

2025 KACPE International Public Policy Symposium

Advancing Together: Korea-ASEAN Strategic Alliance Toward ASEAN Vision 2045

12-13 November 2025
Shangri-La, Phnom Penh, CAMBODIA

**National Committee for ESCAP, CAMBODIA
Korea Research Initiatives, UNSW, AUSTRALIA**

**Hyundai Motor Chung Mong-Koo Foundation, KOREA
Korea Foundation, KOREA**

2025

PROCEEDINGS

KACPE International Public Policy Symposium

Advancing Together:
Korea -ASEAN Strategic Alliance
Toward **ASEAN Vision 2045**

12-13 November 2025

KRI@UNSW

Korea Research Initiatives
@University of New South Wales
AUSTRALIA

NC-ESCAP

National Committee for the
Economic and Social
Commission for Asia and the
Pacific,
CAMBODIA

CMKF

Hyundai Motor
Chung Mong-Koo Foundation
KOREA

KF

Korea Foundation
KOREA

Papers published in this volume constitute the proceedings of the 2025 KACPE International Public Policy Symposium. Papers are selected by the program committee for presentation. They are published as submitted, in the interest of timely dissemination. This symposium is supported by Hyundai Motor Chung Mong-Koo Foundation and Korea Foundation. Copyrights © KRI.

□ **Organising Institutions**

- National Committee for the Economic and Social Commission for Asia and the Pacific, Cambodia
- Korea Research Initiatives, the University of New South Wales, Australia

□ **Supporting Institutions**

- Hyundai Motor Chung Mong-Koo Foundation, Korea
- Korea Foundation, Korea

Contents

CONTENTS	i
PREAMBLE	iii
SYMPOSIUM PROGRAM OVERVIEW	vi
PROGRAM	vii
OPENING SESSION: Strengthening the Comprehensive Strategic Partnership between Korea and ASEAN	
Dr. Seung-Ho Kwon	3
Mr. Jae Ho Choi	9
H.E. Amb. Jang-keun Lee	13
H.E. U Ko Ko Hlaing	17
H.E. Dr. Ly Thuch	19
SESSION 1 – Keynote: Global Paradigm Shifts in Geopolitics and Economy: New Korea-ASEAN Partnership for Shared Growth	
H.E. Amb. Jeong-in Suