life

Many people tend to view environmental protection as something distant from their everyday lives—a responsibility that should rest with organisational leaders or policymakers. However, this perception is mistaken. Countless actions in our daily routines can contribute to sustainability. For instance, sorting waste before disposal or choosing eco-friendly products over conventional ones are simple habits that can collectively create a significant impact. Proper waste classification helps reduce landfill pressure, improve recycling efficiency, and minimise pollution caused by improper disposal. Likewise, opting for sustainable products such as reusable bottles, biodegradable packaging, or locally sourced goods supports responsible businesses and lowers carbon emissions. Ultimately, environmental protection starts with small, mindful choices made by individuals. When these actions accumulate across communities, they can generate meaningful, large-scale change—reminding us that sustainability is not solely the duty of organisations or governments, but a shared responsibility we all carry.

References

Carbonstop. (2023, February 2). *A carbon-neutral pen? Carbonstop assists M&G in creating China's first carbon-neutral stationery*. https://www.carbonstop.com/en/dualcarboninsight/3932.html

CFA Institute. (2025). *Certificate in ESG investing curriculum 2025.*

Depoux, D., Onozuka, M., Yi, A., Zhu, D., & Ong, C. (2025, October 3). Asia's supply chain reconfiguration. *Roland Berger.* https://www.rolandberger.com/en/Insights/Publications/Asia-s-supply-chain-reconfiguration.html

Gearino, D. (2019, October 29). Coal giant Murray Energy files for bankruptcy despite trump's support. *Inside Climate News.* https://insideclimatenews.org/news/29102019/coal-bankruptcy-bob-murray-energy-chapter-11-trump-regulations-rollback/

Shanghai M&G Stationery. (2023, April 21). *M&G joins the "Sustainable Solutions" alliance to co-create a green, sustainable future with multiple enterprises*. https://www.mg-pen.com/corporatenews/info.aspx?itemid=1340&lcid=72

Yerak, B. (2025, September 11). US Magnesium, backed by billionaire Ira Rennert, files for bankruptcy. *The Wall Street Journal.* https://www.wsj.com/articles/us-magnesium-backed-by-billionaire-ira-rennert-files-for-bankruptcy-4c693d67

Yicai. (2025, April 25). *M&G Stationery's Chief Sustainability Officer Chen Zidan: Sustainability is always a must for enterprises.* https://www.yicai.com/news/102590326.html?utm

Yili Group. (n.d.). *Responsible sourcing*. https://www.yili.com/sustainability/responsible-sourcing

Rethinking Succession: Youth and Sustainable Family Firms

LIU Yu

Abstract

This report is based on the IMPACT WEEK seminar, "Reimagining China's Future Through Next-Gen Innovation", and integrates insights from academic literature to systematically examine the core concepts and practical pathways of family business sustainability. It further considers feasible strategies for China's new generation in the context of intergenerational succession.

The seminar invited a professor from the Hong Kong University of Science and Technology (HKUST) and four second-generation successors to share their interpretations of sustainability and discuss the practical challenges and strategies encountered during the succession process to ensure both business continuity and sustainable development.

This report first synthesises the multi-dimensional definitions of family business sustainability by combining seminar content with relevant academic research and presents a personal interpretation of the concept. It then analyses how second-generation successors demonstrate sustainable development principles in practice through their experiences. Additionally, the report examines the current situation of low willingness among Chinese second-generation successors, highlighting underlying issues such as intergenerational value differences and long-term neglect of family education. Finally, the report proposes strategies from the perspectives of both incumbents and successors to address these challenges.

Definition of Family Business Sustainability

Academic Definitions

During the seminar, Associate Professor Winnie Qian Peng from HKUST emphasised that the essence of corporate sustainability lies in succession. On a

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

tangible level, succession involves the transfer of financial assets, while on an intangible level, it concerns the inheritance of family harmony and values, reflecting the influence exerted on successors and other family members. The intangible dimension represents the core of succession and is often characterised by altruism. This means that a business should not only focus on its growth and financial performance but also generate positive impacts on society and the environment, demonstrating a strong sense of social responsibility and strategic awareness.

Professor Peng further highlighted the key factors influencing the sustainability of family businesses. Internally, sustainability is shaped by family governance structures and the degree of familial cohesion. Research shows that the dynamic interaction between the family and the business systems fundamentally shapes business sustainability (Olson et al., 2003) . Externally, there are two major factors.

First, industry characteristics play a significant role. Professor Peng noted that industries with high asset intensity, strong cyclical volatility, or advanced technologies tend to be less conducive for multi-generational family business continuity. Such industries require high levels of capital, risk tolerance and specialised knowledge, which may conflict with family businesses' limited resources, risk-averse tendencies and reliance on internal succession models (Arregle et al., 2021).

Second, macro-environmental factors, such as policy and economic transitions, also significantly influence sustainability. Particularly, the shift towards the digital economy and the rapidly changing external environment require businesses to enhance their adaptability (Zapata-Cantu et al., 2023). Family businesses, therefore, must develop stronger strategic flexibility (Alwadani & Ndubisi, 2019) and dynamic capabilities to address external challenges and sustain long-term vitality.

Successors' Definitions

From a practitioner's perspective, second-generation successors tend to have a more concrete understanding of sustainability. During the seminar, panellist Ms Yiwen Hao, Executive Director and a next-generation leader in Landun Xumei Foods, emphasised that sustainable development requires a broad vision and a long-term strategic perspective. Successors should not view the business merely as a profit-making tool, but rather, as a platform that embodies the family's reputation, safeguards the well-being of employees, and fulfils social responsibility. Such a mindset goes beyond profit-generating and reflects the principles of the "spiritual inheritance" and "altruism" highlighted by Professor Peng.

Personal Understanding

Inspired by the seminar and my academic readings, I recognised that the sustainable development of family businesses is a multi-dimensional and dynamically balanced concept. It goes beyond financial continuity and represents a complex system that integrates economic longevity, family harmony and the inheritance of values. True sustainability is achieved when a business can maintain its competitiveness across generational transitions, preserve the family's core philosophy, and at the same time, fulfil its responsibilities towards stakeholders.

In the era of the digital economy, this balancing process faces both new challenges and opportunities. Successors must adopt innovative mindsets and leverage modern tools to maintain and develop this integrated system, ultimately achieving what can be described as enduring prosperity and long-term success.

Sustainable Development Concepts Reflected by the Second Generation

Development of New Potato-Based Materials at Landun Xumei

When successors take over family businesses, they are often confronted with the problem of outdated business models that struggle to adapt to contemporary requirements for green and circular economies. The key challenge lies in injecting innovation into traditional operations without undermining the family's core assets. Ms Hao Yiwen from Landun Xumei shared that "transformation" is a crucial element in her succession process. After inheriting her father's potato processing business, she recognised the need to adapt innovatively and carry out appropriate changes.

Under her leadership, the company conducted in-depth research on potato processing by-products, specifically potato peels, turning what was once considered waste into valuable new materials. These potato peels were transformed into value-added products, including plastic bags and facial mask sheets (Lei & Li, 2025). This initiative not only reduced agricultural waste and environmental pollution but also created new sources of revenue. Moreover, it integrated ESG principles across the company's value chain, facilitating its transformation from a traditional agricultural processor into a green technology enterprise (Sohu News, 2023).

Innovating Eco-friendly Fertilisers at Monband

Many second-generation successors experience a low willingness to take over the family business, particularly when they struggle to resonate with traditional industries. The successor of Monband, Mr Will Li, admitted that he initially rejected the idea of joining the family's fertiliser business, considering it as lacking prestige. However, after becoming deeply involved in business operations, especially in leading technological innovation and research on new fertilisers, he gradually recognised the importance of his work in promoting agricultural efficiency, reducing chemical fertiliser and pesticide use, protecting soil health, and ensuring food security (Zheng, 2021).

This recognition of the social and environmental value of the business led him to view "succession" not just as a duty to fulfil but as a meaningful social responsibility. His transformation exemplifies the power of "spiritual inheritance" and "altruism". Mr Li's sense of responsibility expanded from care for his family to a broader commitment to society and the environment.

Expanding New Horizons Through a Global Vision

Dr Teresa Chuang, Executive Vice President of the Sustainable Development Committee at the Beijing International Exchange Association, shared a unique perspective from her upbringing in Taiwan and career development in China. She emphasised that possessing a global vision is essential for achieving business sustainability. Drawing on her cross-strait cultural background and international network, she has actively engaged with Southeast Asian markets to attract investment for China's sustainable development projects and to build bridges between Chinese and international capital and technology.

She advocated that businesses should have the courage to "go global" by allocating resources and exploring markets worldwide. This strategy diversifies risks associated with a single market and enables companies to integrate global best practices into domestic operations. allowing businesses to absorb new knowledge and ideas, enhancing their overall resilience and dynamic capabilities (Arregle et al., 2021). For family businesses, this strategy is vital for achieving long-term survival in an increasingly volatile international environment.

Current Situation and Challenges of Second-Generation Succession in China

Low Willingness to Succeed the Business

Currently, Chinese family businesses face significant challenges in intergenerational succession. During the seminar, Professor Peng highlighted that in China, particularly in the manufacturing sector, approximately 80% to 90% of second-generation successors are unwilling to take over the family business. This widespread reluctance poses a major obstacle to the sustainable development of Chinese family businesses and a direct threat to the long-term strategic stability and continuity of these enterprises.

Intergenerational Value Differences

One of the reasons why second-generation successors are reluctant to take over family businesses lies in the significant intergenerational differences in values. The first generation and the successors grew up in markedly different environments, with distinct educational experiences and historical contexts, resulting in divergent views on business, life priorities and even the ultimate purpose of the enterprise. Research shows that such gaps in expectations between generations can significantly affect both the willingness and outcomes of succession (Lv et al., 2022).

The first generation largely grew up during the early stages of China's reform and opening up, a period characterised by relative material scarcity but abundant opportunities. Their values were shaped by the context of "survival and growth", and they often prioritised business expansion and wealth accumulation. In contrast, the second generation mostly grew up in a relatively affluent, globalised and digitalised environment, placing greater emphasis on self-fulfilment, work-life balance and the social value of the business. This fundamental misalignment of values leads many second-generation successors to lack intrinsic identification with the traditional enterprise models, particularly those centred on manufacturing, resulting in psychological resistance to succession.

Lack of Family Education

Another deep-rooted reason for the reluctance of second-generation successors to take over family businesses lies in the long-term neglect of family education. During the early stages of entrepreneurship, the first generation devoted most of their energy to business survival and the accumulation of capital, at the expense of family education. This neglect does not imply material deprivation but, rather, a lack of guidance in value formation, emotional support and the cultivation of responsibility.

Professor Peng's research found that family education is a critical factor in successful family business succession. Effective succession involves not only the transfer of wealth and authority but also the intergenerational transmission of entrepreneurial spirit, values and a sense of responsibility. However, during their entrepreneurial phase, the first generation often lacks the time or focus to systematically and consciously convey these aspects to the next generation. This absence of family education results in second-generation successors failing to develop a strong emotional connection to the family business or a deep sense of responsibility for succession.

Abaddi (2025) similarly highlighted that the success of modern succession planning heavily depends on early and continuous internal family communication and value education. When such education is absent, the second generation is more likely to misperceive succession as a heavy, imposed burden rather than a meaningful opportunity to contribute to the family enterprise and fulfil broader social responsibilities, leading them to refuse succession.

What Can Incumbents and Successors Do?

Initiatives for Incumbents

Succession planning requires proactive preparation. Incumbents should initiate open and honest discussions with potential successors about the business vision, family values and personal career aspirations (Abaddi, 2025). This approach helps bridge intergenerational value differences and strengthens the successors' sense of identification and mission.

It is also important to establish modern governance structures. Mechanisms such as family constitutions, family councils or independent directors can help transform a family business that is heavily influenced by personal authority into a rule- and system-based organisation (KPMG Private Enterprise & STEP Project Global Consortium for Family Enterprising, 2022). These structures clearly define the boundaries of responsibilities and authority between the family and the business, provide institutional support for smooth power transitions, and help manage sensitive issues such as asset distribution.

Once a successor is identified, incumbents should gradually delegate authority, allowing room for successors to make mistakes and gain practical experience. The incumbent's role should shift from a controller to a mentor and advisor. This trust is crucial for the successor to establish their own authority and earn the confidence of the team (Wu & Zhou, 2025). At the same time, incumbents should support the successor in implementing new strategies that align with contemporary development, even if this requires restructuring traditional business models.

Initiatives for Successors

Successors need to actively undergo a process of "dual socialisation", gaining a deep understanding of both the family logic, including emotions, values and developmental history, and the operational logic of the business (Wu & Zhou, 2025). This requires them not only to start from the grassroots level within the enterprise to accumulate practical experience but also to psychologically comprehend their predecessors' entrepreneurial spirit and the family's original intentions, thereby achieving an organic integration of family sentiment and business rationality.

Successors should leverage their strengths in innovative thinking, technology and global perspectives to act as catalysts for innovation within the business. As illustrated in previous case studies, initiatives such as driving digital transformation, exploring international markets, or implementing circular economy practices can inject new vitality into traditional enterprises (Yang & Chen, 2022; Zapata-Cantu et al., 2023). These actions not only demonstrate the successors' value but also translate the concept of sustainable development into tangible business competitiveness.

Moreover, successors should actively cultivate the "broad vision" and "altruism" emphasised by Professor Peng. They should view the business as an integrated platform carrying economic, social and environmental responsibilities, rather than merely a profit-making machine. By proactively fulfilling social responsibilities, building harmonious labour-management relationships, and managing stakeholder expectations, successors can accumulate valuable reputational capital and social trust. This is the true foundation for ensuring the prosperity and sustainability of the family business (Alwadani & Ndubisi, 2019).

Conclusion

The sustainable development of family businesses is a complex system encompassing economic, social and cultural dimensions. Insights from the IMPACT WEEK and relevant academic literature reveal both the core challenges and transformation opportunities that Chinese family businesses encounter during intergenerational succession. Seamless succession requires addressing not only surface-level issues such as power, capital and people, but also fostering deep value consensus and innovative thinking.

For China's new generation, succession is not merely about inheriting a business but also about embracing the responsibility to drive economic transformation and social progress. In the context of the digital economy and sustainability, the new generation must adopt a broader vision and perspective to reimagine and actively shape the future of Chinese family businesses, contributing to the realisation of truly long-lasting enterprises.

Snapshots at IMPACT WEEK.

References

Abaddi, S. (2025). A new era of succession planning in family businesses. *Management & Sustainability: An Arab Review*. https://doi.org/10.1108/MSAR-10-2024-0192

Alwadani, R., & Ndubisi, N. O. (2019). Sustainable family business: The role of stakeholder involvement, mindful organizing, and contingent human factors. *International Journal of Manpower*, *41*(7), 945–965. https://doi.org/10.1108/IJM-08-2019-0359

Arregle, J.-L., Chirico, F., Kano, L., Kundu, S. K., Majocchi, A., & Schulze, W. S. (2021). Family firm internationalization: Past research and an agenda for the future. *Journal of International Business Studies*, *52*(6), 1159–1198. https://doi.org/10.1057/s41267-021-00425-2

KPMG Private Enterprise & STEP Project Global Consortium for Family Enterprising. (2022). R*egeneration of family businesses in China: Nurturing tomorrow's entrepreneurial leaders.* *https://assets.kpmg.com/content/dam/kpmg/cn/pdf/en/2022/12/nurturing-tomorrow-s-entrepreneurial-leaders.pdf*

Lei, Y., & Li, D. (2025, October 10). Interview with Hao Yiwen of Landun Xumei: Turning waste into treasure through full-chain ESG and exploring green pathways in food processing. *21jingji.com*. https://www.21jingji.com/article/20251010/herald/7940b6bb4bed9a9ff110d3045c3aab34.html

Lv, F., Guo, Y., Gao, H., & Nie, J. (2022). Intergenerational expectation gaps and business succession: Evidence from China. *Management Review*, *34*(8). https://doi.org/10.14120/j.cnki.cn11-5057/f.2022.08.018

Olson, P. D., Zuiker, V. S., Danes, S. M., Stafford, K., Heck, R. K. Z., & Duncan, K. A. (2003). The impact of the family and the business on family business sustainability. *Journal of Business Venturing*, *18*(5), 639–666. https://doi.org/10.1016/S0883-9026(03)00014-4

Sohu News. (2023). *Taiyuan's outstanding private enterprise! Landun Xumei: Small potatoes driving a big industry.* https://www.sohu.com/a/709154329_120161493

Wu, J., & Zhou, Z. (2025). The linkage of "family" and "business": The dual socialization growth path of successors—A multi-case analysis based on the adjustment and adaptation of familiness dynamic capability. *Asia Pacific Journal of Management*. https://doi.org/10.1007/s10490-025-10045-1

Yang, Y., & Chen, Y. (2022, June). The Influence of Intergenerational Inheritance of Family Enterprises on Enterprise Performance Under the New Economic Form. In *2022 8th International Conference on Humanities and Social Science Research (ICHSSR 2022)* (pp. 186-191). Atlantis Press. https://doi.org/10.2991/assehr.k.220504.034

Zapata-Cantu, L., Sanguino, R., Barroso, A., & Nicola-Gavrilă, L. (2023). Family business adapting a new digital-based economy: Opportunities and challenges for future research. *Journal of the Knowledge Economy*, *14*(1), 408–425. https://doi.org/10.1007/s13132-021-00871-1

Zheng, T. (2021, April 15). *The second symposium on the agricultural application of silicolytic bacteria was held to promote reduced fertilizer and pesticide use in agriculture.* CFSN. https://www.cfsn.cn/news/detail/261/143437.html?view=pc

The Stories in Asia

With its unique conditions, Asia is writing its own chapter on sustainability. From China and Singapore to the whole of Asia, collaborations are being formed, priming the region for transformation.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). Impact reimagined: Voices of the next generation for sustainability (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

A Greater Purpose for Greater Bay

FANG Zibu

Introduction

The IMPACT WEEK 2025 panel session, "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact", brought together a distinguished panel of leaders from the investment, policy, venture capital and social enterprise sectors. It centred on a critical question: how can the Hong Kong Special Administrative Region and the Greater Bay Area (GBA) harness their collective strengths to foster economic growth that is prosperous, sustainable, inclusive and globally impactful?

My choice of this session was motivated by three key considerations: alignment with the course theme, regional relevance and exposure to diverse perspectives. First, this panel captured the transition from corporate social responsibility (CSR) and Environmental, Social and Governance (ESG) to strategic sustainability, aligning with course concepts of stakeholder capitalism, shared value, and sustainable ecosystems (Porter & Kramer, 2011; Bocken et al, 2014).

Second, the GBA concept represents Asia's largest experiment in regional integration for green growth, linking industrial cities like Shenzhen and Guangzhou with Hong Kong's international finance and governance institutions (Export Flanders Investment & Trade, 2024). This topic is also relevant to my background as a Chinese student.

Thirdly, speakers come from diverse backgrounds. Ms Helene Li (moderator), Executive Director, Association for Well-Being Economy; Dr Au King-lun, Executive Director & Board Member, Financial Services Development Council; Ms Nan Li Collins, Chair, United Nations Sustainable Stock Exchanges Initiative and Divisional Director, Investment and Enterprise, UN Trade & Development (UNCTAD); Mr Richard Dong, Founding and Managing Partner, Hidden Hill Capital; Ms Elissa Liu, Partner, Lanchi Ventures; Mr Wei Wei, Chairman, Vision

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

China Education Group; and Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee) provided insights into how public, private and philanthropic capital can converge for social good, and what economic and social impacts the GBA business ecosystem can create. Moreover, this session's overarching question—how to balance economic growth and purpose—is central to the sustainability transition discourse and aligns closely with my personal research on Asia-specific ESG initiatives.

This report synthesises the key insights from the session, framing them within the strategic sustainability concepts explored in this course. This session offers a live case study of the practical application of ecosystem-level thinking rather than merely presenting abstract theories. The central thesis is that sustainability is undergoing a fundamental shift from a peripheral "nice-to-have" to a central "must-have", forming a core strategic imperative for long-term resilience and value creation (Eccles et al., 2014). Overall, this report will explore the mechanisms of this shift, analysing Hong Kong's role as a financial and compliance bridge, the GBA's unparalleled innovation and manufacturing synergy, and the emerging models of "commercial benevolence" that are creating new markets while addressing social problems.

Speakers' Perspectives

Hong Kong's Role as a Window and Bridge

Firstly, Dr Au King-lun, representing the Hong Kong Financial Services Development Council, emphasised Hong Kong's role as a financial "window and bridge" connecting mainland China with global capital. Unlike single-centre innovation clusters, such as Silicon Valley or Tokyo Bay, the GBA comprises multiple complementary cities, including Shenzhen and Guangzhou, as well as the two Special Administrative Regions of Macao and Hong Kong. Within these cities, Hong Kong's institutional strength, such as its legal system, data governance and international finance, positions it as a platform for cross-border sustainable investment (Flanders Investment & Trade, 2024). Meanwhile, Dr Au argued that while manufacturing remains China's global strength (35% of global output), the future lies in services and data-driven economies, with Hong Kong facilitating "data flow governance" across borders. This corresponds with dynamic capabilities theory (Dewi et al., 2023), which posits that capabilities can evolve and enable adaptation and coordination across complex systems. In my opinion, Dr Au's perspectives illustrate how institutional diversity can become a sustainability asset, as Hong Kong's integration role demonstrates that governance, finance and transparency are themselves forms of sustainability infrastructure that can amplify impact.

Aligning Impact Investing with Public Goals to Expand Ecosystem

Secondly, Mr Richard Dong from Hidden Hill Capital discussed how impact investing and infrastructure development can simultaneously create opportunities for both financial returns and societal benefits. His firm's strategic evolution—from logistics to renewable energy and data centres—demonstrates a strategic reallocation of capital towards long-term resilience. He emphasised that "the next phase of the GBA is an ecosystem expansion, not a zero-sum competition". Hidden Hill Capital's projects exemplify how impact-oriented private equity can align with public-sector sustainability goals such as carbon reduction, digital infrastructure and inclusive employment. Bridging the theory and practice of creating shared value, Mr Dong's experience shows that impact investment thrives when the "return-risk-purpose" triangle is well-aligned through cross-sector partnerships (Porter & Kramer, 2011).

From "Copy" to "Create": Chinese Innovation Goes Global

Thirdly, Ms Elissa Liu, a partner at Lanchi Ventures, offered a venture capital perspective on sustainability. Her narrative of China's evolution from "copy" to "create" illustrates the globalisation of Chinese innovation. She argued that early-stage investors must remain optimistic on geopolitical shifts, emphasising that the next decade's growth will stem from technology developed in China and scaled globally. Moreover, she also pointed out that Lanchi's investments in AI, robotics and new materials can exemplify how the GBA's engineering and manufacturing density supports innovation and commercialisation. As a whole, Ms Liu's explanations align with the eco-innovation archetype, where local resource efficiency and digitalisation drive both environmental and economic sustainability (Bocken et al., 2014). Furthermore, she reframed "impact" from philanthropic efforts to technology-enabled inclusion, leveraging Chinese-specific talent and capital to solve global problems.

Empowered by Social Innovation

Fourthly, Mr Wei Wei, the founder of Vision China Education Group, articulated a compelling vision for embedding compassion and community well-being into capitalism. Drawing from his experience in early childhood and special education, he discussed the rise of social service enterprises that merge commercial discipline with social outcomes. He cited examples of community childcare service for mothers, integration of inclusive education for children with autism, and skills retraining to illustrate how social enterprises achieve profitability through inclusivity. He regarded this as the shift from charity to social innovation, arguing that traditional philanthropy is unsustainable without business viability. Mr Wei's framework corresponds with the well-being economy paradigm, which emphasises that businesses should be a proactive part of the broader economic system. By prioritising sustainable and equitable well-being for both people and the planet, businesses are taking care of the system's stakeholders (Freeman, 1984). Meanwhile, his viewpoints also highlighted how China's social sector can transform from dependence to empowerment, by reframing the service sector as a growth engine for sustainability.

Family Businesses Can Align Capital for Impact

Finally, Mr Chavalit Frederick Tsao, Chairman of a long-established family conglomerate TPC (Tsao Pao Chee), argued that family enterprises function as the moral compass of capitalism. Quoting Chinese maxims such as "cultivate the self, manage the family, and bring peace to the world", he linked family governance with corporate governance, as a large proportion of global employment comes from small and family-run enterprises. Mr Tsao also introduced the concept of "aligned capital for impact", explaining how family offices, philanthropic foundations and private equity can converge to build "happy communities" that integrate education, healthcare, elderly care and green energy. He argued that family capital is often more patient and value-based than institutional capital and therefore can pioneer long-horizon social investments.

In addition, Mr Tsao underscored that sustainable employment, community harmony, and ethical wealth-transfer depend more on social governance and education for generational continuity. His comments contextualise the GBA discussion within the United Nations Sustainable Development Goals (UN SDGs), especially Goals 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), and 17 (Partnerships for the Goals), demonstrating how micro-level actions reinforce macro-level sustainability outcomes by linking local family business transformation to global SDG frameworks. In my opinion, his perspectives exemplify the theory of transformative sustainability leadership, in which moral vision precedes market incentives (Visser, 2010), whilst the "family capital as catalyst" notion can suggest a scalable pathway for Asia's wealth transfer to become a sustainability multiplier (Yang, 2025). Meanwhile, Mr Tsao's global insights also illustrate the multi-level perspective transition theory, in which local innovations or niche experiments will eventually reconfigure global socio-economic regimes (Geels, 2011).

Synthesising across all participants, this session reveals five interconnected insights.

Table 1: Insights from Panel Discussion on Greater Bay

	Key insights	**Strategic implication**
Institutional trust	Hong Kong's rule of law and governance enable cross-border ESG finance.	Build sustainability credibility through compliance and transparency.
Capital alignment	Family and venture capital are increasingly oriented towards impact.	Mobilise patient capital for returns linked to UN SDGs.
Technological spillover	GBA's AI and data capabilities support global decarbonisation and inclusion.	Leverage digital innovation for climate tech growth.
Social innovation	A benevolent economy integrates empathy with efficiency.	Treat a benevolent economy as an emerging business competency.
Education and talent	Human capital underpins innovation ecosystems.	Develop transdisciplinary education for sustainability leadership.

Source: Author

Collectively, these factors illustrate how business ecosystems can serve as vehicles of sustainability transition, compared with just individual firms (Geels, 2011; Bocken et al., 2014). The GBA case underscores that the sustainability challenge is ecosystem-wide and systemic, requiring the integration of technology, governance, capital and culture (Wu et al., 2024).

Lessons learnt and Conclusion

Attending this session fundamentally reshaped my understanding of sustainability as a collaborative ecosystem rather than a compliance checklist. First, sustainability must be built into the firm's value logic, not bolted on as philanthropy (Porter & Kramer, 2011; Freeman, 1984), as both Mr Wei and Mr Tsao have cited examples showing that social impact and profitability can reinforce each other when designed intentionally. Second, this model of "coopetition", evident in the GBA's multi-city structure where different governance and industrial strengths complement each other, is directly applicable to fostering broader and more effective Asia-Pacific regional collaborations (Wu et al., 2024). Third, true sustainability measures not Gross Domestic Product (GDP), but gross community happiness. Echoing Mr Tsao's call for "happy communities", I realised that a sustainable strategy must integrate material progress with emotional and cultural well-being.

In conclusion, the "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact" session illuminated a paradigm shift in Chinese and Asian capitalism, which has shifted from expansionary growth towards purposeful integration. The GBA's future will depend on how well financial, technological, and human ecosystems collaborate across borders. Through this ecosystem, Hong Kong can act as a gateway to responsible globalisation, while mainland Chinese cities can provide industrial dynamism and innovation. Meanwhile, family businesses, educators and venture investors together can redefine capitalism's purpose as sustainable prosperity for all. Therefore, this reflective learning experience helped clarify that the road to sustainability in Asia is not about slowing growth, but about redefining its purpose to become more profitable, equitable and regenerative.

References

Bocken, N. M. P., Short, S. W., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production, 65*, 42–56. https://doi.org/10.1016/j.jclepro.2013.11.039

Dewi, Y., Hanifah, H., Ping, T., Yeong, Y. N., & Padmalia, M. (2023). Dynamic capabilities dimensions: A new measurement for digital start-up companies. *Journal of System and Management Sciences*, *13*(3), 306–324. https://doi.org/10.33168/JSMS.2023.0321

Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The Impact of corporate sustainability on organizational processes and performance. *Management Science*, *60*(11), 2835–2857. http://www.jstor.org/stable/24550546

Flanders Investment & Trade. (2024). *Guangdong – Hong Kong – Macao Greater Bay Area*. https://export.flandersinvestmentandtrade.com/sites/fit_domains/files/2024-12/greater-bay-area-report.pdf

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.

Geels, F. W. (2011). The multi-level perspective on sustainability transitions: Responses to seven criticisms. *Environmental Innovation and Societal Transitions*, 1(1), 24–40. https://doi.org/10.1016/j.eist.2011.02.002

Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review, 89*(1–2), 62–77. https://hbr.org/2011/01/the-big-idea-creating-shared-value

Stewart Investors. (n.d.). *Family companies are the real attraction of investing in Asia.* https://www.stewartinvestors.com/global/en/all/insights/family-companies.html

Visser, W. (2010). The age of responsibility: CSR 2.0 and the new DNA of business. *Journal of Business Systems, Governance & Ethics, 5*(3). https://www.researchgate.net/publication/228188599_The_Age_of_Responsibility_CSR_20_and_the_New_DNA_of_Business

Wu, F., Li, M., & Huang, H. (2024). Innovation ecosystems and sustainable high innovation performance: Evidence from the Guangdong–Hong Kong–Macao Greater Bay Area. *Sustainability*, *16*(21), 9487. https://doi.org/10.3390/su16219487

Yang, H.-H., Lien, Y.-C., & Huang, B.-H. (2025). The impact of family business governance on environmental, social, and governance performance. *Sustainability*, 17(8), 3472. https://doi.org/10.3390/su17083472

Aligning Capital with Sustainability Across Asia

XU Ziyan

IMPACT WEEK stirred reflections about aligning capital with climate.

At IMPACT WEEK, I chose to attend the following sessions because they represented three dimensions of strategic sustainability: social inclusion, financial innovation and systemic transformation.

Firstly, the panel session "Unlocking the Silver Economy: Asian Families Leading the Way" resonated with me on a personal level, as it explored how ageing and family values intersect with economic design, which is close to my interest in demographic change and inclusive growth. I also joined "Financing the Blue Shift: From Pledges to Regenerative Capital" and "From Crisis to Reconstruction:

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Capital, Leadership & the Asian Future" to understand how finance can drive ecological and structural resilience, which relate to what I study about aligning incentives in complex systems. "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact" appealed to me, not only because I come from the southern part of China, but also for its geopolitical and regional-integration insights. I am also interested in how China's innovation ecosystems can collaborate with Southeast Asia, a region I now study and live in. Finally, I believe that "The Green Leap Forward: How China is Reinventing Prosperity for a Sustainable World" can offer a broader policy lens on how China redefines prosperity through sustainability, completing the picture of how social, financial and institutional mechanisms interact. A closing chat, "Everything is the Best Arrangement", is elaborated in this report. Collectively, these sessions allowed me to experience sustainability not as an abstract theory but as a living strategy bridging people, capital and governance across Asia. These sessions have met my expectations, and I feel so appreciative for the opportunity to attend.

Participating in IMPACT WEEK has allowed me to connect the theoretical frameworks from the Strategic Sustainability course, such as systems thinking, shared value creation and stakeholder engagement, with practical examples from industry and finance. After these sessions, I felt that I have deepened my understanding of how sustainability transitions are financed, governed and designed across sectors. This experience was particularly useful in showing how interdisciplinary collaboration and innovative capital structures transform sustainability goals into executable strategies, bridging academic learning with actionable impact in business and policy.

Arriving at IMPACT WEEK at Suntec Convention Centre, Singapore.

Unlocking the Silver Economy: Asian Families Leading the Way

The speakers included:

- Ms Katy Yung, Chief Executive Officer, Sustainable Finance Initiative
- Dr Mary Ann Tsao, Chairwoman, Tsao Foundation
- Mr Nathaniel Farouz, CEO of Sindora Living and CEO of Asia Senior Living, Keppel
- Rebekah Lin, Co-founder, Half

The panel session "Unlocking the Silver Economy: Asian Families Leading the Way".

Key Learnings

Normalcy and autonomy are what senior citizens deeply care about. The segmentation of ageing populations needs to be nuanced. Insurance and blended finance can catalyse the adoption of new care models. In addition, cultural continuity (food, housing, lifestyle) is central to dignity in later life.

Insights

The central question explored in this session captivated my attention: how can rapidly ageing Asian societies uphold dignity, foster inclusion, and sustain productivity amidst profound demographic shifts? By 2050, the Asia-Pacific region is expected to see its over-65 population double, with one in four individuals classified as elderly. This seismic transformation presents a multi-faceted challenge. It demands not only robust systems to care for ageing citizens but also innovative ways to harness their potential as active consumers, mentors and contributors to the social fabric. As I delved into the discussion, I was struck by the complexity of the issue: traditional family-based eldercare, long a cornerstone of Asian societies, is increasingly strained by urbanisation, shrinking household sizes and the escalating costs of care. The challenge, therefore, goes beyond healthcare and housing, and it calls for a bold reshaping of social systems, including insurance, urban planning, intergenerational connections and society's perception of ageing itself.

Additionally, what I found particularly compelling was the session's reframing of ageing not as a phase of decline but as a season of longevity, a time rich with opportunities for continued engagement and contribution. The panellists highlighted that the so-called "silver economy" is far from monolithic; it is a vibrant tapestry of diverse needs and aspirations. For example, a spirited 60-year-old pursuing lifelong learning has vastly different priorities from an 85-year-old requiring daily care. Viewing this diversity through the lens of market segmentation, as the discussion suggested, opens the door to tailored, sustainable solutions. I was particularly intrigued by examples of proactive innovation. In China, for instance, insurance-linked eldercare ecosystems integrate housing, health monitoring and social services, not only educating consumers but also recycling capital to create financially viable models. This hybrid approach blends philanthropy, public policy and private insurance, offering a promising blueprint for transforming eldercare from a societal burden into a sustainable, dynamic sector.

Beyond economics, the session illuminated the profound importance of cultural continuity and emotional well-being in ageing. One example that resonated deeply with me was the initiative in Hong Kong where restaurants reimagined traditional dishes to suit older diners' needs. This simple yet powerful act underscores a vital truth: dignity in ageing lies not only in access to care but in preserving identity and fostering a sense of belonging. Similarly, intergenerational community designs, such as housing complexes that integrate schools with eldercare centres, demonstrate how social interaction can be deliberately cultivated, rather than left to happenstance. These examples sparked my curiosity about how intentional design can bridge generational divides and enrich lives.

From a strategic sustainability perspective, the "silver economy" emerges as a fascinating intersection of risk and opportunity. It challenges policymakers, financiers and entrepreneurs to adopt a systems-thinking approach, aligning physical infrastructure, financial instruments and social innovation within a cohesive framework. The session underscored the need for collaborative governance: governments must craft enabling regulations, private investors should embrace patient capital models, and communities must co-create inclusive spaces that promote active ageing.

Reflections

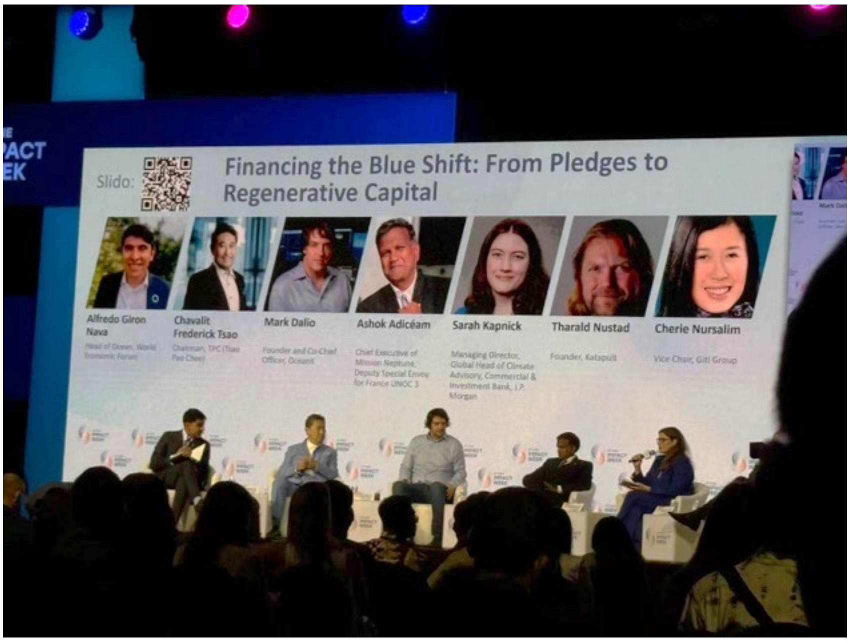
I entered the session expecting discussions about healthcare gadgets or senior-friendly facilities. Instead, I was struck by how deeply normalcy and dignity anchor this economy. What surprised me most was the reminder that loneliness is not incidental but a central challenge. Also, as one panellist said, seniors do not want to be treated differently; they want to be normal. So how can we help them without letting them feel helpless? Robots or apps cannot resolve it! Only deliberate human connection can. I realised that philanthropy and government grants are vital at the pilot stage, but for the model to turn mainstream and be of sufficient scale, public policy and insurers need to be in the picture. This layered funding journey was a revelation for me. It underscored that ageing policy is not just about social welfare but also about financial innovation. Personally, I now see my own ageing future not as a retreat from society but as a need for intentional integration into vibrant, multi-generational communities.

As I reflected on these insights, I felt a growing excitement about the potential for transformative change. The path forward, though complex, is brimming with possibilities to reimagine ageing as a vibrant, meaningful phase of life, one that not only meets practical needs but also honours the richness of human experience. Moreover, the panel emphasised that sustainability is not only about carbon footprints but also about designing inclusive systems that preserve social capital.

Financing the Blue Shift: From Pledges to Regenerative Finance

This session, though I attended only part of it, left a lasting impression on how sustainability and finance can converge. Speakers include:

- Dr Alfredo Giron Nava, Head of Ocean Action Agenda, World Economic Forum
- Mr Mark Dalio, Founder and Co-Chief Executive Officer, OceanX
- Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee)
- Mr Tharald Nustad, Founder, Katapult
- Dr Sarah Kapnick, Managing Director, Global Head of Climate Advisory, Commercial & Investment Bank, J.P. Morgan
- Mr Ashok Adicéam, Chief Executive of Mission Neptune, Deputy Special Envoy to the French President for the Third United Nations Ocean Conference (UNOC3)
- Ms Cherie Nursalim, Vice Chair, Giti Group



The panel session "Financing the Blue Shift: From Pledges to Regenerative Capital".

Key Learnings

Oceans face a systemic funding gap despite their global significance. Resilience metrics can unlock infrastructure-scale finance. Political symbolism can catalyse real capital flows. Governance breakthroughs can strengthen investor confidence.

Insights

The ocean economy faces a critical challenge: it attracts just 1% of climate finance, with only US$25 billion invested in 2023 towards SDG-related ocean goals against a staggering US$175 billion annual need. This profound gap seized my attention, highlighting the urgent need for innovative approaches to bridge it. The session's most compelling insight was the reframing of resilience as an investable asset, a perspective that reshaped my understanding of sustainability. Ports, fisheries, and coastal cities, long seen as climate liabilities, were placed in infrastructure categories that generate measurable returns, such as reduced insurance losses, improved trade continuity and carbon sequestration. I was particularly struck by the realisation that coastal protection and mangrove restoration are not merely acts of ecological repair but powerful forms of capital formation. Insurers are now pricing risks like sea-level rise and extreme weather into their models, transforming previously invisible externalities into financially legible factors, which I found to be a game-changer for investment strategies.

Concrete examples brought this vision to life. Indonesia's leadership during its G20 presidency brought the launch of Ocean 20, a blue finance initiative.

Similarly, global frameworks like the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement high-seas treaty, and the World Trade Organization's ban on illegal fisheries subsidies, provide the governance backbone markets have long lacked, converting soft commitments into credible enforcement mechanisms. These examples underscored the potential for aligned policy and finance to drive systemic change. Reflecting on this, I felt a surge of excitement about the ocean economy's future. This session illuminated how resilience, once seen as a defensive strategy, can be a proactive driver of economic and environmental progress, inspiring me to rethink sustainability as a dynamic interplay of innovation, governance and capital.

Reflections

As a student in the "Strategic Sustainability" course, I initially viewed marine conservation through a moral and ecological lens, but this session reshaped my perspective, revealing it as a challenge of systems design and financial innovation. I was struck by the subtle role of behavioural economics: once stakeholders can quantify and price risks like sea-level rise, their decisions shift, unlocking private investment. This insight echoed our class discussions on materiality—how making impact measurable transforms it into financial and managerial priorities. In all, the session crystallised how regenerative finance aligns profit, planet and people, deepening my conviction that sustainability education must empower us with financial literacy, the language that turns noble intentions into scalable solutions.

From Crisis to Reconstruction: Capital, Leadership & the Asian Future

The speakers are:

- Assistant Professor Brian Wong, Philosophy Department, University of Hong Kong
- Mr Ravi Menon, Board Chairman, ImpactSG
- Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee)
- Mr Gita Wirjawan, Former Minister of Trade, Indonesia

Key Learnings

Crises act as catalysts for reallocation and innovation, not just damage control. The concept of "energy as currency" reframes energy security as an economic and geopolitical asset. Family offices demonstrate how patient, values-driven capital can enable long-term transitions. Resilience in financial systems mirrors ecological adaptation: learning, evolving and reorganising under stress.

Insights

This session brought together family offices and energy transition strategists to discuss how crises, though often perceived as destructive shocks, can serve as catalysts for rethinking global capital flows. The panel's vivid metaphor of "energy as the new currency" struck a chord, suggesting that control over energy production, storage and cross-border transmission shapes not just industrial competitiveness but also geopolitical alliances in an era of volatile supply chains and climate pressures.

The speakers emphasised that periods of turbulence—financial crises, pandemics, or resource shocks—often reveal structural inefficiencies that would otherwise remain hidden. Though these disruptions are painful, they create openings for capital restructuring and strategic reinvestment. Family offices were presented as unique actors in this landscape. They operate outside the short-term reporting pressures of institutional investors and can therefore fund long-horizon projects, especially in clean energy, climate adaptation and green infrastructure. Their hybrid role to bridge philanthropy, venture capital and institutional finance positions them as catalytic agents in periods of uncertainty. One example discussed was the rise of regional partnerships in ASEAN to develop interconnected grids and renewable corridors, a model where energy cooperation substitutes monetary dependency.

Reflections

Before this session, I tended to see crises as reactive challenges, where the aim was to minimise damage and return to stability. This view changed when the speakers described them as structural resets rather than brief interruptions. This point resonates with our Strategic Sustainability studies: resilience isn't merely bouncing back but bouncing forward, innovating towards a stronger future. Also, I am particularly interested in the concept of energy as both a market currency and a moral currency that intertwine technological progress with moral responsibility. The discussion also suggested that patient family capital is underestimated, and that it can support long-term transitions that institutional investors may overlook because they are too gradual or too risky.

For ASEAN economies, these insights hit close to home. The region maintains a delicate balance between its vulnerability to global energy fluctuations and its abundant renewable energy potential. This leads me to consider Singapore's unique position: despite scarce natural resources, its financial expertise and connectivity could position it as a hub for sustainable energy investments. The notion that capital markets are dynamic ecosystems, adapting to environmental, social and technological cues, emerged as a key revelation. It reinforces that crisis management and sustainability are interconnected elements of an adaptive cycle, while disruptions could be viewed as gateways to transformative change.

Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact

The speakers are:

- Ms Helene Li, Executive Director, Association for Well-Being Economy
- Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee)
- Ms Nan Li Collins, Chair, United Nations Sustainable Stock Exchanges Initiative and Divisional Director, Investment and Enterprise, UN Trade & Development (UNCTAD)
- Mr Richard Dong, Founding and Managing Partner, Hidden Hill Capital
- Dr Au King-lun, Executive Director and Board Member, Financial Services Development Council
- Ms Elissa Liu, Partner, Lanchi Ventures
- Mr Wei Wei, Chairman, Vision China Education Group

Key Learnings

Hong Kong is shifting from capital intermediation to ecosystem governance and trust-building. Family offices act as patient capital, aligning profit with purpose. The Greater Bay Area's (GBA) competitiveness stems from polycentric collaboration, not central dominance. The rise of the well-being economy underscores the integration of moral purpose into economic design. Sustainable regional leadership depends on both institutional trust and human empathy.

Insights

This discussion explored Hong Kong's evolving role within GBA and its global mission to bridge China's industrial engine with international capital, innovation and governance systems. The speakers depicted the GBA as a complex yet synergistic ecosystem—nine cities and two special administrative regions working together as a living laboratory for sustainability-driven globalisation.

Unlike traditional "single-core" bay areas such as San Francisco or Tokyo, the GBA represents a polycentric model, blending Shenzhen's manufacturing power, Guangzhou's logistics base and Hong Kong's institutional and financial credibility. Also, the speakers argued that the city's value no longer lies solely in capital intermediation but in its ability to govern trust through data governance, regulatory reliability and cross-border financial innovation. Especially, Hong Kong's robust legal and intellectual property frameworks now underpin digital

The panel session "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact".

trade and sustainability-linked finance, providing institutional scaffolding for a new era of green and digital integration.

The first is the growing importance of family capital. Rather than chasing short-term returns like other funds, it acts as a "patient catalyst" that ties together the forces of philanthropy, venture capital and institutional investing. One panellist said that "family capital is big capital" which can take a long-term horizon. This is crucial for sustainability transitions as they take decades to bear fruit. This point resonates with me because it illustrates how financial resilience and moral motivation can support each other. Most striking was the concept of the well-being economy—business infused with compassion—as the next frontier of sustainable growth. The vision of "happy sustainable communities", integrating eldercare, green energy and education, makes sustainability feel vivid rather than abstract. This session left me inspired, seeing Hong Kong not just as a financial hub but as a beacon for compassionate, sustainable innovation.

Reflections

I used to view Hong Kong's competitiveness through the narrow lens of finance and logistics, but this discussion reshaped my understanding, revealing sustainability, governance and human capital as the true pillars of its global mission. I was struck by the insight that the GBA's edge lies not in its physical infrastructure (factories, ports and skyscrapers), but in its intangible "software" (trust, coordination and shared values). The idea that Hong Kong's "trust capital" can anchor China's sustainability ambitions, connecting mainland innovation with ASEAN markets through credible governance, truly inspired me. But what resonated with me the most was the new take on "competitiveness". It's no longer about who has lower costs or bigger export volumes. Instead, what counts are institutional credibility, talent mobility and consistent policies. That echoes exactly what we learnt in our "Strategic Sustainability" course—resilience and inclusive governance. After learning that the GBA's success will depend on aligning values, incentives and institutions across sectors, I couldn't help but ask myself: Where do I fit in, and what small, meaningful roles might I play? To me, the GBA is a bold prototype for systemic sustainability, where capital, compassion and culture converge to drive lasting prosperity. My role might start with learning, listening and then taking tiny steps to connect or refine things.

Everything is the Best Arrangement

Following the session "The Green Leap Forward: How China is Reinventing Prosperity for a Sustainable World", a fireside chat closed the day. The speakers of this fireside chat are:

- Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee)
- Gyatso Rinpoche, Founder of Mercy Fund (a fund under the China Population Welfare Foundation) and Author

A fireside chat "Everything is the Best Arrangement" which ended the day.

Key Learnings

Gyatso Rinpoche's talk became more than an academic exercise for me—it was a quiet awakening. I used to think that sustainability was a framework: a system of metrics, policies and strategies to balance profit and responsibility. But as I listened to speakers who had lived through crises, founded companies or carried out cultural missions, I realised sustainability is also a mindset and a way of being. It is about staying grounded amidst uncertainty, seeing imperfection as a possibility, and finding purpose within limits. This session evoked self-reflection with spiritual illumination. As Gyatso Rinpoche said, "For the world, a harmonious coexistence of culture and entrepreneurs is the only true path forward."

Insights

Gyatso Rinpoche's speech was deeply moving. He spoke with a calm strength that blended wisdom, humility and compassion, using his life journey, one filled with hardship, displacement and spiritual discipline, as proof that adversity can become the source of transformation. By connecting Buddhist philosophy with modern life and business, he indicated that true leadership, whether in spirituality or enterprise, begins with awareness and service. He emphasised that a company, like a person, must cultivate inner clarity and moral direction to create lasting value. His reflections on cultural transmission also stayed with me. He spoke of compassion not as a sentiment but as a strategic force—one that can reshape how organisations relate to people and society. The talk prompted me to pause and examine my own mindset: how I respond to uncertainty, and whether I view challenges as obstacles or opportunities for growth. Gyatso Rinpoche's optimism felt neither naive nor idealistic—it was disciplined, grounded and quietly revolutionary.

Reflections

The fireside chat made me reflect on how easily I chase control over plans, performance or outcomes. Gyatso Rinpoche's perspective offered something radically different, a belief in inner resilience and acceptance as a source of strength. It made me ask: what would a sustainable self look like? Perhaps someone who learns to adapt without losing integrity, to build without burning out, to measure success not only by achievements but by alignment with their values.

Gyatso Rinpoche's sharing was enlightening.

From an academic standpoint, IMPACT WEEK helped me connect the macro and the micro: how financial systems can regenerate oceans, how family capital can redefine patient investment, how cities like Hong Kong and Singapore can orchestrate trust and innovation across regions. But internally, I learned that strategy begins with the clarity of intention. A sustainable leader is not someone who never fails, but someone who fails forward—with compassion, self-awareness and persistence. I hope to bring this mindset into my own path, whether in sustainable finance, social innovation or policy design. In the future, I want to build strategies that honour both efficiency and empathy; systems that respect both the Earth and the quiet humanity of the people who live on it. IMPACT WEEK reminded me that sustainability is not a goal we reach, but a rhythm we learn to live by balancing vision with humility, ambition with grace, and change with acceptance.

Overall Personal Reflections

I feel genuinely grateful for the opportunity to immerse myself in such an intellectually vibrant and idea-rich environment. Discussing our thoughts with classmates after each session transformed abstract theories into living conversations. These were no longer words confined to textbooks but the distilled experiences of practitioners and thinkers shaping the real world. IMPACT WEEK also opened doors to diverse voices across industries. One moment that still sticks with me is talking to an entrepreneur—sadly, I can't remember his company's name now. He was really open about the tough gap between what you hope to do and what works. His dream was to build an integrated eldercare model in Singapore: a community that brought together hospitals, housing and recreation together. He acknowledged how brutally hard it was to make the numbers add up, how the practical side of keeping it sustainable kept throwing roadblocks in the way. The fixed costs of land and labour were overwhelming; with monthly operating costs running into several thousand Singapore dollars per resident, profitability was nearly impossible. His service could only cater to the wealthy, leaving the middle-income elderly excluded.

His setback is similar to China's plight, but in a different form. China's rapidly ageing population and low fertility have pushed the dependency ratio to historic highs. Yet most senior-care operators struggle to balance affordability with quality. Land prices and medical staffing costs are high, while public funding mechanisms remain fragmented. Many elderly still prefer to age at home, and the social stigma around "sending parents to institutions" persists. Although new models such as "community-based care centres", "elder universities" and "senior co-living apartments" are emerging, they face regulatory bottlenecks and limited financing. However, these challenges also signal the industry's turning point: as awareness, technology and policy evolve, sustainable eldercare may shift from a social burden to a growth frontier, integrating healthcare, wellness and social participation into a cohesive ecosystem.

For me, this conversation was transformative. It reminded me that sustainability must confront reality. The struggle to make eldercare viable financially is not just a business issue; it is a question of how societies value dignity, interdependence, and ageing.

Conclusion

Looking back on IMPACT WEEK, I feel both humbled and inspired. What began as an academic exercise became a personal journey of understanding how sustainability is about people, values and choices. I learnt that sustainable strategy reimagines relationships between generations, between capital and community, and between progress and purpose. More than anything, I learnt that the most powerful change begins quietly, and that I should always hold an open mind, a sense of responsibility, and the courage to keep learning.

Snapshots at IMPACT WEEK.

Charting the Path to Sustainability from Trailblazing Asia

CHU Yun Li Lynnette

Poem 1: The Cost of Our Convenience

We buried a mountain of tomorrows
in yesterday's convenient packaging.
Now, the earth hums back our purchases,
every disposable, a fossil in reverse.
What we called garbage
was the mountain we forgot we built.

I penned the above poem (Poem 1) with the intention of showing how our "take-make-dispose" linear model is harming our Earth and future generations. It succinctly encapsulates the ramifications of the cost of our convenience.

It has been an incredibly insightful time spent at 2025 IMPACT WEEK, which dived deep into the future of sustainability. The energy was palpable, especially during the sessions I attended: "Redefining Value: From Extraction to Regeneration Across Global Flows", "Introducing the Return on Values (ROV) for Organisations/Institutions" and "Closing the Loop: From Waste to Wealth—Asia's Food Circularity Playbook".

Huge gratitude to the brilliant minds on the panels and forums for generously sharing their wisdom, which is truly priceless. It was a privilege to learn from Mr Chris Southgate (ESG Commercial Lead of Microsoft), Mr James Ong (Chief Strategy Officer of TPC (Tsao Pao Chee)), Mr Rob Kaplan (Founder & CEO of Circulate Capital), Mr Michael Smith (Co-founder & General Partner of Regeneration.VC), Mr Keiro Reich (serial entrepreneur and impact investor), Professor Mahendhiran Nair (Pro Vice-Chancellor Research & Sustainability at Sunway University), Dr Koh Chaik Ming (Chairman of The Food Bank Singapore), Ms Lisa Moon (President & Chief Executive Officer of the Global FoodBanking

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Network), Ms Deepa Hingorani (Partner and Head, Planetary Health Investments Asia of Novo Holdings) and Mr Louis-Alban Batard-Dupre (Chief Executive Officer, Yindii).

Introduction

24 July 2025 is the day humanity used up all of its allowance of natural resources (water, soil and clean air) for 2025 (Global Footprint Network, 2025). Every year, Earth Overshoot Day has been getting sooner. In 1971, we used up one year's worth of the Earth's resources by 25 December. Contrast that date with 24 July for 2025. It has moved earlier by five months in the past 54 years. We are living like we have 1.8 Earths, which is simply unsustainable (Global Footprint Network, 2025).

We need to come back to our one and only Earth. Sustainability is not just a good-to-have. It has to be a core part of the business strategy of organisations. Just jumping on the sustainability bandwagon is simply not enough. If we continue without seriously changing our mindset and actions, Earth is going to die at our hands. Beyond superficial sustainable approaches, strategic, far-sighted companies are capturing fresh opportunities with attractive returns in the green economy. A common belief is that profit and sustainability cannot be achieved together, but that is far from the truth. Companies such as Patagonia have shown the world that they can do good for the environment without sacrificing returns. Sustainability is no longer a foreign concept or a mere buzzword. At the moment, the United States may have pulled back and retracted from championing sustainability, but Asia can and will rise to lead the future change in sustainability.

Integrating a Regenerative Circular Economy with ROV

Why does this matter? I intentionally chose to focus on this area for my 2025 IMPACT WEEK learning log because of the circular economy's huge potential. If profit and planetary health can both be achieved simultaneously, the entire business playbook will be flipped.

We do not inherit this place from our ancestors; we borrow it from our children. Our action or inaction will determine our children's future and thus the urgency to switch from our current take-make-dispose linear economic model to a regenerative circular economy where nature is incorporated.

Companies should start looking at Return on Value (ROV) rather than Return on Investment (ROI). ROV better reflects the contribution of an organisation to the ecosystem and economy. It should be a key feature of a roadmap for any organisation. We are living through a polycrisis. A relentless storm of geopolitical uncertainty, accelerating climate change and immense economic pressure can feel overwhelming. The challenges are real, but amidst the noise, a new and more intelligent conversation is emerging about the future of business and our planet.

This is not a conversation about greenwashing but a fundamental rewiring of strategy, value and behaviour that is already defining the market leaders of tomorrow.

Understanding the Differences Between ROI and ROV

ROI follows the zero-sum development model, maximising profits at all costs and provides returns to only shareholders. ROV, on the other hand, follows the sustainable socio-economic development model, which balances profits with planetary health and provides returns to all stakeholders. In the profit maximisation model, ROI is pursued at the expense of ROV. Contrast that with the purpose maximisation model achieved through sustainable development, where ROI is a function of ROV, i.e. ROI = f(ROV).

Argument for ROV over Traditional ROI

Arguably, the biggest elephant in the room is that the zero-sum development model is not working, and yet we are still using it. The zero-sum model postulates that profit can be pursued at the expense of people's health and the environment. The question then to ask is: is this sustainable? Clearly not, and yet most businesses are still adopting this zero-sum approach. Troublingly, Professor Mahendhiran Nair (Pro Vice-Chancellor (Research & Sustainability) at Sunway University) shared shocking research (Fanning et al., 2022) that none of the 148 countries analysed have met basic human needs sustainably within the past 30 years. Let that sink in. In general, countries transgress biophysical boundaries faster than they achieve social thresholds (Fanning et al., 2022). It is important to distinguish that countries at different levels of income face different challenges. High-income countries have seen socio-economic development at the expense of the environment, whereas lower- and middle-income countries may be ecologically sustainable but lag in life expectancy and energy access. In fact, development does not need to be zero-sum. In the sustainable development model, the health of the planet deepens socio-economic development. Isn't this perspective refreshing?

ROV can be maximised through a strong environmental-economic-social-political nexus. It should be leveraged as a strategic tool to increase the value of organisations, thereby creating a positive cycle of increasing investments flowing into the organisation and ecosystem. Thus, ROV should be a key feature of the organisation's roadmap.

Circular Economy and Regeneration

Circularity is about managing the full lifecycle of materials through making, using and reusing. For years, circularity has been the dream, the gold standard. However, a more powerful solution is taking its place: Regeneration. To ignore this shift is to risk solving yesterday's problem.

To put things into perspective, circularity is a brilliant strategy for stopping the bleeding by reusing the resources we have. Regeneration is the act of healing the wound itself by creating systems that, by their very nature, restore and strengthen the ecosystems they use, for example, healthy soils in regenerative agriculture.

The surprising obstacle? Many of our modern, human-made materials, particularly plastics and industrial chemicals, actively prevent regeneration. Even when properly recycled, their toxicity can block the very nature we need to restore. Thus, we need a new goalpost where circularity kickstarts the journey, with regeneration as the ultimate destination. The imperative is to first close the loop and then strategically replace the harmful materials with new biomaterials that actively contribute to the planet's health.

Market Innovation

An excellent example is Cruz Foam, a company that has developed a replacement for toxic styrofoam from a blend of shellfish waste (chitosan) and agricultural waste. It perfectly exemplifies a circular product, but its real power is that it is regenerative. When you are done with the packaging, you can put it directly into your garden soil, where it stimulates growth. This is ROV in action: a product that delivers economic returns while actively enhancing environmental value, creating a new market in the process which is a blue ocean strategy.

For the last thirty years, C-suite leaders have been fixated on optimising global supply chains for efficiency. For the next thirty years, they will be focused on mastering local "waste" chains for growth. The most valuable commodity in today's chaotic world is, in fact, the one you already own.

The global logistics model has become fundamentally fractured, shifting from a lean just-in-time system to a defensive just-in-case posture. This fragility makes nations that rely heavily on imports for everything from consumer goods to critical metals incredibly vulnerable. In this new reality, circularity is no longer an environmental ideal; it becomes a critical instrument of national security and economic stability.

Fighting Food Waste as a "Heroic Act"

When it comes to food wastage, the statistics are shocking and troubling: Food waste is four times more pollutive than airlines (United Nations Climate Change, 2024), and ⅓ of our food is wasted globally! In Singapore, food wastage is high—in 2019, the amount of food waste is equivalent to two bowls of rice per person per day (Singapore Green Plan, 2022)!

When it comes to the perennial problem of food wastage, how do you get millions to change their daily habits? You do not guilt trip them, you make them heroes. Any sustainability strategy that ignores behavioural psychology is destined to fail. Consider Yindii, a food-saving app in Southeast Asia. Its Founder and Chief Executive Officer, Mr Louis-Alban Batard-Dupre, initially launched his platform with a mission to fight food waste. The result? "Nobody cared." This is because the initial message was framed negatively i.e. a problem to be solved, a chore to be done.

The pivotal shift came when Yindii reframed the narrative to a heroic act: save food, save money and help the planet. This approach works because it taps into a positive self-identity. Consumers of Yindii could now view themselves as food heroes and gain a sense of satisfaction and fun, as Yindii has wisely tapped on gamification. Making this choice cool and joyful drives demand in a way that dry, gloomy facts never can.

Analysis

For countries that master the collection, processing and reuse of materials, circularity success will become their "superpower" weapon. It is a smart, strategic move because it reduces dependence on volatile international sourcing, insulates the economy from price shocks and builds resilience. The business risk for those dependent on fragile, linear supply chains has never been higher.

Forget ROI, the new metric for success is ROV. For decades, the business playbook has been dominated by a single metric: ROI. ROI emphasises maximising profit from land, labour and capital, but it completely ignores a critical fourth element: the environment. This zero-sum development model, where economies grow at the expense of planetary health, is now a catastrophic liability. In Malaysia, for instance, the cost of premature mortality due to air pollution in 2022 was around 5% of its Gross Domestic Product (GDP) (Tabatabaei & Moradi-Lakeh, 2025).

A More Holistic Compass

ROV provides a more holistic compass for success by balancing four key components: Economics (prosperity and corporate performance), Society (positive impact on communities), Political Empowerment (stewardship and effective governance) and Environment (measuring and improving planetary health).

What rewrites the playbook of business, especially for every leader and investor, is truly understanding that ROI is a function of ROV. ROI and ROV are not trade-offs. Organisations that generate high ROV build superior brand reputation, attract and retain talent, mitigate regulatory risk, as well as unlock new customer segments, all of which are direct, powerful drivers of financial performance.

The outdoor apparel company Patagonia is a masterclass in action for the ROV model. Its mission, "we're in business to save our home planet", is not charity; it is a value-generating engine. By prioritising the planet's health, it builds an eco-conscious customer base, attracts the best talent and builds strong brand loyalty. It is a prime example of showing that profit and planetary health can be achieved together. Its billion-dollar revenue is achieved even with its mission to save our planet. In fact, its economic success is precisely because it is brave enough to stand out from the crowd and create a business model that integrates sustainability as part of its core business strategy.

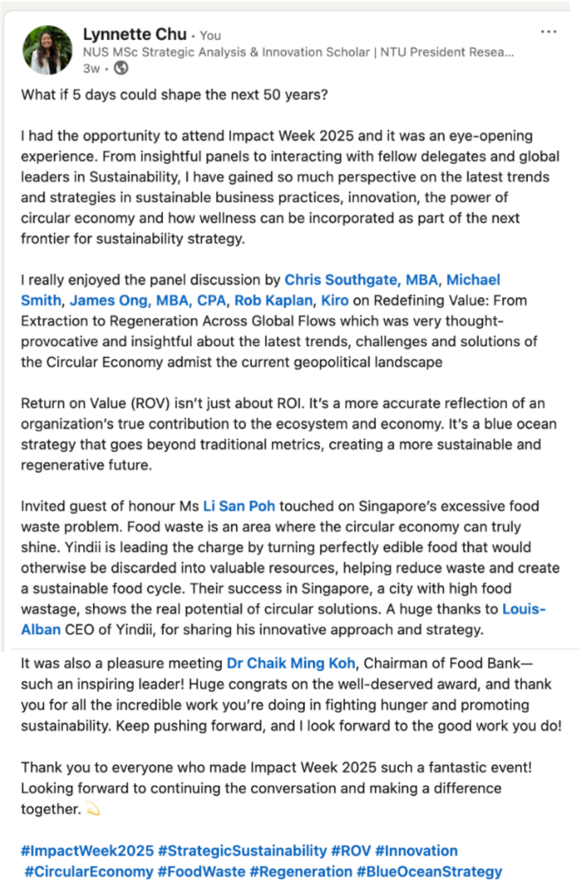
The elephant in the room for this IMPACT WEEK 2025 conference is a difficult but essential question: Is it fair for wealthy nations, which have built their prosperity on extraction for the past few decades, to now demand sustainability from emerging markets?

Southeast Asia Can Bypass the Polluting Path

Panellists from the session "Redefining Value: From Extraction to Regeneration Across Global Flows" had all unanimously agreed and candidly shared that it is, in fact, not fair. This tension is the core reason why ambitious global agreements have failed. However, out of this unfairness arises a powerful, asymmetric opportunity. Just as many nations in Southeast Asia skipped the era of expensive landline infrastructure and jumped straight to mobile phones, they now have the chance to bypass the West's polluting, extractive industrial development path entirely.

This leapfrog potential is immense. Instead of building last-generation infrastructure, these markets can jump straight to next-generation renewables and circular economies. They can build their future growth by using the resources they have already extracted, rather than relying on new virgin materials. It is a chance to build a more resilient, efficient and sustainable economic model from the ground up, avoiding the costly and catastrophic mistakes of the past.

What Mr Southgate said hit the nail on the head, "It's not fair, but Southeast Asia will make it fair." Indeed, emerging markets will not just catch up, they have the chance to leapfrog.



Lynnette Chu · You
NUS MSc Strategic Analysis & Innovation Scholar | NTU President Resea...
3w ·

What if 5 days could shape the next 50 years?

I had the opportunity to attend Impact Week 2025 and it was an eye-opening experience. From insightful panels to interacting with fellow delegates and global leaders in Sustainability, I have gained so much perspective on the latest trends and strategies in sustainable business practices, innovation, the power of circular economy and how wellness can be incorporated as part of the next frontier for sustainability strategy.

I really enjoyed the panel discussion by Chris Southgate, MBA, Michael Smith, James Ong, MBA, CPA, Rob Kaplan, Kiro on Redefining Value: From Extraction to Regeneration Across Global Flows which was very thought-provocative and insightful about the latest trends, challenges and solutions of the Circular Economy admist the current geopolitical landscape

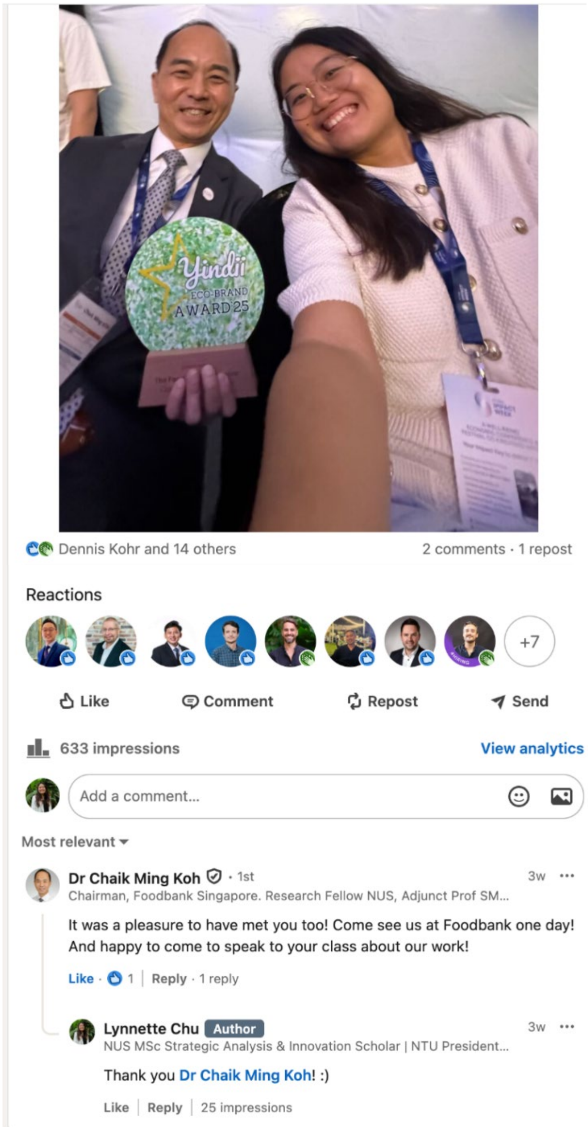
Return on Value (ROV) isn't just about ROI. It's a more accurate reflection of an organization's true contribution to the ecosystem and economy. It's a blue ocean strategy that goes beyond traditional metrics, creating a more sustainable and regenerative future.

Invited guest of honour Ms Li San Poh touched on Singapore's excessive food waste problem. Food waste is an area where the circular economy can truly shine. Yindii is leading the charge by turning perfectly edible food that would otherwise be discarded into valuable resources, helping reduce waste and create a sustainable food cycle. Their success in Singapore, a city with high food wastage, shows the real potential of circular solutions. A huge thanks to Louis-Alban CEO of Yindii, for sharing his innovative approach and strategy.

It was also a pleasure meeting Dr Chaik Ming Koh, Chairman of Food Bank— such an inspiring leader! Huge congrats on the well-deserved award, and thank you for all the incredible work you're doing in fighting hunger and promoting sustainability. Keep pushing forward, and I look forward to the good work you do!

Thank you to everyone who made Impact Week 2025 such a fantastic event! Looking forward to continuing the conversation and making a difference together.

#ImpactWeek2025 #StrategicSustainability #ROV #Innovation #CircularEconomy #FoodWaste #Regeneration #BlueOceanStrategy



Combined screengrab of the author's LinkedIn post on IMPACT WEEK, with a comment by Dr Koh Chaik Ming, Chairman, The Food Bank Singapore. This post was also reposted by Mr Louis-Alban Batard-Dupre, CEO, Yindii.

Poem 2: Regenerative Circular Economy (Acrostic Poem)

Collectively together, we can
Impact our current and future generations.
Refuse, Rethink, Reduce, Reuse, Repair,
Refurbish, Remanufacture, Repurpose, Recycle and Repair.
Come make a difference, no matter how small.
Understand the why behind the reasons we are doing this.
Linking the end to the beginning to form a circular loop.
Aiming and achieving a
Regenerative Circular Economy to save our planet.

Poem 3: The Loop's Promise

The linear model, we now dispose.
No more make, use and dispose.
A cycle we embrace,
Where waste surrenders its disgrace.
Each product created with an end-in-mind,
To be restored, not left behind.
From use to return, the resources flow.
The planet heals and the ecosystem grows.
A thriving world, regenerative, set.
Our brightest, most sustainable, yet.

Conclusion

I wrote these two poems (Poems 2 and 3) as I reflected on what I have learnt from these incredible leaders of change. I am truly grateful for this opportunity to attend IMPACT WEEK 2025 which marks a transformational part of my journey as I pursue my interest in sustainability. I have had the chance to meet the big movers of the industry, and their generous and candid sharing has widened my perspective and further fuelled my passion for sustainability. Even though IMPACT WEEK 2025 has ended, it gives me a spring in my step and hope, hope for the future that we can make this Earth we call home a better place—that these 5 days of IMPACT WEEK can really shape the next 50 years. With the Impact Partner Coalition signing taking place at the end of IMPACT WEEK, I think there is hope when corporations commit to change and when changemakers gather to make a point together. Collective action is key, and momentum is indeed building for sustainable prosperity for People, Planet and Progress.

The very definition of a successful business is undergoing a radical transformation. The game is no longer about short-term profit, but about long-term value creation, systemic resilience and regeneration. The organisations being left behind will be the ones stuck in old models, that refuse to change or that remain focused only on their own small slice of the problem without seeing the larger picture. They are not just risking irrelevance; they are ignoring the most profound opportunities for growth and innovation in this century.

The train of transformation is already moving, and organisations that do not jump on this wagon will risk getting left behind.

References

Fanning, A. L., O'Neill, D. W., Hickel, J., & Nicolas, R. (2022). The social shortfall and ecological overshoot of nations. *Nature Sustainability*, *5*(1), 26–36. https://doi.org/10.1038/s41893-021-00799-z

Global Footprint Network. (2025). *Earth Overshoot Day 2025 falls on July 24th, correcting humanity's largest market failure* [Press release]. https://overshoot.footprintnetwork.org/newsroom/press-release-2025-english/

Singapore Green Plan. (2022, January 27). "Ah Boy! Don't Waste Food!" *Medium.* https://greenplan.medium.com/ah-boy-dont-waste-food-9b1b69c888b0

Tabatabaei, M., & Moradi-Lakeh, M. (2025). *2025 Climate and health policy priorities for Malaysia.* https://lancetcountdown.org/wp-content/uploads/2025/10/Malaysia_Lancet-Countdown_2025_Policy-Priority.pdf

United Nations Climate Change. (2024, September 30). *Food loss and waste account for 8-10% of annual global greenhouse gas emissions; cost USD 1 trillion annually.* https://unfccc.int/news/food-loss-and-waste-account-for-8-10-of-annual-global-greenhouse-gas-emissions-cost-usd-1-trillion#:~:text=significant%20environmental%20burden.-,Food%20loss%20and%20waste%20account%20for%208%2D10%25%20of%20annual,both%20people%20and%20the%20planet.

China and Japan: Paths in Sustainable Development

WANG Shuyi

As a youth who is extremely passionate about sustainability and curious about the different perspectives on sustainable practices, I felt greatly honoured and pleased to attend IMPACT WEEK 2025 during my master's studies—it brought me several novel angles and inspirations on sustainable development. I participated in two sessions: "Reimagining China's Future through Next-Gen Innovation" and "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact". After listening to the guests' sharing, I believe these two sessions revealed two complementary forces shaping China's future: a top-down, systemic approach to integration led by policy and infrastructure, and a bottom-up, values-driven transformation of capital led by the next generation of stewards. They represent a powerful model for sustainable and globally integrated growth. In the following sections, I would like to share my own perspectives on each session.

Reimagining China's Future through Next-Gen Innovation

In this session, panellists, including second-generation successors of family enterprises in different industries, and Associate Professor Winnie Qian Peng, who specialises in researching Asian family businesses and family offices, shared their own interpretations of sustainability and its connection to their enterprises' core values.

I was particularly impressed by the perspective from Dr Teresa Chuang, Executive Vice President, Sustainable Development Committee, Beijing International Exchange Association. She believes that the concept of sustainability is deeply aligned with the traditional Chinese wisdom of "harmony between man and nature". This is not merely a lifestyle that follows the rhythms of nature but also embodies a holistic mindset of "interdependence among all things". When making decisions, we need to proactively consider the long-term

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

impacts of our choices on the social fabric and overall ecosystem, rather than just focusing on immediate interests.

Family Businesses in Japan

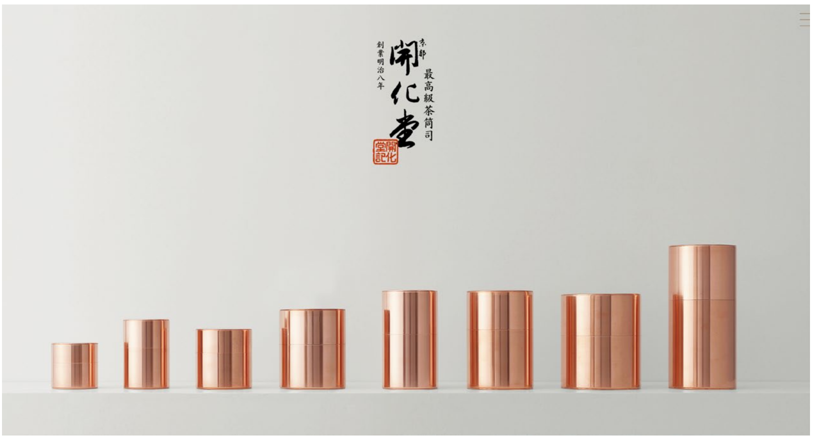
The panel discussion "Reimagining China's Future through Next-Gen Innovation".

Then Professor Peng mentioned that the core quality of an outstanding family enterprise should be "altruism". She has long focused on researching family enterprises in Japan, which is home to the largest number of longstanding family businesses in the world. According to Schwartz and Bergfeld (2017), a 2008 study from the Bank of Korea showed that there are 5,586 businesses globally that have operated for more than 200 years. Japan leads the pack with 3,146 such businesses, accounting for 56% of the global total. Furthermore, by any metric (including Gross Domestic Product (GDP), population or landmass), Japan has the highest concentration of long-standing family businesses; seven of the world's ten oldest corporations are also based there.

As a student who studied in Kyoto, Japan, for three years previously, I find that this data is consistent with the Japanese society and economic structure I witnessed firsthand. Early in my time in Kyoto, I was constantly drawn to the various shops lining the streets. Most seemed simple and unassuming, yet a little research revealed that many are century-old establishments. I gradually became captivated by the historical heritage these long-standing shops carry, and even more fascinated by the unique stories behind each one, along with the wisdom that has sustained them through centuries of challenges to this day.

The case of Kaikado

From small-scale sake breweries, art and craft workshops and manufacturing studios scattered across the streets, to Nintendo (the globally acclaimed creator of Super Mario games and the Switch console), all embody the Japanese people's profound understanding and practical wisdom of "long-termism" and sustainability. Based on my observations of Japanese society and my research, I believe Japanese enterprises owe their enduring success to some factors such as controlled growth and a focus on core competence. Many Japanese family businesses regulate their annual growth rate instead of fixating on rapid expansion, allowing them to prioritise quality and deliver the highest-quality services to their target customers. I was deeply struck by the business model behind traditional Japanese crafts. For instance, if customers want to buy a handcrafted earthen pot or a tea caddy (such as those made by Kaikado), they often have to wait six months or even longer.



Living Tools that can be used for centuries

The year of the Meiji Restoration,
1875 when people felt vibrant and filled with new hopes and dreams,
Kaikado became established as a pioneer of tinplate canisters using imported tinplate from England.
Since that time, consistently being handmade,
they have passed down their techniques from generation to generation for over a century,
meticulously creating every canister, each consisting of 130 procedures, as was done in 1875.

Screengrabs from Kaikado's website highlight its history.

Source: Kaikado, n.d.

Kaikado was established in Kyoto in 1875, the year of the Meiji Restoration (Kaikado, n.d.). Although the demand for its products was strong, and mass production methods were available post-WWII, Kaikado, now passed to the sixth generation, continues to make everything by hand (LeafKyoto, 2025). The copper tea caddies from Kaikado gradually oxidise over time. Their appearance, which evolves with the years, is not only a testament to time but also a reflection of the Japanese dedication to craftsmanship. Japanese people seem to have their own unique pace. They possess the ability to slow down time, focus on one small thing, and refine it to perfection.

In this fast-changing era, such dedication and craftsmanship are truly rare. With the rapid economic development in China today, many industries must rely on rapid iteration to maintain their market share; otherwise, they are highly likely to be eliminated. However, this model often comes at the expense of quality and services, ultimately making it difficult to retain loyal customers. This is essentially a harmful economic cycle—it is not sustainable development, but a short-sighted decision aimed at pursuing short-term traffic. I hope these industries can slow down appropriately and formulate strategies from a long-term perspective.

Balancing heritage and innovation

After the seminar, I asked Professor Peng a question: "While Japan has done an excellent job in preserving traditions and developing a sustainable economy, how can it maintain the ability to keep pace with the world in this rapidly changing era? And how to achieve balance in these two aspects ?" This question stemmed from my life experience in Japan. I often feel that Japan is a nation full of contradictions, which are reflected in many aspects.

Professor Peng explained to me that traditional Japanese enterprises do not equate "heritage" with "stagnation". Different sectors adopt distinct development strategies, especially manufacturing giants like Toyota, which anchor on core values while innovating. These companies have invested a large amount of funds into R&D for eco-friendly technologies. For instance, Toyota's decades-long investment in hybrid and hydrogen fuel cell vehicles is in line with their own Environmental Challenge 2050 and global carbon reduction goals (Toyota, n.d.). For these companies, "longevity" isn't about clinging to the past, instead, it's about using their reputation and sustainable innovation to be competitive and expand to the world.

In short, everything in the world needs balance. Whether it is an individual or a business, only by being in a relatively balanced state can sustainable development be achieved.

Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact

In this session, the guests focused on China's Guangdong-Hong Kong-Macao Greater Bay Area (GBA), sharing insights about the connection between sustainable development and GBA. I used to have a general understanding that

GBA is a region full of economic vitality and innovation, but I did not know exactly where this vitality is reflected. The session deepened my understanding of GBA. More than a commercial engine, it is also a living laboratory for systems innovation, business regeneration and East-West integration.

The panel discussion "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact".

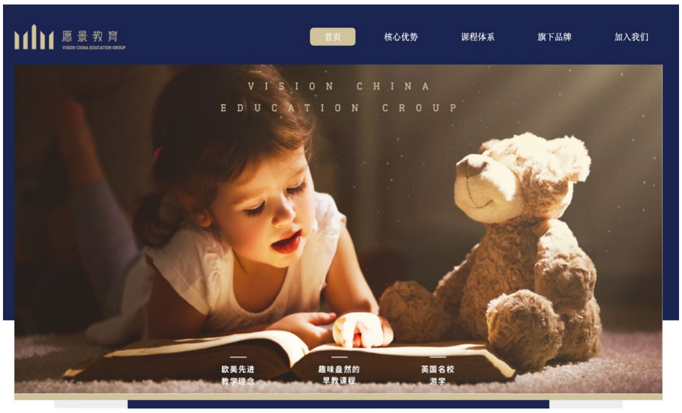
Hong Kong not only connects global capital with the mainland China market but also continuously enhances Environmental, Social and Governance (ESG) standards, fintech and governance capabilities. This positioning has accelerated the emergence of a new development paradigm. Hong Kong's unique geographical location and policy advantages complement the manufacturing strengths of other cities. Together, this vibrant GBA region provides a "Chinese solution" for sustainable development to the world.

From Profits to Shared Value Creation

In addition, this session's exploration of small and medium-sized enterprises (SMEs), family businesses and next-generation industry leaders in Hong Kong is highly enlightening. Instead of merely focusing on profit, these leaders are deeply aligned with the Belt and Road Initiative, creating social value and impact by adopting ESG integration, cross-border cooperation and digital transformation, reminding me of the IMPACT WEEK's theme on the well-being economy.

Nowadays, enterprises are shifting from pure business operations to social value creation, which is particularly evident in sectors such as elderly care, education and renewable energy development. One of the panellists in this session, Mr Wei Wei, founded the Vision China Education Group to provide inclusive early childhood education and care services, including for migrant children and children with special needs. This echoes the altruistic spirit mentioned previously.

I always believe that the core of both the sustainable economy and the well-being economy lies in caring for the needs of others. When individuals' basic livelihoods are secured, we should do our best to contribute to social development and genuinely care about human well-being. "Building a community with a shared future for mankind" should not remain a slogan, but be translated into concrete actions, which will ultimately yield long-term benefits.



Vision China Education Group's website.

Source: Vision China Education Group, n.d.

A Replicable Path for Global Sustainable Governance

The panellists also mentioned that Hong Kong's trustworthy reputation and its mature regulatory framework have built a "compliance bridge" for Chinese mainland enterprises to go global. Nowadays, many of these enterprises usually go through Hong Kong's compliance system before they expand overseas. This "regulatory box" effect can also be applied to sustainable development, where Hong Kong enables sustainable practices that align with international standards to take root across China. This provides a replicable, actionable path for global sustainable governance.

Conclusion

Looking back on these sessions, I have deepened my understanding of sustainable development and realised that it has never been a one-dimensional proposition; rather, it is an art of balance. Just as traditional Japanese family enterprises find a fulcrum between inheritance and innovation, the GBA is also exploring its own balance among economic vitality and sustainable value, and business profit and social well-being. This kind of wisdom is the core code for regional development and even global sustainable development.

In the future, as industries across the globe deeply integrate the concepts of a sustainable, well-being economy into their daily operations and strategic decision-making, I have reasons to believe that this model can address global challenges. Meanwhile, I also hope that conferences like IMPACT WEEK, which bring together professionals from all walks of life to discuss sustainable development, can be held in diverse formats globally and reach a wider audience.

References

LeafKyoto. (2025, April 17). *Kaikado tea caddies fascinate the world. The sixth generation's vision for the future of craftsmanship.* https://www.leafkyoto.net/en/250217-kyoto-kaikado/

Kaikado. (n.d.). *Living tools that can be used for centuries.* https://www.kaikado.jp/english/

Schwartz, H. & Bergfeld, M.-M. (2017, May 9). *What Japan's over 1000 year-old family owned businesses can teach us.* Munich Business School. https://www.munich-business-school.de/insights/en/2017/family-business-japan/

Toyota. (n.d.). *Goals & targets.* https://www.toyota.com/usa/environmentalsustainability/goals-and-targets

Vision China Education Group. (n.d.). *Vision China Education Group.* http://cn-vision.net/

From Bay Area to the World: The Position of Hong Kong in China's Overseas Expansion Strategy

LI Hangwei

The IMPACT WEEK seminar "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact" mainly discussed Hong Kong's role in the globalisation process of Chinese enterprises. The discussion linked the past and the present of China's Greater Bay Area (GBA). The rich economic and legal perspectives conveyed key signals about the region's future development. Of essence is how various sectors, such as business and government, can promote the global integration of China's business ecosystem through GBA. The panel viewed Hong Kong as a strategic fulcrum, and its function is evolving from a financial channel to a global hub for systems, data and innovation.

The panellists comprised:

- Ms Helene Li, Executive Director, Association for Well-Being Economy
- Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee)
- Ms Nan Li Collins, Chair, United Nations Sustainable Stock Exchanges Initiative and Divisional Director, Investment and Enterprise, UN Trade & Development (UNCTAD)
- Mr Richard Dong, Founding and Managing Partner, Hidden Hill Capital
- Dr Au King-lun, Executive Director and Board Member, Financial Services Development Council
- Ms Elissa Liu, Partner, Lanchi Ventures
- Mr Wei Wei, Chairman, Vision China Education Group

The Global Context: A Multi-polar Economic Order

The Guangdong-Hong Kong-Macao GBA is a coordinated development region comprised of nine cities in Guangdong Province, the Hong Kong Special Administrative Region (SAR) and the Macao SAR. At present, the world is in a

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

multi-polar economy, where opportunities and challenges coexist. Considering this current situation, what role will GBA, especially Hong Kong, play in the process of Chinese enterprises' globalisation?

First of all, we must note that the world is moving from a financial system centred on the United States dollar to a "dual system" that includes China and the US. The panellists believe that in the next 10 to 20 years, the economic, technological and political systems formed by these two countries will gradually stabilise and shape the world's economic and political landscape.

The panel discussion "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact".

To go global, Chinese enterprises will require stronger international compliance and institutional support. For some leading Chinese enterprises, non-domestic markets have accounted for 30% to 40% of their total revenue, with this figure reaching as high as 80% for those mature in internationalisation (McKinsey & Company, n.d.). This means a large market potential for Chinese enterprises to go global. However, the backdrop of trade protectionism and international complexities implies a greater need for support. Hong Kong, with its compatibility with international financial, legal and institutional systems, could help.

Hong Kong's Economic and Legal Systems

The panel held that Hong Kong's mission is to enable the "Chinese model" to be trusted and understood by international capital. First of all, Hong Kong has a strong offshore trade industry. In 2023, the total value of Hong Kong's offshore trade reached US$639.4 billion (Hong Kong Trade Development Council, 2025). In 2024, mainland China's goods accounted for 43.8% of Hong Kong's imports; while 59.3% of Hong Kong's exports went to mainland China, making it Hong Kong's largest export market. As the third largest trading partner of mainland China, Hong Kong's import and export trading companies, numbering over 95,000, have facilitated the international trade of Chinese companies (Hong Kong Trade Development Council, 2025).

Secondly, under the "one country, two systems" policy, the Basic Law stipulates that the Hong Kong SAR is a separate customs territory (Commerce and Economic Development Bureau, 2025). As of June 2025, Hong Kong has signed 24 investment agreements with 33 overseas economies (Commerce and Economic Development Bureau, 2025), promoting free trade and facilitating Chinese enterprises to go global.

The outline development plan for GBA was established in 2019 and forms an important part of China's national strategy. The first strategic goal of GBA is to promote high-level industrial synergy and occupy a prominent position in the international industrial chain (The Chinese General Chamber of Commerce et al., 2024). The panellists believe that China's ambition for GBA reflects its proactive stance in rebalancing globalisation. With Hong Kong as a bridge, GBA could play a crucial role in promoting China's "high-quality development" and the overseas expansion of Chinese enterprises. So, how can GBA achieve this goal?

The Structural Advantages and Synergy Potential of GBA

The panellists introduced the unique structure of GBA, where different cities have different functions. Each has its own strengths, enabling the entire urban agglomeration to achieve complementarity in manufacturing, technological innovation, education, finance and other aspects.

One view arose, likening GBA to a regulatory sandbox. That is to say, China is implementing institutional innovation in GBA. The GBA is not a direct copy of the old model of "reform and opening up", but a testing ground for a Chinese-style of opening up in the new era.

First of all, the Guangdong-Hong Kong-Macao GBA has achieved a more explicit industrial division of labour. Guangdong is the core of manufacturing and supply chain, Macao is a window for tourism and exhibitions, and Hong Kong is the international financial and professional services centre. Through its well-developed financial system, legal environment and international resources, Hong Kong helps to provide capital and risk management support for innovative projects.

It is precisely because of such a labour division that an efficient innovation cycle has been further achieved between Hong Kong and Shenzhen. High-tech enterprises in Shenzhen are responsible for product research and development as well as hardware manufacturing, while those in Hong Kong are in charge of patent technology protection and international cooperation. The Shenzhen-Hong Kong model can provide a rapid transformation and globalisation channel for “Made in China” innovation.

In addition, many manufacturing enterprises in Shenzhen have obtained international financial support by listing or issuing bonds in Hong Kong. This integration of “manufacturing + finance” not only enhances the overall capital efficiency of the region but also provides a replicable experience model for the Chinese-style of opening up.

Hong Kong’s Strategic Role: From Bridge to Hub

In the development of the GBA, Hong Kong has played a crucial role. The analyses of the panellists are conducive to the audience’s understanding of Hong Kong’s future development direction.

As an offshore renminbi (RMB) centre, Hong Kong bridges mainland enterprises to the global financial market through institutionalised financing channels. With advancements in RMB internationalisation and the Belt and Road Initiative, Hong Kong has also become a hub for cross-border settlement, financing and RMB investment. Meanwhile, the international compatibility of Hong Kong’s financial regulatory system has also made it a test zone for the “spillover” of the mainland’s capital market system.

Hong Kong has obvious institutional advantages in data and governance. On one hand, its laws are part of the Anglo-American legal tradition and are in line with the legal language of the international market. On the other hand, it maintains policy coordination with the mainland and can provide a “compliance buffer zone” for Chinese capital to enter the international market. The panellists gave examples, saying that emerging fintech enterprises in Hong Kong are using AI technology to identify and review compliance risks, such as automated regulatory models for Environmental, Social and Governance (ESG) disclosure, anti-money laundering and cross-border data transmission.

When it comes to intellectual property rights, the panellists particularly emphasised that Hong Kong has a world-class university system and an open research environment, which enables it to maintain close cooperation with research institutions in Europe, America and Southeast Asia, thus forming a “knowledge port” that gathers knowledge, capital and technology. In their view, Hong Kong is becoming an important gateway connecting the mainland with the international innovation network by virtue of its unique educational and institutional advantages. Some panellists pointed out that as the trend of the "financialisation of technology assets" accelerates, Hong Kong's position in this ecological chain is becoming increasingly important. Many mainland and international technology enterprises have chosen to set up their headquarters or financing platforms in Hong Kong because of these characteristics.

Hong Kong's New Mission

Discussing Hong Kong and GBA at a conference in Singapore holds extraordinary significance. As an open international port city, Singapore has long been at the forefront in global asset allocation, cross-border investment and financial regulation. With openness, the rule of law and multi-culturalism at its core, it has successfully established the image of an "Asian capital circulation hub". The experience of Singapore might also be a reference for Hong Kong in finding its position in GBA's development.

Reflecting on the forum discussions, it could be seen that the panellists hoped that Hong Kong would reposition itself in the new international landscape, from "a financing platform for mainland enterprises" to "a collaborative node for global capital". The new mission would be connecting China with the world through its unique offerings—open systems, rule of law, compatibility with international systems and reputation.

The "ambition" of the GBA is not merely the expansion of its economic volume, but rather the reshaping of the Chinese-style opening-up model. In the past, "opening up" was mainly export-oriented, emphasising the output of products and capital flow. Today, the GBA is exploring a new form of "global co-construction" and Hong Kong is at the forefront of this transformation. GBA would be a window through which the world understands China. A memorable point from the panellists are: the true GBA ambition is not the ambition of a single city, but a self-renewal mission in the rebalancing of globalisation.

Reflections

My friends and I had an unforgettable day at IMPACT WEEK. On this day, we had the opportunity to hear from experts on the development of East Asia. Such an experience not only enabled me to understand cutting-edge business perspectives, but also made me pay attention to issues that I had not noticed before. At the same time, we also deepened our friendship through listening and discussing throughout the day. IMPACT WEEK has inspired me to adopt a lifestyle of continuous learning and inclusiveness, and has brought me many wonderful memories.

References

Commerce and Economic Development Bureau, Hong Kong SAR. (2025, June 19). *The role of Hong Kong in global trade*. https://www.cedb.gov.hk/sc/trade-and-investment/hong-kong-in-global-trade.html

Hong Kong Trade Development Council. (2025, September 8). *Overview of Hong Kong's import and export trade.* https://research.hktdc.com/sc/article/MzEzODkxODY0

McKinsey & Company. (n.d.). *Going global: A strategic choice for Chinese enterprises in the face of global uncertainties.* https://tinyurl.com/5n8u5brs

The Chinese General Chamber of Commerce, Hong Kong, One Country Two Systems Research Institute, & KPMG. (2024). *The development strategy of the Guangdong-Hong Kong-Macao Greater Bay Area and Hong Kong's opportunities and challenges.* https://www.cgcc.org.hk/uploads/U241105094001.pdf

From Crisis to Reconstruction and the Singapore Case Study

ZHANG Yuqi

Introduction

I attended the IMPACT WEEK panel session "From Crisis to Reconstruction: Capital, Leadership & the Asian Future" because the theme resonated deeply with my academic pursuits, internship experiences and coursework. During my undergraduate studies, I completed three summer internships in finance and advertising, where I was actively involved in fiduciary project management and securities market analysis. During my tenure at an advertising agency, I was also involved in post-crisis strategic planning to help clients return to pre-crisis performance levels.

These experiences have made me acutely aware of the vulnerability of traditional financial and business systems in the face of sudden global crises such as the pandemic. Market liquidity dries up overnight and consumer and investor confidence collapses. As a result of the macroeconomic "emergency brakes", several of the projects I analysed during my two finance internships suffered severe liquidity crises. This made me realise that the traditional valuation system, which focuses on short-term profits and capital appreciation, has a major blind spot when dealing with systemic shocks.

This first-hand experience of the crisis led me to focus on the economic and governance dimensions in my "Strategic Sustainability" course. Through the course, I came to the realisation that what we are facing is not just a cyclical economic crisis, but a deep structural crisis intertwined with climate shocks, growing inequality and governance failures. This realisation signals that future models of finance and leadership must place sustainability and resilience at their core.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

This IMPACT WEEK event allowed me to think in a longer-term framework: how do we move from crisis to rebuilding? How do we build a new paradigm of financial governance that is resilient to shocks and truly serves the long-term well-being of humanity? This is especially true at a time when the old order is becoming increasingly unsustainable. Asia, as both the epicentre of global growth and a microcosm of development challenges, is an ideal lens through which to explore this question. Such a perspective will also provide the basis for my search for global solutions to this challenge.

Personal Learning Objectives

Given this background and motivation, my core objectives for participating in this forum are as follows:

Connecting Theory to Reality

I aim to deepen my understanding of the sustainable finance and governance frameworks covered in the course, such as Loh's 3R framework and stakeholder theory. By observing how top practitioners address these challenges in practice, I seek to bridge the gap between abstract academic theories and complex real-world situations. This will enhance my theoretical knowledge and help me identify concrete scenarios where these theories can be applied in my future work.

Focus on Capital Reconstruction

In particular, I am interested in gaining a deeper understanding of the central issue of economic viability in the renewable energy transition, as emphasised by one of the speakers, Mr Ravi Menon, Board Chairman, ImpactSG. I will explore the specific application of economic feasibility in addressing the challenges of financing the energy transition in Southeast Asia as revealed by Mr Gita Wirjawan, Former Minister of Trade of Indonesia. I intend to use the information to independently research relevant articles and further explore structural knowledge of contemporary social capital reconstruction.

Inspiring Critical Thinking

By contrasting Eastern leadership perspectives with Western analytical frameworks, I aim to develop independent insights into "sustainable leadership". This exercise will help me identify potential gaps in the current curriculum, strengthen critical thinking skills, and add a sustainable leadership dimension to the current knowledge framework.

Stepping into the IMPACT WEEK main grounds.

Report Structure

To clearly demonstrate the process of transforming information into a body of knowledge, this paper will follow the following logical structure: first, I will distil the core insights of the forum. At the same time, I will make initial connections to the core knowledge points of the course, laying the groundwork for subsequent arguments. Then, in the section "Deep Reflection and Curriculum Integration", I will use the curriculum analysis framework to reveal more connections and deeper motivations through structured analysis. In the section of "Personal Perspectives and Critical Reflections", I will introduce relevant literature, question the presented concepts, explore the possibility of integrating Eastern and Western perspectives, and identify potential blind spots. Finally, in the "Recommendations for Action and Application" section, I present recommendations for individuals, companies and policymakers.

Forum Content Summary and Preliminary Reflections

Redefining the Nature of Crises: From Events to Systems

At the beginning of the forum, Mr Ravi Menon questioned the traditional definition of "crisis". He argued that crises are not isolated events, but rather ongoing states of "disruptive change". Some crises may affect only specific groups of people—a key dimension that is often overlooked in our analysis. Drawing on his previous experience at the Monetary Authority of Singapore (MAS) during the pandemic, he illustrated the multi-dimensional relevance of crises—how a tiny virus can simultaneously impact the global financial system, social governance, public health and the public psyche. He emphasised that the core of leadership lies in identifying and coordinating multi-stakeholder efforts to address these systemic and interrelated risks across sectors and levels. This leads us to the "Leadership Traits" that we will explore later.

Reflection

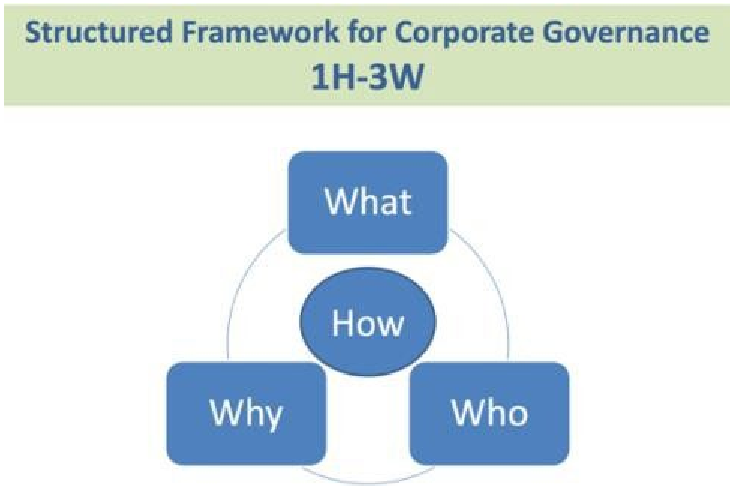
During my internship at a financial institution, the "liquidity crises" I analysed were mainly micro-level and cyclical in nature. Mr Menon's discussion made me realise that future leaders will need to be systems thinkers in order to identify and respond to these long-term, interconnected crises across multiple domains and levels. This fits well with the Multi-Stakeholder Pyramid Model presented in my "Strategic Sustainability" course. The model recognises society, communities, governments, customers, suppliers, employees, creditors (lenders) and investors as key stakeholders in corporate governance that need to be considered.

While Mr Menon's insights stem from his experience at the MAS and the course focuses more on corporate governance choices, both point in the same direction: solutions must involve working with or balancing the interests of others. As he put it, "It has to be hand-in-hand with government, industry and the public."

This is not only a contingency measure in times of crisis, but also a profound reflection of the "who" (governance actors) and "how" (collaboration mechanisms) of the 1H-3W governance framework. The concept is highly compatible with the principles of circular economy and systemic resilience.

Multi-Stakeholder Pyramid Model.

Source: Loh, 2025

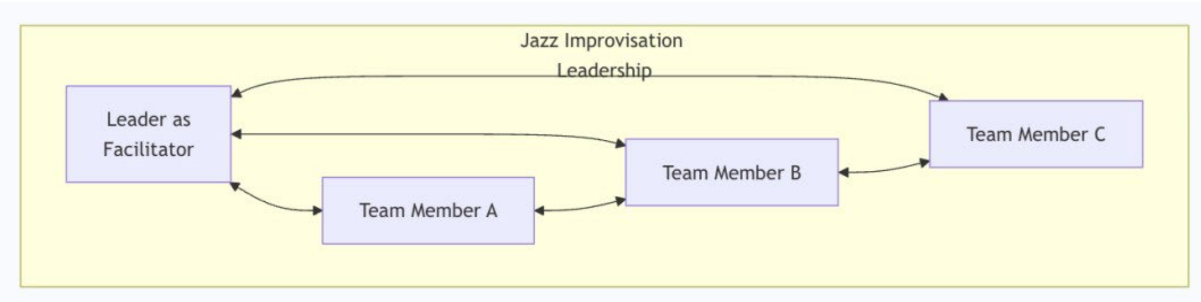


1H-3W governance framework.

Source: Loh, 2025

Leadership Reconstruction: Jazz Improvisation—Shifting from Control to Coordination

Panellist Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee), compared leadership to "jazz improvisation". He argued that effective leadership is not about following a musical score but rather about experimenting with innovation, embracing mistakes and creating unexpected harmonies through collaboration. This model of leadership echoes Mr Menon's emphasis on "collective collaboration" and also challenges the traditional model of top-down leadership.



Analogy of effective leadership to jazz improvisation.

Source: Author

Reflection

This perspective perfectly embodies the stakeholder theory discussed in my studies. As OpenAI's governance crisis in late 2023 revealed, when stakeholder communication broke down, it triggered a major crisis that led to the dismissal and return of the CEO to the company (Dastin & Soni, 2023). This crisis and the subsequent rethinking of governance structures—particularly how to pursue growth while adhering to founding principles (Metz, 2025)—revealed both the failures and inherent limitations of the traditional closed board decision-making model in complex systems. The incident exposed the limitations of traditional corporate governance frameworks in responding to disruptive technologies such as artificial intelligence, and there is an urgent need to explore more adaptive governance models in practice (Tallarita, 2023). Mr Tsao's "jazz" model provides a cultural perspective and framework for action that emphasises openness, adaptability and collaborative creativity to address such governance dilemmas.

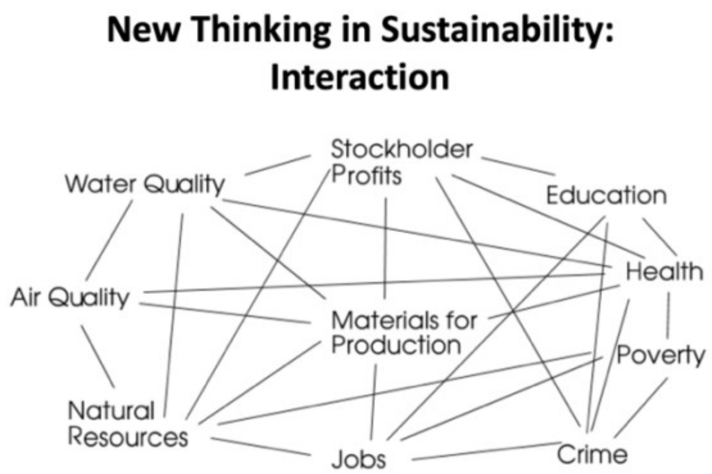
Southeast Asia's Narrative Deficit and Its Implications for Future Development

Mr Tsao noted that, despite its extraordinary diversity, the Southeast Asian region is suffering from a "narrative deficit". Despite its geographic scope and population size, its presence in the global body of knowledge is very small—

largely due to the inability of some Asians to tell their stories to themselves and the world. This lack of narrative directly contributes to low capital attention, slow policy learning, weak regional identity and consequently, overall slower development. In particular, he emphasised the education gap as a source of economic fragmentation within Southeast Asia. Using metaphors such as "mysterious China", he argued that actively shaping narratives was decisive in determining the future trajectory of Southeast Asia.

Reflection

Mr Tsao's discussion of the power of narrative resonated deeply with what I learnt in the first lecture of my course: the challenge of mindset and that "sustainable development is transformation". The course pointed out that one of the challenges of sustainable development lies in "thinking and mindset" and the need to shift from the traditional "isolation mindset" to a new "interaction mindset". Mr Tsao's perspective deepened my understanding of this concept: he viewed reality (e.g., the image of the Southeast Asian region) as a "narrative" that can be actively shaped, rather than a static, objective existence. This also connects with the course concepts of "Sustainability as Transition" and "Sustainability as Innovation". We move from short-term to long-term thinking, creating new possibilities by rewriting our stories about the past and the future. It also aligns with my earlier point that leaders should adopt systems thinking to address long-term crises and not just micro and cyclical crises.



Interactions in sustainability.

Source: Loh, 2025

Real-World Dilemma of Energy Transition: Brutal Calculation of Economic Viability

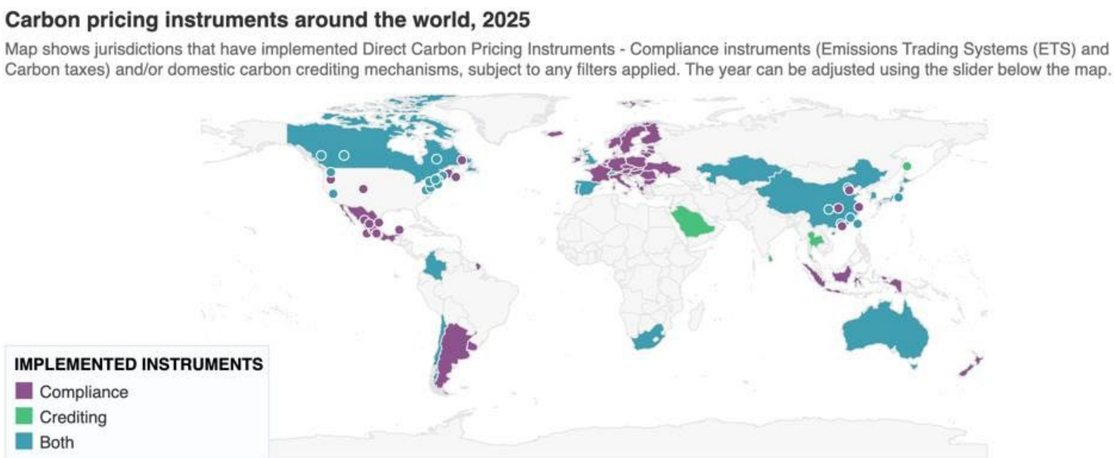
Mr Wirjawan's presentation injected a dose of cold realism into the discussion. With detailed data, he revealed the huge gulf between the average cost of renewable energy (about 15 cents per kilowatt hour) and the ability of the global South to pay (about 5 cents per kilowatt hour). To modernise Southeast Asia, the region needs an initial investment of about US$2 trillion. However, constrained fiscal space and the size of foreign direct investment (FDI) makes it "virtually impossible" to achieve the carbon neutrality targets set for 2050 or 2060 under the current framework.

Reflection

Mr Wirjawan's stark reality check tempered many of the optimistic visions in the course. The course emphasises building a "business case" for sustainability, but Mr Wirjawan's data revealed that, at the macro level, this case is currently "virtually impossible" to achieve. This compelled me to ask more critical questions: Are we over-relying on the inherent "payoff" logic of the market to solve problems that the market itself cannot solve?

In a lecture on carbon disclosure and management, the importance of tools such as carbon taxes was unquestioned. However, I cannot help but wonder: in the face of the huge costs of sustainable development, might these measures remain a "drop in the bucket"? For example, Singapore's carbon tax scheme aims to reach S$50-80 per tonne of emissions by 2030. Yet, it is estimated that the price of carbon would have to far exceed this target to close the green premium gap. This reveals a harsh reality: the existing policy framework may drive incremental improvements, but it may not trigger a systemic transformation.

A systematic review published in Nature Communications noted that global carbon pricing has already achieved 4-15% reductions in emissions (Döbbeling-Hildebrandt et al., 2024). Meanwhile, data from the World Bank suggests that while carbon pricing mechanisms currently cover about 23% of global GHG emissions, both the overall coverage and the strength of the price signal need to



Carbon pricing instruments around the world in 2025.

Source: World Bank, n.d.

be significantly increased to effectively address the climate challenge (World Bank, 2025). In addition, research by the Macro and Green Finance Lab at Peking University emphasises that there are structural barriers to implementing carbon pricing in developing countries, such as high political costs, weak data bases and multiple market failures (He et al., 2024). This means that instead of relying on carbon pricing alone to trigger systemic change, there must be a more comprehensive package of policies including energy efficiency standards, industrial subsidies and non-price regulatory measures. In conclusion, while Singapore's carbon tax policy is a critical step forward, bridging the green premium and achieving energy system transformation may require the implementation of higher carbon prices in the future, complemented by strong non-carbon pricing policies.

Deep Reflection and Curriculum Integration

Further analysis is conducted through case studies.

Singapore's Systematic Development of Sustainable Finance & AI Governance Ecosystem

I selected Singapore as a case for in-depth analysis. In the face of global sustainability challenges, Singapore has adopted a highly systematic and interconnected portfolio of strategies, demonstrating a holistic approach that cuts across crisis response (governance), recapitalisation (economy), technological empowerment (artificial intelligence) and future narratives (leadership).

Governance dimension: From pyramid model to agile AI governance testbed

The ultimate practice of "multi-dimensional connectivity" and collaborative governance, as emphasised by Mr Menon at the forum, is embodied in Singapore's governance model. This model goes beyond the static description of the "stakeholder pyramid" and evolves into a dynamic "platform governance" model. The Veritas Initiative, jointly launched by the MAS and the Infocomm Media Development Authority (IMDA), aims to provide a framework for financial institutions to assess the fairness, ethics and interpretability of AI models. The framework involves regulators, technology providers, industry implementers (banks, insurance companies) and academic institutions to establish financial AI credibility standards (Monetary Authority of Singapore, 2020).

Deep integration with course content

This case clearly defines the "who" (developers, users, regulators, experts), the "what" (assessing the fairness and ethics of AI), "why" (building market trust and reducing financial risk), and "how" (through joint projects and standard setting). It applies the framework of corporate governance to a cross-sectoral public governance scenario. It allowed me to quickly capture the essence of the problem, highlighting its applicability as a general analytical tool while providing a clear structure for subsequent analysis. AI governance is presented as the heart of financial stability and innovation. It reflects a shift from "disconnected thinking" to "interconnected thinking". The "Seven Challenges of Sustainability Strategy" introduced in the course are brought to life, demonstrating how AI governance can address these challenges through systems thinking.

Seven challenges of sustainability strategy.

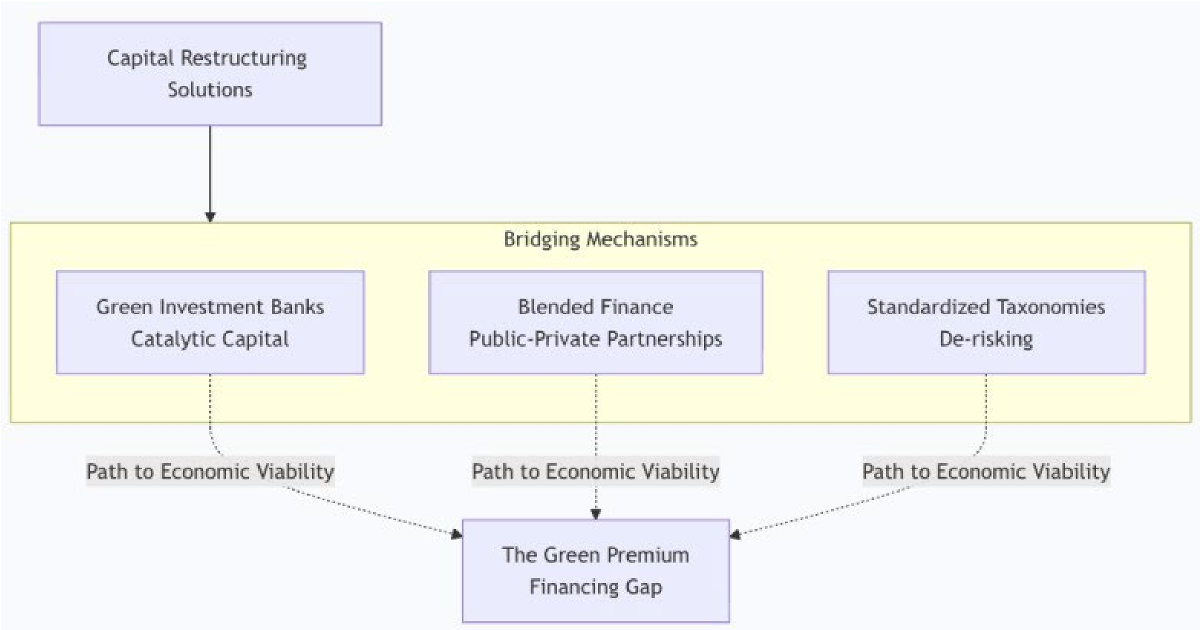
Source: Loh, 2025

It also sets out a framework for assessing the fairness of AI models by developing testing procedures and driving implementation to create a cycle of monitoring and auditing. The case also successfully coordinated different parties involved, ensuring diversity and balance in governance decisions. These insights demonstrate how Singapore has applied its flexible, industry-driven governance model to specific industries to address the "technological complexity" challenges of AI.

Economic dimension: Transcending the "3R Framework" to build catalytic green financial infrastructure

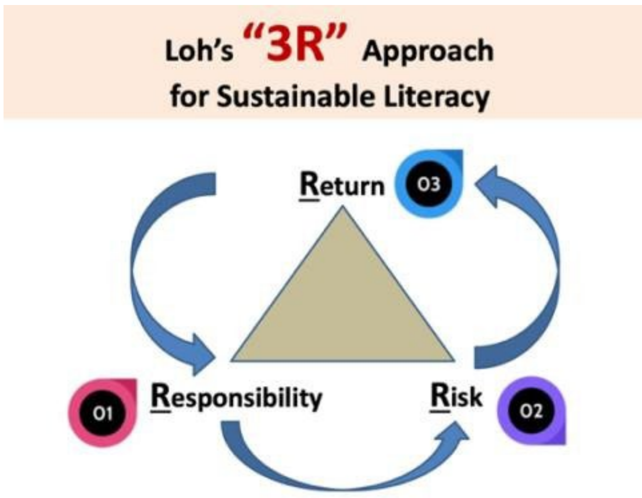
The green financing gap in Southeast Asia, revealed by Mr Wirjawan, prompted Singapore to develop a financial engineering system for sustainability. This goes beyond Loh's "3R" framework (Responsibility, Risk, Reward) to advance institutional innovation.

MAS' Green Finance Action Plan lays out guidelines on environmental risk management and includes grant schemes for defraying the costs of green bonds and loans (Monetary Authority of Singapore, 2022). The MAS Green Investments Programme also incentivises asset managers to build green portfolios. This blended finance model is a refined implementation of Mr Menon's proposed "public-private philanthropic" (3P) capital mix. It explores a potentially viable path for future sustainable development.



How blended finance could look like.

Source: Author



3R Approach to Sustainable Literacy

Source: Loh, 2025

Loh's "3R" approach to sustainable literacy illustrates the relationship between sustainability and business models. Singapore's strategy suggests that when individual projects lack a viable business case, new cases can be created by establishing systematic financial infrastructure (e.g., grants and risk-sharing mechanisms) to fill in the gaps in the business chain while attracting the interest of other stakeholders. This counters Mr Wirjawan's pessimistic view and emphasises the need to upgrade from corporate-level social responsibility to a systemic financial architecture.

This green finance infrastructure is being integrated with AI technologies. For example, an AI-driven carbon accounting platform can utilise Singapore's green taxonomy to automatically assess projects for "green certificates" and predict future emissions trends, reducing due diligence costs and attracting more capital. This demonstrates how AI for sustainability can support recapitalisation and drive the sustainable transition of the economy.

Technology and social dimensions: Establishing the foundation for a just transition through "trustworthy AI" and "digital inclusion"

Singapore has addressed Asia's narrative and education gaps through strategic investments in technology governance and digital capabilities. It recognises that without social trust and a talent base, technology-driven transformation will face significant challenges. As a result, Singapore has not only invested in education, but also begun to deploy AI and related fairness principles (Monetary Authority of Singapore, 2020).

In 2024, Singapore developed a Model AI Governance Framework for Generative AI (Infocomm Media Development Authority, 2024). This represents more than just the initial AI governance rollout; in the long term, it represents a process of social learning and trust building. By progressively engaging societal stakeholders in AI governance and practices, Singapore is actively shaping the narrative of a "responsible AI nation" (Khanal et al., 2024) to progressively build societal trust in AI technologies. Mr Tsao's "improvisational jazz" leadership is reflected here in the government's assumption of the roles of "platform builder" and "collaborator" rather than a top-down conductor. This new role would promote a more flexible and adaptable model of leadership. By establishing credible rules (AI governance) and empowering society (digital inclusion), it provides a safe, harmonious arena for innovative improvisation.

An Interconnected Knowledge System

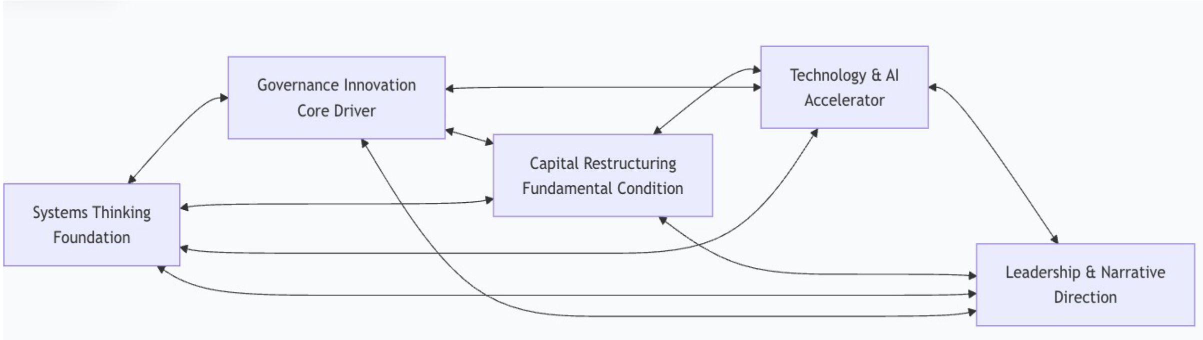
By combining insights from the IMPACT WEEK forum, course knowledge and further analysis, I have constructed a dynamic and sustainable knowledge system with an internal logic.

Systems Thinking as the Foundation

We must recognise the deep links among economic, social, environmental, technological and governance subsystems, and build systems thinking to respond to interconnected crises.

Governance Innovation as the Core Driver

Systems thinking cannot remain at the purely theoretical level; it requires institutionalised, effective and well-defined vectors for implementation. Modern governance has evolved from a static "pyramid" to a dynamic "responsive network". Its core functions include aligning stakeholder interests, clearly



A conceptual framework linking systems thinking, governance innovation, capital restructuring, technology & AI, and leadership & narrative.

Source: Author

defining responsibilities and obligations across sectors, and building societal trust in these innovative approaches. This provides a basis of legitimacy and a platform for cooperation.

Capital Restructuring Is the Fundamental Condition for Achieving These Goals

Ambitious visions require tangible capital, but contemporary societies face the challenge of over-costing and under-financing sustainable development. Therefore, sustainable finance (e.g., Singapore's hybrid finance) fundamentally transforms abstract "responsibility" and "long-term value" into investable, tradable "business cases" through complex financial restructuring and risk reorganisation. This can be achieved through a government green bank to attract more commercial investors into the sustainability sector and provide the necessary capital support.

Technology Serves as an Accelerator

Disruptive technologies such as AI can accelerate the achievement of the SDGs once the above are met. Within this framework, AI plays a dual role: as a tool (AI for sustainability), it can significantly improve resource efficiency, optimise management, and reduce measurement costs through its predictive power, leading to accurate policy implementation; as an object (sustainable AI and AI governance), its own sustainability and credibility must be incorporated into the governance framework. Failure to do so risks creating new harms and eroding social trust.

Leadership and Narrative as Direction

Ultimately, all these developments require a clearly structured direction. Leadership and narrative, as emphasised by Mr Tsao, are the soul of this system. They help in determining whether we are moving towards an inclusive, regenerative and sustainable future or a divisive future due to structural confusion.

In short, the insightful reflections following IMPACT WEEK suggest that true strategic sustainability depends on weaving these five dimensions into a synergistic whole. We must take a more holistic view of the macro level, rather than treating isolated components as separate subjects and ignoring their interdependent impacts.

Personal Perspectives and Critical Reflections

The Essence of "Regenerative Capital": Paradigm Shift or Strategic Narrative?

In my view, true "regenerative capital" should move beyond the traditional principle of "do no harm" to the "active creation of ecological and social value" (Hawken, 2021). For example, funds can be allocated to sustainable businesses, and products can be designed to be reused or repaired easily (Circular Economy, 2024).

However, this model faces a significant risk of greenwashing. Without rigorous standards (e.g. the European Union's (EU) Sustainable Finance Disclosure Regulation, SFDR), regenerative capital runs the risk of being reduced to pure marketing rhetoric (Circular Economy, 2024). My critical view is that whether regenerative capital can truly become a paradigm and drive development depends not on how advanced the concept is, but on whether it is underpinned by credible and transparent measurement, reporting and verification (MRV) systems.

Global Fragmentation in AI Governance and Opportunities for Asia

There are various approaches in AI governance: the EU emphasises risk-based hierarchical regulation, China focuses on content labelling and digital identities, the US employs national-level pilot programmes, and Singapore implements an industry-led and flexible governance model. These divergences stand in stark contrast to the systemic leadership approach discussed earlier, significantly limiting the pace and scope of global AI governance. This fragmentation creates compliance complexity, but it may also provide an opportunity for countries like Singapore to shape regional standards and export governance soft power.

I believe that Southeast Asian countries can draw inspiration from Singapore's Model AI Governance Framework. There could be an "ASEAN Consensus on AI Governance", where nations align with the general direction of the framework while customising their own AI training and share insights on best practices. This approach would prevent regulatory arbitrage while providing clear guidance to local businesses. This is not only a technology governance issue, but also a practical application of the "narrative reconstruction" emphasised by Mr Tsao.

Identifying Blind Spots: The Weight of Geopolitics and Energy Security

Through this forum and extended reflection, I have identified a potential gap in my curriculum's knowledge framework: the discussion of sustainable transitions (energy transitions in particular) against geopolitical and energy security dimensions.

Both Mr Wirjawan and Mr Menon alluded that in the pursuit of green development, energy must not be viewed merely as a commodity, rather, it should be viewed as a strategic resource. The high degree of concentration of global renewable energy supply chains (e.g., photovoltaic panels, batteries) has made them a new focus of geopolitical competition (Yergin, 2020). Geopolitical risks and national energy security requirements need to be included in the core considerations. This means that the PESTEL (Political, Economic, Social, Technological, Environmental and Legal) analytical framework in the curriculum should be infused with a higher degree of geopolitical sensitivity. This approach further lends understanding to why a country like Indonesia may not be able to completely abandon coal in the short term. Beyond an economic issue, it is also a political issue related to national energy autonomy and social stability.

Recommendations for Action and Application

Implications for Personal Career Development

Becoming a "T-shaped sustainable talent"

In addition to mastering the current course content, I aim to further develop AI sustainability literacy. I would like to understand the application of AI in sustainability scenarios at an infrastructure level and utilise these tools in the future to assess risks and opportunities within the governance framework.

Monitoring agentic AI and artificial general intelligence (AGI) trends

As AI increasingly performs tasks autonomously (e.g. supply chain optimisation, energy scheduling), having the relevant knowledge and ethical judgment will increase my effectiveness in using these tools. This will allow me to produce the results of AI predictions or optimisations more efficiently, and integrate AI tools into my productivity ecosystem, ultimately forming a core competency for the future.

Recommendations for Southeast Asian Enterprises

Leverage AI to optimise carbon management and supply chains

Adopt proven AI models for carbon forecasting, resource utilisation minimisation and supply chain transparency.

Proactively engage in AI governance practices

Refer to existing frameworks in Singapore and tailor them to your organisation to ensure that the models introduced are effective while preparing in advance for the global transition. Larger companies can set up internal AI ethics committees and conduct third-party testing to enhance credibility and social acceptance. This can also enhance product competitiveness and provide talking points for marketing.

Policy Development Considerations

Develop a "Smart Policy Portfolio"

Improve policy design through mitigation and adaptation strategies, together with AI-driven policy simulation tools. This creates opportunities for sustainable development where economic conditions allow.

Introduce a "Green Bank" or alternative investor mechanisms tailored to national circumstances

The government can guide investor interest towards sustainable development projects by addressing their concerns and putting in place tailored mechanisms.

Advance an "ASEAN AI Governance Collaboration Platform"

Building on the Singapore framework, promote regional cooperation on data standards, model testing, and content traceability to prevent regulatory fragmentation. This approach enhances the region's collective competitiveness.

Conclusion

In conclusion, the IMPACT WEEK forum allowed me to apply my course concepts to the complex realities of Asia. The emphasis on systems thinking, collaborative leadership, the urgency of recapitalisation, and the uniqueness of the Asian pathway resonated deeply with the course content and was complementary in many valuable ways. This has not only deepened my multi-dimensional understanding of sustainability but also led to a systemic knowledge framework that connects finance, governance, energy and society. I realise that sustainable development is not a one-dimensional technical issue, but a complex systemic challenge that encompasses multiple dimensions, including economic, social, environmental, governance, technological and geopolitical. Going forward, I will need to analyse these issues more comprehensively. My commitment is to be a sustainability leader who can rebuild after crises and design within constraints.

References

Circle Economy. (2024). *The circularity gap report 2024.* https://reports.circularity-gap.world/cgr-global-2024-37b5f198/CGR+Global+2024+-+Report.pdf

Dastin, J., & Soni, A. (2023, November 22). Sam Altman to return as OpenAI CEO after his tumultuous ouster. *Reuters.* https://www.reuters.com/technology/sam-altman-return-openai-ceo-2023-11-22/

Döbbeling–Hildebrandt, N., Miersch, K., Khanna, T. M., Bachelet, M., Bruns, S. B., Callaghan, M., Edenhofer, O., Flachsland, C., Forster, P. M., Kalkuhl, M., Koch, N., Lamb, W. F., Ohlendorf, N., Steckel, J. C., & Minx, J. C. (2024). Systematic review and meta-analysis of ex-post evaluations on the effectiveness of carbon pricing. *Nature Communications*, *15*, 4147. https://www.nature.com/articles/s41467-024-48512-w

Hawken, P. (2021). *Regeneration: Ending the climate crisis in one generation.* Penguin Books.

He, X., Wu, M., & Zhang, X. (2024, January 10). *Comparison and combination of carbon pricing policies and non-carbon pricing policies.* Macro and Green Finance Lab. https://mgflab.nsd.pku.edu.cn/qyzz/798178022f6d4f1e83e8d52f9fe0665c.htm

Infocomm Media Development Authority. (2024, January 16). *Singapore proposes framework to foster trusted Generative AI development* [Press release]. https://www.imda.gov.sg/resources/press-releases-factsheets-and-speeches/press-releases/2024/public-consult-model-ai-governance-framework-genai

Khanal, S., Zhang, H., & Taeihagh, A. (2024). Building an AI ecosystem in a small nation: Lessons from Singapore's journey to the forefront of *AI. Humanities and Social Science Communications, 11*, 866. https://doi.org/10.1057/s41599-024-03289-7

Loh, L. (2025). *Multi-stakeholder pyramid model* [Image]. In *The governance dimension of sustainability* [PowerPoint slides] (Slide 25).

Loh, L. (2025). *New thinking in sustainability: Interaction* [Image]. In *Lecture 1* [PowerPoint slides].

Loh, L. (2025). *Seven challenges of sustainability strategy* [PowerPoint slides].

Loh, L. (2025). *Structured framework for corporate governance: 1H-3W* [Image]. In *The governance dimension of sustainability* [PowerPoint slides] (Slide 22).

Loh, L. (2025). *3R approach to sustainable literacy* [PowerPoint slides].

Metz, C. (2025, May 4). OpenAI backtracks on plans to drop nonprofit control. *The New York Times.* https://www.nytimes.com/2025/05/05/technology/openai-nonprofit.html

Monetary Authority of Singapore. (2020). *Veritas document 1: FEAT fairness principles assessment methodology.* https://www.mas.gov.sg/-/media/mas/news/media-releases/2021/veritas-document-1feat-fairness-principles-assessment-methodology.pdf

Monetary Authority of Singapore. (2022). *Green finance action plan.* https://www.mas.gov.sg/-/media/MAS-Media-Library/development/sustainable-finance/without-retail-ESG-funds-GFAP-Infographic_June-2022.pdf?la=en&hash=B49713D36266B8D8EF3CA8EEBD0FEFFD9ACBDAA0

Tallarita, R. (2023, December 5). AI is testing the limits of corporate governance. *Harvard Business Review.* https://hbr.org/2023/12/ai-is-testing-the-limits-of-corporate-governance

World Bank. (2025). *State and trends of carbon pricing dashboard.* https://carbonpricingdashboard.worldbank.org/

Yergin, D. (2020). *The new map: Energy, climate, and the clash of nations.* Justin Miller Award Recipients and Books. https://scholarship.law.duke.edu/justin_miller_awards_books/131/

IMPACT WEEK: The Greater Bay Area, SHEIN and Disclosures

CAI Wenxu

The panel session "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact".

The Greater Bay Area (GBA) has emerged as one of China's key economic hubs in recent years. As the region's economy continues to grow and more enterprises are established, trends towards institutional innovation, business transformation and East-West integration have become increasingly pronounced (IMPACT WEEK, 2025). This session primarily discussed the region's technological capabilities overspill, how enterprises in mainland China leverage Hong Kong's advantages to gain greater international recognition, and the trend

---

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

of enterprises advancing sustainable practices. This report will focus on how businesses within GBA are progressively implementing sustainability strategies. By integrating relevant events and companies discussed at the conference with my personal experiences, additional research and concepts covered in class, I will explain my understanding and reflections on corporate sustainability.

Distinguished guests attending this conference.

Case Study of SHEIN

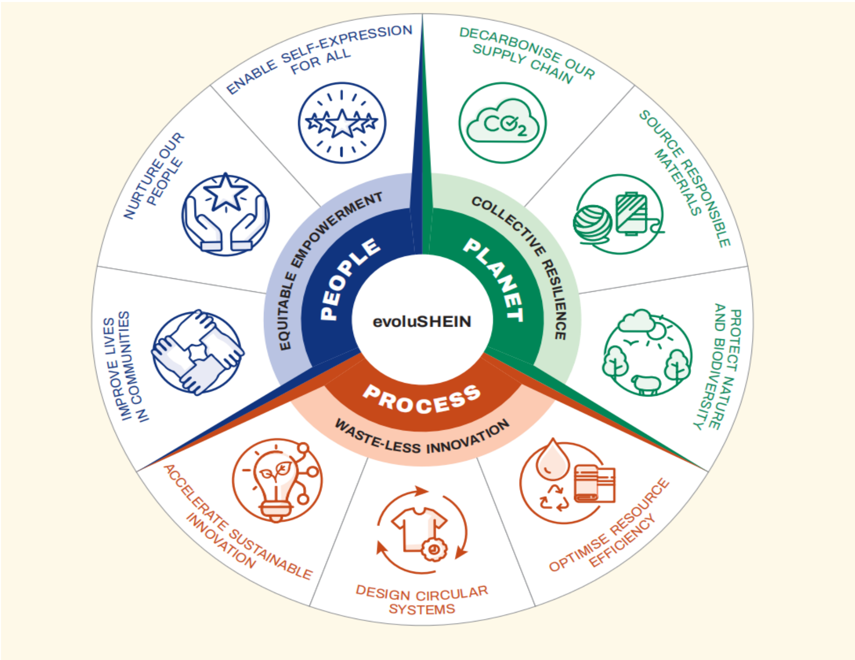
What impressed me most was that a guest speaker at the conference mentioned SHEIN's growing emphasis on sustainability in recent years. SHEIN is a company offering a wide range of products and services, primarily focused on fast fashion and accessories (Ria, 2023). In 2023, SHEIN's profits exceeded US$2 billion, surpassing Swedish fashion group H&M and United Kingdom retailers Primark and Next (Thomas et al., 2024). This brought to mind the persistent skepticism and numerous controversies SHEIN has faced since its establishment.

First, SHEIN's low-cost products may cause resource wastage. Some consumers in Western countries accuse SHEIN of exporting vast quantities of cheap fast-fashion apparel and accessories to markets like the United States and the UK, where these products can be easily discarded, leading to significant waste (The Wall Street Journal, 2023). Additionally, there were controversies surrounding SHEIN's labour welfare and labour rights practices.

During my undergraduate studies, one of my classmates, who is British, stated during a seminar that she would never purchase SHEIN products because the company used child labour in its Chinese factories, severely violating the rights of minors. Additionally, there were media reports of excessive overtime, low wages and poor working conditions for SHEIN's employees (The Wall Street Journal, 2023). This series of negative coverage has damaged SHEIN's international image, prompting the company to take steps.

SHEIN's Sustainability Strategy

To overturn the negative perceptions, SHEIN developed a roadmap "evoluSHEIN" which guides its environmental and social impact initiatives (SHEIN, 2024). This includes three directions: Equitable Empowerment that focuses on social responsibility towards employees, suppliers, and communities; Collective Resilience that works on decarbonisation, responsible sourcing and biodiversity protection; and Process, which aims to develop waste-less innovation (SHEIN, 2024).



SHEIN's sustainable strategy (evoluSHEIN)

Source: SHEIN, 2024

Emissions targets

SHEIN plans to achieve net-zero emissions by 2050 and has established phased emission reduction targets, according to the Science Based Targets initiative (SBTi) (2025). The core objective of SBTi is to assess and validate corporate climate goals, verifying the decarbonisation targets of global corporations, financial institutions and small and medium-sized enterprises (Science Based Targets Initiative, 2025). The 2025 updates to the SBTi are driving companies to set more ambitious science-based targets through rigorous standards and verification protocols (Sustainability Academy, 2025). However, it needs to be noted that net-zero emissions targets need to be accompanied by clear implementation pathways, interim milestones, and transparent oversight mechanisms.

Employee rights

In safeguarding employee rights, SHEIN requires all suppliers to sign and adhere to its Supplier Code of Conduct. This code aligns with the standards of the International Labour Organization (ILO) and the Universal Declaration of Human Rights, explicitly prohibiting child labour and forced labour (SHEIN, 2024). It means that sustainability is not only about the environment, but also about social sustainability. How a company conducts its business will affect employees, customers and local communities (United Nations Global Compact, n.d.).

Implementing actions for sustainable social development helps retain and attract business partners while boosting internal morale and employee engagement (UN Global Compact, 2024). They also enhance productivity, strengthen risk management, and foster positive relationships between businesses and communities (UN Global Compact, 2024).

During the conference, most guest speakers focused on the overseas expansion of GBA enterprises and did not delve deep into social sustainability. However, for companies with global ambitions seeking true sustainability, social factors cannot be ignored. In recent years, employees in many Chinese enterprises are subject to long working hours and frequent overtime, with some companies even dismissing employees without compensation or not paying insurance contributions for their staff. To promote sustainable social development, this should be an area for future improvement.

Recycling

Furthermore, to address recycling-related challenges, SHEIN has partnered with Donghua University to conduct research on polyester fibre recycling technologies (SHEIN, 2024). It will also collaborate with selected manufacturers to scale up the production of recycled polyester fibres. As outlined in its 2024 Sustainability and Social Impact Report, SHEIN has achieved structural progress in its transition from fast fashion to sustainable fashion through initiatives such as the evoluSHEIN sustainability road map, strengthening supply chain governance, advancing carbon reduction targets, and driving circular innovation.

I have observed that in recent years, an increasing number of Chinese enterprises have begun researching or seeking more environmentally friendly materials or manufacturing processes. This represents a crucial step towards achieving sustainable development. I believe that in the future, enterprises can continue to make efforts in this area. Through technological improvements and resource recycling, they can further reduce environmental burdens, thereby achieving a higher level of green transformation while pursuing economic growth.

Disclosures

In recent years, an increasing number of companies have begun disclosing and publishing their internal sustainability governance and strategies. I believe we should not only reflect on what companies have done, but also on why they have made a shift. These disclosures may stem from both internal drivers and external pressures. Professor Lawrence Loh of the National University of Singapore (NUS) also stated that the pressure comes from multiple sources, including regulators, investors and customers; and that this pressure on businesses regarding sustainability issues is only expected to intensify (Tang, 2024). By June 2024, 2,124 Chinese enterprises had published their 2023 sustainability reports, marking a 21.03% increase from the previous year (Principles for Responsible Investment, 2024). It shows that businesses, markets and governments are placing greater emphasis on the disclosure of sustainability-related information.

The focus of sustainable development lies not only in the information companies disclose, but also in whether their actions are genuinely effective. SHEIN's sustainability report has obtained independent limited assurance on selected sustainability information (SHEIN, 2024). It reflects that enterprises have begun using third-party resources to enhance the credibility and transparency of their reporting.

To strengthen the verification requirements for sustainability reporting, for example, the Corporate Sustainability Reporting Directive (CSRD) issued by the European Union explicitly requires EU member states to utilise independent assurance service providers for the assurance of sustainability reports. I find that Europe is moving swiftly and taking a leading role in this area.

Following years of rapid economic growth, China has increasingly emphasised corporate sustainability in recent years, with many enterprises voluntarily beginning to focus on this issue. China has been rapidly advancing its policy and institutional framework for sustainable development reporting (ESG disclosure) in recent years. In 2024, the Ministry of Finance solicited public feedback on unified standards for corporate sustainability disclosure, aiming to establish a national unified standard by 2030 (Xinhua, 2024). Considering the current stage of development and information disclosure capabilities of Chinese enterprises, the implementation of basic standards will adopt a tailored approach rather than immediately imposing mandatory uniform requirements (Xinhua, 2024). The government plans to extend the publication of corporate sustainability reports from listed companies to non-listed companies and gradually advance from voluntary disclosure to mandatory disclosure (Xinhua, 2024). This demonstrates that China is gradually advancing ESG disclosure and has a relatively long-term plan.

Should disclosures be mandatory?

From the varying requirements and attitudes towards corporate sustainability reporting across different countries, we can consider whether sustainability reporting should be mandatory or voluntary. Mandatory disclosure ensures uniformity and comparability of information, reduces selective disclosure and greenwashing by companies, and enhances overall market transparency. The EU's CSRD and the Singapore Exchange's requirement for listed companies to disclose climate-related information are examples of regulation. However, mandatory reporting may also carry the risk of formalism, leading companies to focus solely on presenting actions on paper while neglecting genuine sustainable practices. In contrast, voluntary reporting or "comply or explain" mechanisms offer greater flexibility, allowing companies to determine the scope of disclosure based on their industry characteristics and resource capabilities.

From a comprehensive perspective, a hybrid model combining voluntary and mandatory disclosure is currently more reasonable: mandatory disclosure can be implemented for large, listed companies to ensure information quality and market comparability; while small and medium-sized enterprises can retain voluntary disclosure options, supported by policy guidance and capacity building. This approach promotes overall market transparency while avoiding excessive regulation that could stifle corporate initiative, therefore ensuring the long-term effectiveness of sustainable reporting systems. On one hand, advancing sustainability cannot rely solely on corporate resources and voluntary compliance. On the other hand, it cannot depend entirely on government mandates and requirements.

I believe this hybrid model is particularly well-suited to China's national conditions. As China undergoes rapid development, businesses and all sectors of society are gradually recognising the importance of ESG principles and beginning to experiment with information disclosure. However, given the complexity of the business environment and significant industry variations, considerable disparities persist in sustainability awareness and implementation capabilities among enterprises of different sectors and sizes. In this background, adopting a hybrid model during the initial phase may serve as a more pragmatic and effective transitional approach. This approach encourages forward-thinking enterprises to proactively disclose information while providing appropriate flexibility for those still in their early stages.

Currently, many countries allow companies to independently determine the scope of their ESG information disclosure. In the absence of fixed or mandatory disclosure standards, I question whether companies might selectively disclose information that conceals the full picture of their environmental footprint. Through searching for information, I discovered that several international organisations have been working in recent years to establish unified sustainability disclosure standards, such as the International Sustainability Standards Board (ISSB). They aim to provide investor-oriented, highly comparable disclosure baseline standards that align with financial reporting for global enterprises, and many countries are exploring the incorporation of these standards into their national disclosure frameworks (Lloyd, 2023). The adoption of more unified or standardised assessment criteria enhances the comparability and transparency of sustainability performance across different enterprises, thereby facilitating objective evaluations of corporate governance standards on a global scale. I think China can introduce a more unified ESG framework for company disclosures in the future.

Greenwashing and Green Highlighting

Furthermore, in advancing corporate sustainability and information transparency, stakeholders should remain vigilant against the emergence of "greenwashing". This concept refers to the strategy where companies profit by addressing environmental issues through symbolic eco-friendly publicity rather than substantive action (Walker & Wan, 2012). When a company's "green rhetoric" diverges significantly from its actual actions, consumers, investors, and employees will lose trust, leading to reputational and financial losses.

Chinese enterprises in the GBA continue to prioritise profit generation and market expansion. While some companies have begun acknowledging the importance of sustainability and disclose related information in their reports, these actors tend to be large, listed companies. They exhibit a tendency to focus more on narrative descriptions than on quantifiable data. Moreover, we still have a long way to go in encouraging small and medium-sized enterprises and micro-enterprises to take relevant actions.

What impressed me was that Walker & Wan (2012) proposed a novel concept called “green highlighting” which refers to companies combining symbolic actions (such as publishing ESG reports and signing sustainability declarations) with substantive actions to better implement sustainability initiatives. This dual-track strategy not only enhances external credibility but also improves internal sustainable development performance. I believe it is also one of the right directions for enterprises to better advance sustainable governance in the future.

Conclusion

In this report, I primarily use SHEIN (one of the representative enterprises in the GBA) as a case study. What I want to convey is that enterprises in the GBA are progressively implementing sustainable development strategies to expand their international influence, while actively referencing international sustainability standards to enhance their sustainability management systems. Although some developed countries have relatively more advanced concepts and practices in sustainable development, China is continuously advancing its sustainable process and improving relevant policy and institutional frameworks.

A group photo of the panellists at the end of the session.

In the past, many companies focused primarily on efficiency and profitability, paying less attention to the long-term impacts of sustainable development. However, an increasing number of businesses are now recognising the importance of environmental and social responsibility and exploring more sustainable business models. While these efforts are still evolving, I can feel that companies are moving towards a more responsible and sustainable direction. As the demand for meaningful progress in sustainable development continues to grow, companies must navigate these complexities with a clear sense of direction and purpose to ensure their initiatives deliver significant, lasting change (Loh et al., 2024). This conference has been highly rewarding for me, and I have gained a deeper understanding of the sustainable development of enterprises in China's GBA.

References

IMPACT WEEK. (2025). *Greater Bay, greater purpose: Integrating China's business ecosystem with global impact.* https://impactweek.com/programmes/%e6%b9%be%e5%8c%ba%e9%9b%84%e5%bf%83%ef%bc%8c%e5%85%a8%e7%90%83%e4%bd%bf%e5%91%bd%ef%bc%9a%e4%b8%ad%e5%9b%bd%e5%95%86%e4%b8%9a%e7%94%9f%e6%80%81%e4%b8%8e%e4%b8%96%e7%95%8c%e5%bd%b1%e5%93%8d%e5%8a%9b/

Lloyd, S. (2023, August 29). New global sustainability report requirements are out. Here's what companies need to know. *World Economic Forum.* https://www.weforum.org/stories/2023/08/issb-global-sustainability-reporting-requirements-explainer/

Loh, L., Huang, M., & Soon, S. (2024, September 30). *How to demonstrate excellence in the pursuit of sustainability impact*. NUS Business School. https://bizbeat.nus.edu.sg/thought-leadership/article/how-to-demonstrate-excellence-in-the-pursuit-of-sustainability-impact/

Principles For Responsible Investment. (2024, August 13). *Chinese companies accelerate disclosure: Insights from PRI signatories.* https://public.unpri.org/pri-blog/chinese-companies-accelerate-esg-disclosure-insights-from-pri-signatories/12637.article

Ria, A. (2023, November 6). *A brief history of SHEIN.* https://futurestartup.com/2023/11/06/a-brief-history-of-SHEIN/

Science Based Targets initiative. (2025). *Target dashboard.* https://sciencebasedtargets.org/target-dashboard

SHEIN. (2024). *2024 Sustainability and social impact report.* https://www.SHEINgroup.com/wp-content/uploads/2025/06/SHEIN-2024-Sustainability-and-Social-Impact-Report-Final-14-June.pdf

Sustainability Academy. (2025, April 7). *Top 8 ESG regulations and frameworks in 2025.* https://sustainability-academy.org/top-8-esg-regulations-and-frameworks/

Tang, S. K. (2024, July 23). CNA Explains: More companies are putting out sustainability reports – why, and how to read them? *CNA.* https://www.channelnewsasia.com/business/sustainability-reports-acronyms-cna-explains-4490596

The Wall Street Journal. (2023, November 30). *How Shein Built a $66B Fast-Fashion Empire | WSJ The Economics Of* [Video]. YouTube. https://www.youtube.com/watch?v=gWotBPtsulo

Thomas, D., Jones, L., & Hooker, L. (2024, June 8). *The rise and rise of a fashion giant Shein*. https://www.bbc.com/news/articles/cp991n2v0m2o

Walker, K., & Wan, F. (2012). The harm of symbolic actions and green-washing: Corporate actions and communications on environmental performance and their financial implications. *Journal of Business Ethics*, *109*(2), 227–242. https://doi.org/10.1007/s10551-011-1122-4

United Nations Global Compact. (n.d.). *Social sustainability.* https://unglobalcompact.org/what-is-gc/our-work/social

Xinhua. (2024, May 28). *China charts path to unified sustainability disclosure by 2030*. https://english.www.gov.cn/news/202405/28/content_WS6655152bc6d0868f4e8e78b8.html

Implementing Transformations

SHI Jiali

I chose two apparently dissimilar sessions: the first one was the panel discussion "Unlocking the Silver Economy: Asian Families Leading the Way" (on ageing, care and autonomy). The second was "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact". This dealt with how family offices integrate various types of capital to catalyse impact in the Greater Bay Area (GBA) and in Southeast Asia. These topics relate to a recurrent concern I have when studying sustainability strategies: how do we effectuate noble visions into systemic transformations in daily life? More specifically, the first session made me reconsider ageing—not a downer leading to decline, but a design opportunity based on normalcy and autonomy. The other session made evident how we fund long-term community solutions when market mechanisms fail. This paper is a reflection on the topics discussed on the site, an analysis of the gaps in existing approaches, and suggestions for remediation.

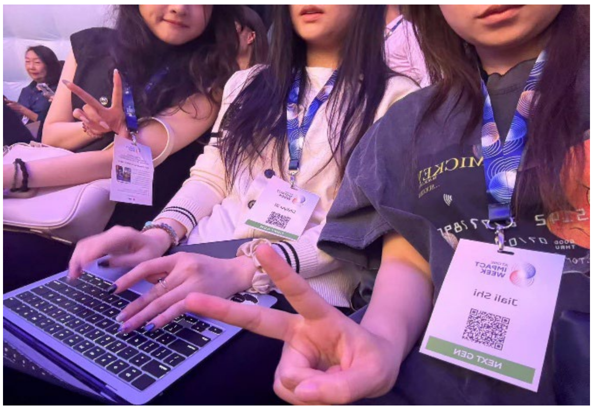
Reframing Longevity: From Old Age to Normal, Longer Life

The first step in reframing the longevity debate is to reframe "old age" from the frill it is now to mean "longevity". Many of the speakers at the conference pointed out the folly of placing the 60-to-120-year group in the same "silver" category. Most of the elderly do not want specialised products, nurses, caregivers or nursing homes. They want to live in familiar places, keep their independence and make their own decisions.

This reminds me of a conversation I once had with my mother. I asked her about why she had not brought my grandmother out of her home to live with her, since my grandmother is now so old. Is it not terribly wearing on my grandmother to have to do her own cooking and look out for herself in her old apartment? My mother said that many elderly people resent being regarded as burdens or helpless. Hence, she urges my grandmother to live independently within her

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

abilities and even allows her to help out a little; that makes my grandmother feel valued and needed.



Snapshots at IMPACT WEEK.

Agency Span

In the same spirit, the discussion shifted from lifespan to healthspan, and then to "agency span"—the years in which a person can actually make their own decisions and carry them out (the World Health Organization's (2020) definition of "healthy ageing" is similar in its focus on functional ability and doing what one values). This orientation is compatible with the long-standing research on ageing at home or ageing in place: many people experience value through continuity with home and community rather than being "specially treated" (Wiles et al., 2012).

However, this view does not register in the calculation of traditional Return on Investment (ROI) because it occurs in daily life and not in hospital records. This is not just a challenge in selling eldercare, it is a challenge in counting what matters. If the goal is to increase people's agency span, we should not judge a programme only by medical numbers or short-term profit. We should also ask "How many extra minutes each day can someone do things on their own?" and "How many decisions still belong to them?" For example, a handrail, a talking pillbox, or a bench added near a bus stop may not change a lab result, but they can let someone cook, shop, or visit friends without asking for help, and that is the real value.

Existing Tools for Measuring Outcomes

Health economics already offers tools like ICECAP-O or ICECAP-A which measures the capability well-being of adults (Al-Janabi et al., 2011). In social care, the Adult Social Care Outcomes Toolkit (ASCOT) directly measures social-care-related quality of life, including control and everyday independence (Towers et al., 2015). Traditional ROI calculations tend to miss these outcomes and thus systematically undervalue the benefit of human agency. In short, count independence and choice, not only cures and cash. When we measure that, we design for it. And people actually stay well, at home, and in charge.

Mismatches in Segmentation and Value

Two mismatches explain today's gaps: segmentation mismatch and value mismatch. First, markets collapse diverse health states and life stages into one "senior" label—easy to create segmented channels, bad for real needs. "Ageing in place" studies repeatedly show willingness to pay is anchored in maintaining everyday continuity, not in separation from mainstream life (Wiles et al., 2012).

Second, public and commercial investments still chase visible "life-extension" outputs while underweighting the years of living well; yet biomedical literature is clear that longer life does not automatically mean longer healthspan (Hansen & Kennedy, 2016). To realign capital with real utility, I propose shifting project Key Performance Indicators (KPIs) towards capability and control (trackable via ICECAP or ASCOT at the project level) and operational metrics towards a Face-Time Ratio (share of staff time spent in direct, human interaction). On the valuation side, introduce a Capability-Adjusted Net Present Value (CANPV) that discounts the shadow price of capability gains into the cash flow. This reduces the over-supply of "label-driven senior products" and finally writes those "quiet utilities" into the agenda.

From Proximity to Belonging: Financing Anti-Loneliness in 15-Minute Longevity Districts

The panellists stressed that the fastest way to shrink loneliness is not a new app but a familiar day: put elderly-friendly housing back in the city core so ordinary errands and chance "hellos" happen without a long ride. It seems evident that this "longevity district" will envision clinics, parks, markets and schools close by, so senior citizens can reach them quickly on foot. The idea of a 15-minute city, applicable for post-pandemic cities (Moreno et al, 2021), will suit those who prefer to age in place in their own homes and neighbourhoods.

Design for Everyday Life

The panellists also advocated design for the life that people really live. This aligns with the health evidence: stronger social bonds are associated with lower mortality likelihood (Holt-Lunstad et al, 2015). Proximity is merely hardware. Intergenerational meetings, such as learning workshops, community dinners or choir nights, could build the human connection.

Patient Capital

As loneliness doesn't show up as a billable service, markets move slowly. That is why philanthropic first-loss and patient family capital should fund small, street-level pilots first: prove what works, publish the data, and then let government purchasing and private operators scale it. One practical device is a Companion Credit: trained helpers and volunteers log verified minutes of social visits; an independent checker validates them; then a pooled fund buys the credits in the early years so programmes can run.

As evidence builds, the insurers or the municipalities can begin to purchase those credits as a result. To keep the whole business fair and inclusive, however, ensure three points: Carry out audits of those services without prior notice so that box-ticking will be discouraged; let residents vote which services to subsidise, for a democratic decision; and reserve positions or cap the price so that the lower-income elderly are not forced out of the services. In more general terms, do not try to design for the exceptional day, try to assess the victories of the general day, and finance the companionship as a product, not an afterthought.

Talent, Education and Capital in the Greater Bay Area

An urgent refrain of IMPACT WEEK was the simple message: The Greater Bay Area (GBA) will unfurl its next S-curve only if three pipes flow together—talent, education and capital. They have to be disciplined by sustainability rather than buzzwords. This framework fits with the overarching blueprint for the region's development.

The panel session "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact".

Set Clear Roles

Panellists in this session summarised the execution risks through three tensions. First, the division of labour versus closed-loop delivery: be explicit about who finances, who builds, and who operates, and tie it together with shared data and templates. Second, short-term cost versus long-term pricing power: accept near-term frictions in exchange for a future voice in capital and commodity pricing. Third, local livelihoods versus regional coordination: use cross-boundary transport, tax and talent policies to shrink commute radii so ordinary households can feel the upside. Thus, if we lock those balances in the Qianhai–Nansha–Hetao corridor, Hong Kong regulates and prices while the nine cities scale and learn; the "mesh" becomes investable because roles are clear, frictions are priced, and benefits are visible where people live.

Talent Mobility

All that collapses without the right people, and "education" cannot only mean classrooms. The fastest fix is applied through cross-border apprenticeships that braid sustainability, data and engineering into real projects. Universities are already retooling for this—the Hong Kong University of Science and Technology (Guangzhou) was purpose-built as a cross-disciplinary, GBA-facing campus in Nansha; regulators are also seeding talent via sustainable finance internships, and talent visas make cross-boundary placements easier.

From the IMPACT WEEK discussions, a simple design emerges. Place semester-long apprenticeships in Qianhai (services and compliance), Nansha (university–industry pilots), and Hetao (research-to-trial). Fund student stipends through issuers preparing green bonds, and award course credit to the students only after independent checks. The internship/talent visa channels can also track how students develop. So, talent mobility only becomes execution capacity when credits, stipends and hiring are tied to verified project hours.

Conclusion: Why These Threads Matter for Sustainability

Both panel sessions point to sustainability not as a side label but as the discipline that makes choices legible and durable. On ageing, the sustainability lens shifts the measurement unit from beds and gadgets to human capability and control—social capital, not just steel and silicon. That matters because climate and populations interact: neighbourhood-scale services cut travel demand (mitigation), while age-friendly streets, benches, crossings and mixed uses reduce vulnerability to heat, floods and shocks (adaptation). Yet these co-benefits only survive if procurement pays for outcomes—minutes of restored autonomy, safe access to clinics and markets etc—rather than inputs that vendors can oversupply. In other words, sustainability translates "living well, longer" into purchase contracts and audits, so everyday resilience is financeable.

For capital, sustainability is the incentive design that prices time properly. A combination of approaches could allocate risk to the party best able to hold it, and link payouts to audited social and environmental results. That internalises externalities we otherwise ignore (e.g., loneliness costs, avoided hospital days), and it deters green- and "grey-washing" by making misreporting expensive. Common taxonomies, data and systems interoperability, spot checks and resident voting for choice of subsidies could help. The same hygiene that makes climate disclosures useful to capital now makes companionship and community health investable.

References

Al-Janabi, H., N Flynn, T., & Coast, J. (2011). Development of a self-report measure of capability wellbeing for adults: the ICECAP-A. *Quality of Life Research*, *21*(1), 167–176. https://doi.org/10.1007/s11136-011-9927-2

Hansen, M., & Kennedy, B. K. (2016). Does longer lifespan mean longer healthspan? *Trends in Cell Biology*, *26*(8), 565–568. https://doi.org/10.1016/j.tcb.2016.05.002

Holt-Lunstad, J., Smith, T., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analytic review. *Perspectives on Psychological Science*, *10*(2), 227-237. https://doi.org/10.1177/1745691614568352

Moreno, C., Allam, Z., Chabaud, D., Gall, C., & Pratlong, F. (2021). Introducing the "15-minute city": Sustainability, resilience and place identity in future post-pandemic cities. *Smart Cities*, *4*(1), 93–111. https://doi.org/10.3390/smartcities4010006

Towers, A.-M., Holder, J., Smith, N., Crowther, T., Netten, A., Welch, E., & Collins, G. (2015). Adapting the adult social care outcomes toolkit (ASCOT) for use in care home quality monitoring: Conceptual development and testing. *BMC Health Services Research*, *15*, 304. https://doi.org/10.1186/s12913-015-0942-9

Wiles, J. L., Leibing, A., Guberman, N., Reeve, J., & Allen, R. E. (2012). The meaning of "aging in place" to older people. *The Gerontologist, 52*(3), 357–366. https://doi.org/10.1093/geront/gnr098

World Health Organization. (2020, October 26). *Healthy ageing and functional ability.* https://www.who.int/news-room/questions-and-answers/item/healthy-ageing-and-functional-ability#:~:text=WHO%20defines%20healthy%20ageing%20as%20%E2%80%9Cthe%20process,value.%20This%20includes%20a%20person's%20ability%20to

Personal Reflection: Family Business Succession and China's Green Transformation

QI Xuanlin

Introduction

IMPACT WEEK 2025 was an inspiring and intellectually stimulating experience. This report aims to record my learning journey during IMPACT WEEK. Through a week of lectures, case studies and discussions, my understanding of sustainability expanded from a purely environmental focus to include social and economic dimensions. I gradually realised that sustainability is not only about protecting the environment, but also about how individuals, families and societies maintain their core values and pursue long-term growth in times of change.

IMPACT WEEK was an inspiring experience.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

Among all the sessions, two left the deepest impression on me: the sustainable succession of family wealth and China's large-scale green economic transformation. The former explored how family enterprises achieve intergenerational continuity through innovation, responsibility and shared values, while the latter examines how China promotes its green transition and global influence through new energy development and rural revitalisation.

In the following sections, I will analyse these two themes from the sustainability approach and related strategies and challenges.

Sustainable Development of Family Wealth

The panel session "Reimagining China's Future Through Next-Gen Innovation".

During the session on family business succession, I was deeply inspired by the discussions. One of the speakers emphasised that the continuity of a family enterprise is not about inheritance, but about reinvention. Every succession represents a new round of entrepreneurship. This statement made me reflect: what is the true essence of family succession? Is it merely the transfer of wealth and power, or is it the continuation of a mission, a sense of responsibility and shared values?

At the same time, the session also revealed a view that nearly 90% of second-generation heirs today are unwilling to take over their family businesses. It made me wonder: why has the younger generation's enthusiasm for family enterprises declined? Is it due to generational value conflicts or a diminishing sense of responsibility?

Finally, the session concluded with a thought-provoking question: in the pursuit of innovation and growth, should family enterprises also learn to “slow down”? Scholars have highlighted that many century-old Japanese family firms have achieved longevity by deliberately controlling their pace of expansion and adhering to their core values. This philosophy of steady progress with stability may be the very wisdom that many Chinese family businesses have yet to master.

In the following sections, I will discuss each of these questions in detail, combining insights from the conference with my own reflections. These questions are not only about the survival of enterprises, but also about whether family spirit can truly achieve sustainable inheritance.

The Succession of Every Family Enterprise Essentially Represents a Second Round of Entrepreneurship

In a family business, succession does not mean keeping everything the same. Truly sustainable family enterprises are those that keep improving themselves and stay ahead of change. In this sense, the long-term vitality of a family business depends on its ability to adapt to market changes, transform itself, and redefine its identity.

One panellist, Ms Yiwen Hao, Executive Director, Landun Xumei Foods, is a second-generation leader whose family business’s operations include making potato chips. She said that what once made fast food brands like McDonald’s successful, such as high-calorie and convenient foods, no longer fits people’s lifestyle today. As people become more health-conscious, McDonald’s has started offering healthier meals. Seeing this trend, she led her company through a major transformation by investing in low-fat potato chips, as well as exploring new uses for potatoes, such as using them to make facial masks. Through this product diversification, she transformed a traditional snack producer into a sustainable lifestyle brand.

Her story made me realise that the essence of family succession is not about preservation but about foresight. The mission of the next generation is to lead change before change leads them. Her actions perfectly represent the spirit of second-generation entrepreneurship, where innovation and tradition coexist in harmony.

The Challenge of Succession: Why Many Heirs Are Reluctant to Take Over

The panel discussion also raised a thought-provoking question: today, most of the second generation are unwilling to take over their family businesses. This is not an isolated phenomenon. The panellists pointed out that this reluctance comes from several reasons. The first generation often experienced scarcity, built their companies from nothing, and viewed success as a matter of survival. In contrast, the second generation grew up in a more comfortable environment, valuing individuality, self-expression and work-life balance. This gap in values makes many heirs see succession as a burden rather than an opportunity.

However, true sustainable inheritance requires a shift from being a family business to becoming an enterprising family. The new generation should inherit not only wealth but also the mission and spirit of the family. One example is Ms Yiwen Hao from Landun Xumei Foods. At first, she also hesitated about continuing the business. Her father, the founder, had told her, "If you ever feel too tired, don't force yourself to go on." For a moment, she really thought about giving up. But when she entered the factory and saw the anxious yet hopeful faces of employees who had worked there for decades, and when the board members expressed relief at her presence, she suddenly felt a strong sense of duty. At that moment, she realised that this was not only her father's business but also the livelihood and trust of hundreds of families.

Her story shows that the emotional core behind many smooth successions is responsibility. A sense of responsibility towards employees, the family legacy and society often turns a hesitant heir into a visionary leader. In fact, families that cultivate a sense of mission from childhood tend to have smoother transitions and stronger stewardship values. This explains why successors in Japanese companies often begin by joining the business activities at a young age, learning the family philosophy long before taking formal control.

Therefore, genuine sustainability in family succession is not about passive continuation but about renewal driven by responsibility. Only when younger generations grow up with a clear sense of mission and identity will succession become a voluntary act rather than an obligation.

The Tempo of Growth: Should Family Firms Control Their Speed?

Another important reflection raised in the session was whether family businesses should control their pace of growth in order to achieve long-term succession. Associate Professor Winnie Qian Peng, Director, Roger King Center for Asian Family Business and Family Office, Hong Kong University of Science and Technology (HKUST), pointed out that Japan has more than 33,000 companies that are over 100 years old, and one of their key characteristics is the deliberate control of expansion. These companies value stability over speed, focusing on sustainable profit, craftsmanship and social contribution. In other words, they ensure that growth never comes at the cost of their core values or family reputation.

In contrast, many Chinese enterprises tend to pursue aggressive expansion, quickly capturing market share and chasing short-term gains. This speed-driven model may bring temporary prosperity but often sacrifices corporate governance, innovation quality and internal cohesion. As seen in China's consumer and tech industries, many products achieve explosive success through marketing hype, only to decline rapidly once the novelty fades. Excessive growth is like walking on a tightrope; no one can guarantee every step is right. In the long run, uncontrolled expansion often leads to distorted capital flow or strategic misalignment, a phenomenon commonly described in China as "cutting the leeks", meaning exploiting consumers or investors for short-term profit.

Therefore, the essence of long-lived family enterprises lies in strategic restraint, which is knowing when to accelerate and when to pause. Japanese companies call this philosophy "Kaizen through stability", meaning improvement through steady and continuous progress. This controlled pace of growth gives businesses resilience and intergenerational continuity, ensuring that each generation inherits not chaos but clarity and order.

In the end, the sustainable succession of a family enterprise is not only about transferring material wealth. It involves three interconnected dimensions:

- Wealth Transmission (Tangible Capital): Financial assets and ownership.
- Influence Transmission (Social Capital): Reputation and social contribution.
- Values Transmission (Cultural Capital): Entrepreneurial spirit and altruistic mindset.

Through this lecture, I realised that altruism is the cornerstone of prosperity. The most successful family legacies are those that find balance between economic growth and moral purpose, integrating profit with contribution. When wealth is accompanied by social responsibility, when the next generation responds to change with innovation, and when a family shifts from "preserving a legacy" to "creating a legacy", that is when family succession becomes truly sustainable.

Scaled Green Transformation: China's Green Economy in Practice

The panel session "Greening at Scale: China's Green Economy in Action".

At the panel session "Greening at Scale: China's Green Economy in Action", I was deeply inspired by the discussions on how sustainability is reshaping industries and communities. One of the speakers mentioned that China's green development is no longer limited to the domestic level but is now expanding globally through new energy technologies.

This made me think: what does China's green transformation really mean for the world? At the same time, the session also explored how the green economy is transforming China's rural areas. It made me wonder: how can rural revitalisation and green transformation be achieved effectively? Finally, the discussion turned to the challenges behind the green transition. I realised that technological innovation and patient capital are both crucial, yet often difficult to sustain.

In the following sections, I will discuss three main topics in detail: China's green technology going global, the integration of rural revitalisation and the green economy, and the challenges of technology and patient investment.

Green Technology Going Global: A New Symbol of China's Green Economy

One impressive topic was China's green technology going global. New energy companies, such as Contemporary Amperex Technology Co., Limited (CATL), have become an important symbol of China's green economy. This is not only about exporting technology but also about showing China's role in the global green transformation. According to statistics, in 2024, CATL continued to be the world's largest battery supplier with a 37.9% market share, the only company with a market share above 30% (Kang, 2025). This shows that China has grown from being a "major producer of new energy" to becoming the core part of the global green supply chain.

CATL's international expansion, such as building plants in Germany and Hungary, reflects this trend. These projects follow a model of local production, green manufacturing and low-carbon supply chains. It is important to note that China's green technology expansion is not one-way exporting, but a process of two-way cooperation and shared growth. CATL works closely with local industries when building factories abroad.

- In Europe, it has long-term supply partnerships with BMW, Mercedes-Benz, and Stellantis (CATL, 2022).
- In Southeast Asia, it cooperates with Indonesia's state-owned enterprises PT Aneka Tambang Tbk (ANTAM) and Indonesia Battery Corporation (IBC) to build an integrated project for nickel mining, battery production, and recycling (CATL, 2025b).
- In the Middle East, it partnered with Masdar in the United Arab Emirates to develop solar and energy storage projects (CATL, 2025a).

These projects not only export China's green manufacturing capability but also help improve local energy structures and create jobs. For example, the Hungary plant is expected to create about 9,000 local jobs (Drebecen City, n.d.).

From the session, I learnt that China's green technology going global is not just about manufacturing moving overseas, but about a new kind of globalisation based on cooperation, innovation and responsibility. As one panellist said, "Going global is not about leaving, but about connecting. It is not about exporting, but about cocreating." This made me realise that the real value of the green economy is not in speed or scale, but in creating a future where technology, responsibility and sustainability grow together.

Rural Revitalisation and the Green Economy: From “Returning to the Countryside” to “Industrial Revival”

The panel also mentioned that the green economy is not only about cities. It is also about reshaping China’s rural areas. As Chinese President Xi Jinping said, “Lucid waters and lush mountains are invaluable assets.” This saying is not only an ecological slogan but also a development concept. Today, China’s policy of rural revitalisation no longer only means that young people return to farming or that the elderly return to retire. It now encourages more people to start businesses in the countryside, build local brands, and reconnect communities with the land.

In some regions, local governments and companies are working together to promote a model that combines eco-agriculture and rural tourism brands. This helps villagers earn income from the land and added brand value. China’s Ministry of Agriculture and Rural Affairs has been introducing examples of green agricultural development for several years, emphasising local solutions that combine ecology and economy. In 2025, the ministry introduced the third batch of cases in green agricultural development, including projects in Yanqing District, Beijing, that focused on “green agriculture and brand upgrading” (Ministry of Agriculture and Rural Affairs, 2025). These cases show that rural revitalisation and green transformation can develop together.

One successful example comes from Xiaotaiping Village in Mile City, Yunnan Province, which has a horticulture industry. The village has reached 80% green coverage and has combined eco-tourism, wooden house exhibition, and landscape design into an integrated green development model of ecology, industry and tourism (Yunnan Provincial Department of Agriculture and Rural Affairs, 2022). This model not only restores the environment but also increases the economic value of the countryside.

These examples support the idea shared in the panel session that a green countryside should not look the same everywhere. Each village should use its own local culture and resources to build unique industries, connect brands to the land, and make rural areas new centres of green economic growth. From these cases, I realised that the core of the green economy is not about slowing down, but about finding the right balance between nature and development. When the environment is respected and local culture is revived, rural communities can gain both new economic vitality and social energy.

Facing the Challenges: Technological Innovation and Patient Capital

Of course, the green transformation is not easy. As the panel pointed out, China still faces two main challenges in developing its green economy.

The first challenge is technological change. In the past, many rural construction projects depended on manual design and hand-drawn maps, which were slow and not very accurate. Now, with the help of 3D modelling, data analysis and digital planning, both design and construction have become faster and more precise. This technology-based improvement shows that “green” is not only about protecting the environment but also about modernising production methods. It is a new kind of efficiency that combines sustainability with innovation. This made me realise that technology and green development are closely connected, and technology is the foundation that makes green growth possible.

The second challenge, mentioned by the speaker Mr Ian Zhu, Founding Member, NIO Capital, is capital trust and long-term return. Green projects often take a long time and bring profits slowly, so investors sometimes lose patience. To solve this problem, China is now building clear roadmaps and step by step goals for sustainable projects. For example, in some ten-year development plans, annual key performance indicators (KPIs) and return goals are set to help investors follow the progress. When investors can see good results each year, they have more confidence to keep supporting the project.

Government support also plays an important role. Subsidies, tax benefits and policy guidance encourage both private and public investors to stay involved. The combination of long-term planning, transparent results, and system support helps make green investment more sustainable and stable.

From this session, I gained a deeper understanding of what a truly sustainable green economy means for China and the world. I realised that green development is not only about reducing pollution or improving efficiency, but about creating new connections between technology, people and nature. Through the examples of green technology going global, rural revitalisation, and the challenges of innovation and patient capital, I also learnt that sustainability needs both vision and action. It requires cooperation across borders, respect for local culture, and long-term thinking from both businesses and governments.

Conclusion: From Understanding to Action

This was my first time participating in a full week of lectures and activities centred around sustainability, and the experience deeply moved me. In the past, my understanding of sustainability mostly came from textbooks and policy documents. However, through this IMPACT WEEK, I truly felt how it has become a shared global mission that connects people from every background, culture, and discipline. During the week, I not only listened to insightful talks by scholars and industry leaders but also witnessed people from around the world come together, exchanging ideas and taking action for a common purpose.

Beyond the lectures, the exhibitions were equally inspiring. Many of them focused on green living, from recycled material design and sustainable food innovation to ecological art and creative climate solutions. Every exhibit reflected a genuine care for the planet's future. I was deeply touched by the passion of these creators and advocates. Their work is not about short-term success, but about contributing to the well-being of the next generation or, as one speaker beautifully said, "for the seventh generation after us". They reminded me that sustainability is ultimately about responsibility, empathy and legacy.

I have also come to realise that sustainability is not a problem to be "solved" within a few years. It is a long, ongoing journey that requires time, patience, collaboration and faith. IMPACT WEEK helped me see the multi-faceted nature of sustainability. It connects economic transformation, social equity, technological innovation and cultural responsibility. This experience not only expanded my knowledge but also prompted me to reflect on my own role: What can I do to make a difference?

In many ways, this week clarified my direction for the future. No matter where I work or what path I take, I hope to integrate the principles of sustainability into my everyday life and professional practice. I believe that real change does not begin with grand policies, but with individual awareness and consistent action. And perhaps, as this week has taught me, even a single step taken with conviction can help build a more sustainable world.

References

CATL. (2022, August 12). *CATL announces its second European battery plant in Hungary.* https://www.catl.com/en/news/983.html

CATL. (2025a, January 19). *CATL and Masdar establish partnership for world's largest BESS project.* https://www.catl.com/en/news/6365.html#:~:text=%E2%80%8BCATL%20and%20Masdar%20Establish%20Partnership%20for%20World's%20Largest%20BESS%20Project,-2025%2D01%2D19&text=On%20January%2017%2C%20CATL%20and,battery%20storage%20in%20Abu%20Dhabi.

CATL. (2025b, June 30). CATL and partners break ground on US$6 billion battery integration project in Indonesia. https://www.catl.com/en/news/6481.html

Drebecen City. (n.d.) *CATL creates 9,000 jobs in Debrecen.* https://www.debrecen.hu/en/local/news/catl-creates-9000-jobs-in-debrecen

Kang, L. (2025, February 11). *Global EV battery market share in 2024: CATL37.9%, BYD 17.2%.* CnEVPost. https://cnevpost.com/2025/02/11/global-ev-battery-market-share-2024

Ministry of Agriculture and Rural Affairs, China. (2025, July 17). *The Ministry of Agriculture and Rural Affairs recommends the third batch of 31 typical cases of green agricultural development.* https://www.gov.cn/lianbo/bumen/202507/content_7032509.htm

Yunnan Provincial Department of Agriculture and Rural Affairs. (2022, March 1). *Yunnan's only case! This example has become a model for national green agricultural development.* https://nync.yn.gov.cn/html/2022/yunnongkuanxun-new_0301/384000.html

Sustainability in Asia

Sharvi Kumar SAXENA

Executive Summary

Sustainability was introduced as a central theme in a course led by Professor Lawrence Loh at the National University of Singapore. In the opening session, he referenced the phrase “Drill, Baby, Drill”, commonly attributed to United States President Donald Trump, to prompt critical inquiry into future societal trajectories and collective preferences.

The discussion expanded beyond political and energy considerations, encouraging us to critically evaluate our own perspectives on sustainability. We moved past textbook definitions and industry terminology to address the practical, ethical and future-oriented dimensions of sustainable development. This approach raises a key question: How can theoretical knowledge be translated into concrete actions that drive substantive change within communities?

IMPACT WEEK reinforced this reflective process and provided an example of experiential learning beyond conventional classrooms. The event demonstrated how theoretical knowledge can be integrated with practical implementation, emphasising the importance of collective responsibility.

The author at IMPACT WEEK.

The inaugural IMPACT WEEK conference emphasised that

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

meaningful transformation begins with personal reflection rather than relying solely on external factors.

I explored the conference with fellow Master of Science in Strategic Analysis and Innovation (MSI) students, Amisha and Muskan, who also recognised that internal change is essential for broader transformation.

From left: Sharvi, Amisha and Muskan.

We concluded that substantive change is best achieved through collaboration. Beginning as a team proved effective, as collective action enhances impact and supports sustained progress.

From Crisis to Reconstruction: Capital, Leadership & the Asian Future

The post-war global order faces increasing challenges from climate shocks, widening inequality, and demographic shifts. The fireside chat "From Crisis to Reconstruction: Capital, Leadership & the Asian Future" sparked discussion on strategies to shape future developments.

Global governance and capital allocation structures are undergoing reassessment. In Asia, China's assertiveness, Singapore's leadership, and ASEAN's growing influence are establishing a new centre of influence. This shift represents both a regional transformation and a broader civilisational rebalancing. Key themes emerged from the discussion.

Firstly, the idea of "Capital in Service of Life". The conversation challenged the traditional view of capital as merely a tool for accumulation. It also introduced a regenerative perspective, emphasising that capital should support ecosystems, communities and long-term well-being.

Secondly, the idea of "Leadership Beyond Profit". The speakers advocated for leadership grounded in purpose, wisdom and interdependence. They emphasised the importance of reconstruction over incremental reform, highlighting the need to reconsider the fundamental goals of governance in a multipolar world.

Singapore's role as a bridge is also another key idea. Situated between East and West, Singapore was described as a strategic fulcrum where ideas, capital and

Speakers: Assistant Professor Brian Wong from University of Hong Kong; Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee); Mr Ravi Menon, Board Chairman, ImpactSG; and Mr Gita Wirjawan, Former Minister of Trade of Indonesia.

diplomacy are redefined. Singapore's stewardship model offers lessons in adaptive governance, financial resilience and civic trust.

Lastly, Asia's civilisational voice. Asia's rise is characterised not only by economic growth but also by increasing philosophical influence. The region's traditions of collective harmony, long-term planning and moral leadership provide alternatives to zero-sum approaches in geopolitics.

Advancing sustainability in Asia requires empirically grounded strategies for immediate progress and long-term transformation. Key components include targeted sustainable finance instruments, comprehensive impact assessments and adaptable policy frameworks. For example, green bonds have mobilised capital for renewable energy and sustainable urban infrastructure, aligning financial markets with sustainability goals. Technological advancements, such as digital platforms for resource optimisation and advanced agricultural technologies, enhance the efficiency and scalability of sustainability efforts.

Systemic Strain and Fragmentation

The primary crisis is characterised by systemic strain and fragmentation, as illustrated in the following diagram.

Climate Shocks

- US$675 billion annually due to productive losses, healthcare and infrastructure cost.

→ Devastation from more intense weather events e.g. cyclones.

Demographic Disruption

- It is expected that most of world's elderly population will reside in Asia.

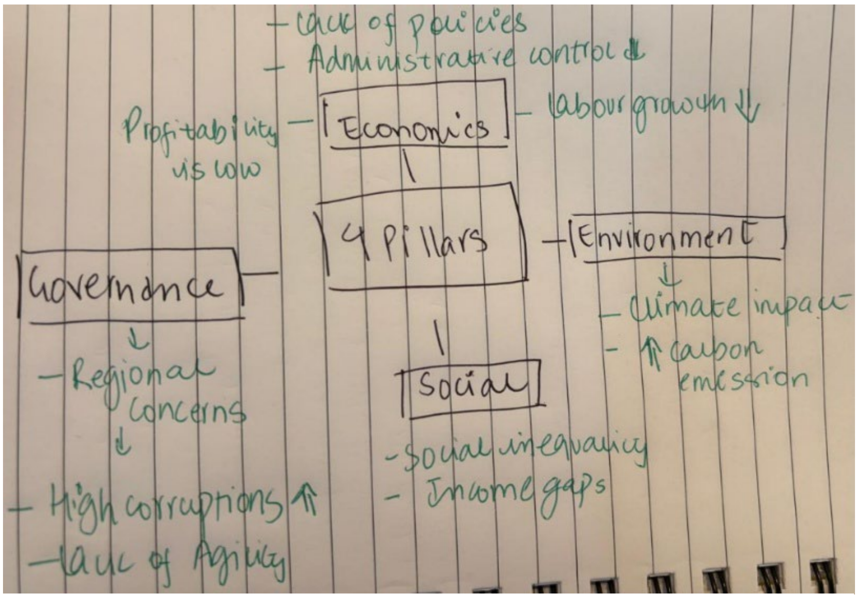
→ Shrinking workforce leading to less growth and less social protection.

Inequality

- Income gaps across regions still remain a concern irrespective of growing economies.

→ Growth without inclusion fuels social unrest.

This crisis has affected all four pillars of sustainability.



Written notes on the four aspects of sustainability: economics, environment, social and governance.

Reconstructing the Strategic Role

Capital reimagined: Financing a regenerative future

Although Asia comprises nearly 60 percent of the global population, it receives a disproportionately small share of sustainable finance flows relative to its demographic and developmental importance. The Organisation for Economic Co-operation and Development (2023) attributes this disparity to factors such as policy fragmentation, inconsistent environmental, social and governance (ESG) data, and heightened investment risk perceptions. This misalignment between

Asia's need for sustainable development finance and current capital allocation is significant. Addressing these barriers is essential to mobilising sustainable investment, enhancing regional resilience, and supporting Asia's transition to equitable, environmentally responsible growth.

Momentum for sustainable finance in Asia is accelerating.

- Green Investments Partnership (GIP), a blended finance fund, has secured US$510 million in its first close to fund sustainable infrastructure across Southeast and South Asia (Soh, 2025).
- Temasek's 2025 Sustainability Report outlines a strategy that goes beyond traditional capital structures, embedding ESG considerations into portfolio decisions and engaging fund managers on climate risk (Temasek, 2025).
- UOB and OCBC reaffirmed at the 2025 Unlocking Capital for Sustainability Summit that Asia remains committed to climate goals, despite ESG scepticism in Western markets. OCBC is actively financing decarbonisation in hard-to-abate sectors, while UOB's sustainable finance portfolio has grown (Hicks, 2025; Eco-Business, 2025).

Leadership redefined: From power to purpose

The fireside chat challenged the zero-sum logic of traditional geopolitics and advocated for a shift towards phronetic leadership, a concept introduced by Ikujiro Nonaka that emphasises:

- Practical wisdom (phronesis): Making context-sensitive decisions rooted in shared values.
- Moral purpose: Prioritising long-term societal well-being over short-term gains.
- Dialogue and co-creation: Engaging stakeholders across sectors and cultures.

Singapore's model exemplifies this shift:

- As a bridge between East and West, Singapore fosters adaptive governance that balances economic competitiveness with environmental stewardship.
- Singapore's Green Plan 2030 integrates sustainability into urban planning, finance and education, demonstrating how leadership can align national identity with planetary responsibility.

Sustainability as a civilisational imperative

This perspective extends sustainability beyond conventional quantitative indicators, emphasising the need to redefine prosperity in the 21st century. Asian cultural philosophies that prioritise interdependence, harmony and environmental stewardship present a robust alternative to extractive economic paradigms. By drawing on these traditions, the region offers a model of development that integrates well-being, ecological balance and social cohesion.

Key regional initiatives include:

- China's Ecological Civilisation: A constitutional commitment to embed environmental protection into all aspects of governance and development.
- India's LiFE Movement (Lifestyle for Environment): Launched by India's Prime Minister Narendra Modi and supported by the United Nations, it promotes behavioural change and individual responsibility for sustainability.
- Indonesia's Just Energy Transition Partnership (JETP): Aims to phase out coal while ensuring social equity and economic resilience, with support from partners.

Sustainability reflections

Doughnut Economics: Designing Cities Within Limits

Cities across Asia are adopting the principles of Doughnut Economics, which advocate for a safe and just space for humanity defined by ecological limits and social foundations. Urban centres such as Jakarta, Seoul and Delhi are implementing models that balance environmental constraints with societal needs. Initiatives include flood-resilient infrastructure, inclusive housing improvements, and green public spaces that serve both ecological and social functions. The Doughnut Economics framework guides urban planning towards well-being, prioritising dignity, resilience and ecological balance over GDP-centred growth.

Circular Economy: Rewiring Industry and Consumption

Asia is increasingly recognised as a centre of circular economy innovation, marked by a shift from linear take-make-waste production models to closed-loop systems that prioritise waste elimination, product longevity and ecological restoration. For example, Singapore's Zero Waste Masterplan incorporates extended producer responsibility and food waste valorisation strategies, while China has established circular manufacturing zones that enable remanufacturing and industrial symbiosis. These developments demonstrate the potential of circularity to drive systemic transformation in production, consumption and policy frameworks.

Climate Justice and Equity: Embedding Fairness into Sustainability

Asia's socio-economic diversity requires sustainability frameworks to focus on inclusivity and distributive justice. In Southeast Asia, expanding digital inclusion has improved access to climate literacy and financial tools, reducing informational and economic divides. These examples show that Asia's emerging sustainability paradigm is defined not only by commitments to fairness but also by mechanisms that ensure equitable resource allocation, participatory governance, and protection of vulnerable groups.

Together, doughnut economics, the circular economy and climate justice exemplify how Asia is translating sustainability theory into practice. The region is adapting and modifying global frameworks to offer a regenerative model of prosperity based on balance, renewal and collective stewardship.

References

Eco-Business. (2025, October 13). *Transition finance in turbulent times: OCBC on decarbonising Asia's toughest sectors*. https://www.eco-business.com/news/transition-finance-in-turbulent-times-ocbc-on-decarbonising-asias-toughest-sectors/

Hicks, R. (2025, October 22). ESG backlash? 'Huge' difference between headlines and reality in Asia: UOB sustainability chief. *Eco-Business.* https://www.eco-business.com/news/esg-backlash-huge-difference-between-headlines-and-reality-in-asia-uob-sustainability-chief/

OECD. (2023). *Sustainable Finance in Asia: ESG and climate-aligned investing and policy considerations.* https://doi.org/10.1787/bde9ec0d-en

Soh, T. (2025, September 8). Temasek-linked blended finance fund secures US$510 million in committed capital at first close. *The Business Times.* https://www.businesstimes.com.sg/esg/sustainable-finance/temasek-linked-blended-finance-fund-secures-us510-million-committed-capital-first-close?close=tru

Temasek. (2025). *Sustainability Report 2025.* https://www.temasek.com.sg/content/dam/temasek-corporate/sustainability/2025/Temasek-Sustainability-Report-2025.pdf

The Exploration of ESG Strategy through China's Green Transition

JI Shiyu

Introduction

Through my study of sustainability strategy at the National University of Singapore with Professor Lawrence Loh, I have come to understand the comprehensive concept and complexity of sustainable development. In the initial stage, I was especially confused about two key questions in sustainability: how much should we modify business models in the pursuit of sustainability? Can tensions between environmental, social and governance (ESG) and economic elements ever be resolved?

I understand that within the market, some may use ESG mainly as a marketing strategy due to a lack of understanding of its importance and a lack of awareness of irreversible environmental damage. This also means less market force and preferences towards ESG products. Businesses are known to pursue profits, and are one of the largest contributors of CO_2 emissions. In the face of consumer demand for sustainability, businesses that are more perfunctory and reactive may resort to actions such as greenwashing.

As an international student, I observed that sustainability concepts are less recognised and emphasised in Eastern culture; thus, I am very curious about how ESG can be implemented in Asia. During IMPACT WEEK in September 2025, I signed up for three sessions related to Asia, including China, eager to dive into them and find the answers to my questions. The sessions are: "Greening at Scale: China's Green Economy in Action", "Greater Bay, Greater Purpose: Integrating China's Ecosystem with Global Impact", and "Unlocking the Silver Economy: Asian Families Leading the Way". The experience has given me a deeper understanding of the circular economy, adaptive solutions, and how sustainability strategies are applied in global playbooks.

Tai, S. Y., Loh, L., & Ang, H. M. (Eds.). (2026, February). *Impact reimagined: Voices of the next generation for sustainability* (Vol. 2: Economies and Systems). Well-being and EESG Alliance (WEGA), TPC (Tsao Pao Chee), NO.17 Foundation, & Centre for Governance and Sustainability, NUS Business School.

My learning log will be separated into two sections. The first section explores sustainability as policy-driven transformation, focusing on how governments and capital flows help shape priorities in ESG. The second section uses Mojia Biotech as a case study, focusing on the business' current barriers to regeneration as well as its future potential.

ESG Strategy from a Macro-Economic Perspective

An article shared in class described 2025 as a pivotal year of sustainability, due to political intervention and unmet climate goals. Governments, businesses and society are rethinking how to develop a sustainable approach that balances financial profit.

In this context, the three IMPACT WEEK sessions illustrated how sustainability has evolved into a national strategy to grow the economy and strengthen a country's global position. This also helped me to think deeper about the options for "revising existing business models versus transforming the economic system entirely" and "voluntary ESG actions or requirement of strong regulations".

Government Support for Businesses' Sustainable Development

In the session "Greening at Scale: China's Green Economy in Action", panellist Mr Blake Niu, Lead Partner at Lochpine Capital which manages funds for Contemporary Amperex Technology Co., Limited (CATL), shared how CATL almost went bankrupt in an initial stage due to heavy research and development (R&D) costs in developing high-performance electric vehicle (EV) battery for BMW. This gives me a clear example of how and why economics is a huge barrier for ESG development, even for improving products in familiar industries. In this case, CATL overcame the critical period through government support, and since then, it has become the world's largest EV battery supplier, contributing significantly to China's Gross Domestic Product (GDP).

CATL's story shows that to ensure successful sustainability transformations and innovation, government intervention must come in. These government subsidies or support will help the company create a first-mover advantage, as well as help China become a leader in areas such as green energy. From the Solow model in macroeconomics, these innovations can create new jobs and increase the long-term GDP growth rate.

Thus, ESG in China has, in fact, become a value-creation model from both macro and micro perspectives, focusing on economic resilience and sustainable competitiveness. For businesses, it is a way to extend their business in a whitespace and capturing more profit. For a country, it can be a way to increase tax revenue, job creation, productivity and GDP.

Context-specific ESG

During the session "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact", one panellist mentioned how Chinese businesses can leverage Hong Kong, which combines Western and Chinese cultures and has an internationally recognised financial and audit system, to enhance their image and expand their international influence.

Panellists of the session "Greater Bay, Greater Purpose: Integrating China's Business Ecosystem with Global Impact".

Another point was that countries have different values which are influenced by their stage of development, historical events and geographic environment. These shape their level of sustainability and perceived actions. Although many current frameworks are Western-oriented, the session highlighted that China or other developing countries must develop its own sustainable development path rather than simply replicate Western models.

Additionally, the model should be designed considering the country's background and strengths, especially its labour structure, technology and resources. Then, these contextual strengths should determine the country's role in the international ESG movement. For example, China could adopt a coordination role with a green industrial strategy; the United States could focus on technology and finance, investing in sustainable materials, businesses and research; and Africa could zoom in on resource protection and community development.

Scale and ESG Actions Paradox

Thirdly, panellist Mr Chavalit Frederick Tsao, Chairman, TPC (Tsao Pao Chee), also critically pointed out that although many larger businesses are implementing ESG strategies, the majority of their actions are limited to the surface and only seek to be compliant with regulations. People are willing to invest capital in well-being ventures, but find it hard to find a company worthwhile to invest in. Interestingly, he indicated that small and medium-sized enterprises (SMEs) demonstrated stronger ESG vitality and have closer relationships with their communities.

Personally, I understand this paradox, as larger corporations, bound by rigid Key Performance Indicators (KPIs) and layered governance, often treat ESG as compliance. Meanwhile, SMEs with flexible, value-driven cultures exhibit greater ESG authenticity but struggle to attract capital, which also becomes a barrier to developing a sustainable business. This also means that although external stakeholders are willing to support businesses' ESG transformation, there is a lack of projects that are sustainable, scalable and profitable at the same time.

Additionally, the session has strengthened my understanding of the importance of governance in implementing authentic, sustainable businesses. Publicly-listed companies may have sustainability ratings for investors' review. However, mature investors would also acknowledge that a successful transformation could be seen from the organisation's structure, culture, employee empowerment at lower levels and the organisation's connection to the community.

Summary

The macro perspective has helped me reframe my understanding of the tensions between voluntary action and the regulations needed to transform or modify the business. First, I think that given China's cases, government regulation is needed to stimulate ESG implementation and oversee unethical practices, such as greenwashing. Else, it may slow down early-stage sustainability innovation and development as capital is not going to the intended places.

Secondly, transforming into a sustainable business environment is not just aligning with international trends. It can also be a national strategy. Just as

DeepSeek and other AI firms helped China boost its international recognition, green energy works in the same way, ensuring China's long-term relevance and leadership within the global economy. Other countries can also seize the sustainability opportunity to innovate and potentially boost their GDP.

Overall, I am very optimistic about the future of China and Asia in ESG, as more capital and technology-related labour are invested within the region. However, I think that building a more sophisticated ecosystem is the foundation for ensuring capital, support and funding go to authentic ESG enterprises and projects. This will deliver effective returns to both investors and governments.

Barriers to a Truly Circular Economy

During IMPACT WEEK, I was introduced to a biochemistry company, Mojia Biotech, which focuses on providing sustainable solutions by understanding materials at the atomic or molecular level (Mojia Biotech, 2025). This inspired me to rethink the circular economy, dive into concepts of degradation and upgrading, so as to consider the current barriers to the circular economy and adaptive solutions.

Systemic Framing

When we talk about ESG, we are actually talking about using limited resources effectively and appropriately, rather than just focusing on efficiency.

In the current world, "currency" is used as a medium of trade in resource allocation. However, resources are considered scarce and will run out someday. Traditionally, economies are phased in linear terms, meaning that once a resource is extracted, manufactured and consumed, it is gone. This is where sustainability steps in. With resources increasingly running out, we see the need for a circular approach, where used products can be recycled or reused.

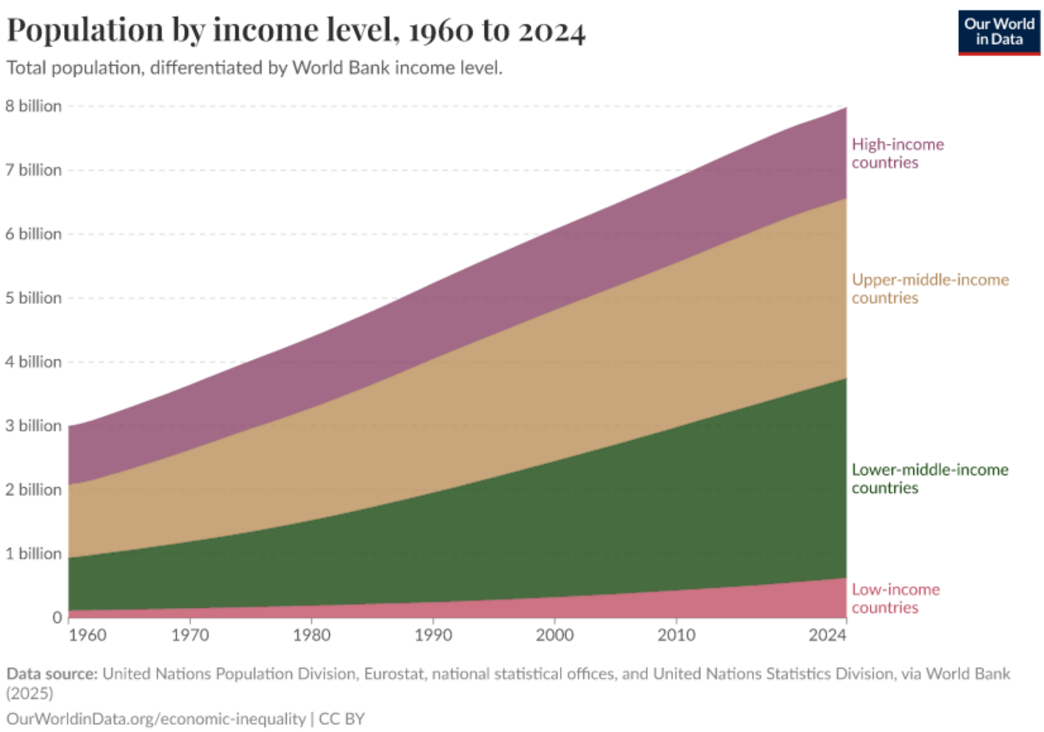
This also means that an adaptive solution for sustainability is required. It goes above mitigating resource over-exploitation and could rebuild our resource pool for future generations.

Mojia Biotech designs new molecules and processes that upcycle carbon-rich, non-food inputs (like carbon dioxide or methanol) into valuable bio-based products (Mojia Biotech, n.d.). This allows them to skip the degradation phase of recycling entirely, rebuilding usable materials from cleaner, more renewable sources.

Current Recycling Limitations

Recycling includes mechanical and chemical processes. Even if we do not consider the carbon footprint in some traditional recycling processes, there is still quality degradation problems, in which the recycled material has lower quality after each recycling process, and the continuous degradation leads to a limited cycled duration for a material to be reused (Singh & Walker, 2024). To decrease the effect of quality degradation, one option is to mix virgin materials with the plastic to be recycled (Hinczica et al., 2022). This only slows down the use of new materials, rather than truly achieving an adaptive and complete circular economy.

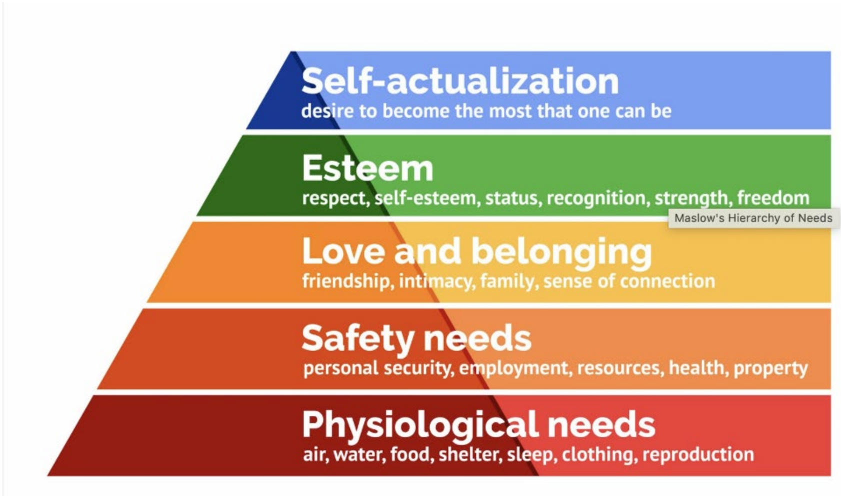
Some products made of recycled materials may be of reduced quality but are sold at a high price. The incompatibility between price and quality builds a barrier for adoption within the market. More specifically, even when consumers support sustainability in principle, most people still need to think about cost efficiency. Additionally, recycling may not be as effective in reducing the amount of waste as previously thought (Bowyer et al., 2023).



World's population by income level, 1960 to 2024.

Source: Global Change Data Lab, 2025

We can observe that half of the world's population is distributed in the low- to medium-income groups (Global Change Data Lab, 2025). Bearing in mind Maslow's Hierarchy of Needs pyramid, consumers, especially those in the low- to middle-income groups, are likely to first look at whether the products meet their physiological and safety needs, before assessing whether the products add to their sense of love, belonging or esteem. This means that when the product made of recycled materials is of lower quality than new products, and does not fulfil basic needs, consumers are not likely to go for it even if it appeals to their esteem for being eco-friendly. The quality of recycling, and even a lack of clear definition for this term, make it hard to advance recycling (Tonini et al., 2022). In essence, promoting recycled products to the masses solely through moral appeals would face barriers.



Maslow's Hierarchy of Needs

Source: McLeod, 2025

However, Mojia Biotech's approach of precision upcycling (creating new chemicals with consistent performance) avoids these issues to a certain extent. This shows that adaptation—rather than mitigation—may be the path to scalable circular economies.

In-Depth Analysis and Reflection

Although molecular-level recycling still faces significant challenges in technology, cost and time, the biochemistry approach offers the potential to address the seemingly endless sustainability challenge through a truly adaptive, circular economy. More specifically, it inspired me to understand recycling and the circular economy in both theoretical and practical approaches. When businesses make sustainable transitions, they will need to ensure product quality to gain market acceptance and scalability.

Conclusion

After attending IMPACT WEEK, my understanding of sustainability shifted from a compliance and environmental protection case to sustainable resource allocation and aligning value with economic concepts.

Additionally, I think successful sustainable development requires contributions from both firms and governments. The regulations and ecosystem building will benefit both entities.

Moreover, through Mojia Biotech's case, I have deepened my understanding of recycling and the circular economy, including current scalability barriers.

Personally, this experience helped me develop a more comprehensive understanding of the ESG concept, which is not a trade-off against financial income, but a way of valuing creation. I believe that as ESG-related research and education grow, sustainability and circularity will become mainstream, and I am excited to witness how they will transform our lives.

References

Boise State University. (2023, July 12). *Recycling: Is it as good as we think?* https://www.boisestate.edu/cobe/blog/2023/07/recycling-is-it-as-good-as-we-think/

Bowyer, C., Roberts, K., & Northen, S. (2023, May 30). Plastic recycling is failing – here's how the world must respond. *The Conversation*. https://theconversation.com/plastic-recycling-is-failing-heres-how-the-world-must-respond-206338

Global Change Data Lab. (2025). *Population by income classification, World*. Our World in Data. https://ourworldindata.org/grapher/population-by-income-classification

Hinczica, J., Messiha, M., Koch, T., Frank, A., & Pinter, G. (2022). Influence of Recyclates on Mechanical Properties and Lifetime Performance of Polypropylene Materials. *Procedia Structural Integrity*, *42*, 139–146. https://doi.org/10.1016/j.prostr.2022.12.017

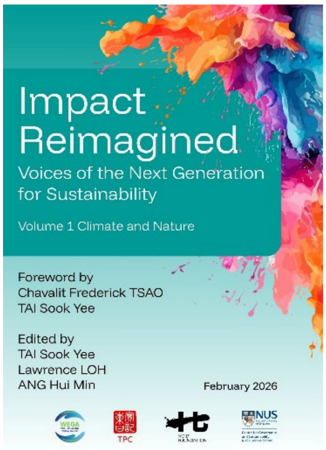
McLeod, S. (2025, October 23). *Maslow's hierarchy of needs*. Simply Psychology. https://www.simplypsychology.org/maslow.html

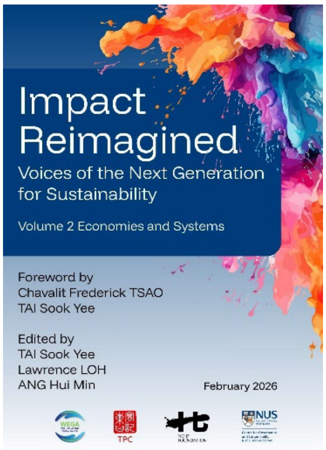
Mojia Biotech. (n.d.). *Our approach*. https://www.mojia.bio/our_approach.html

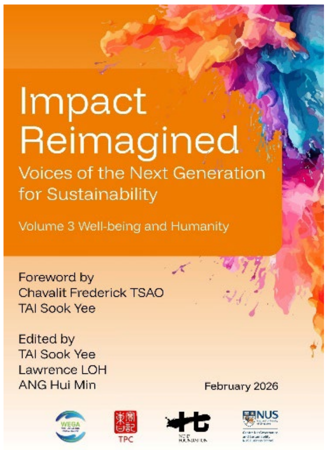
Singh, N., & Walker, T. R. (2024). Plastic recycling: A panacea or environmental pollution problem. *Npj Materials Sustainability*, *2*(17). https://doi.org/10.1038/s44296-024-00024-w

Tonini, D., Albizzati, P. F., Caro, D., De Meester, S., Garbarino, E., & Blengini, G. A. (2022). Quality of recycling: Urgent and undefined. *Waste Management*, *146*, 11–19. https://doi.org/10.1016/j.wasman.2022.04.037

Impact Reimagined: Voices of the Next Generation for Sustainability







Volume 1

Climate and Nature

Volume 2

Economies and Systems

Volume 3

Well-being and Humanity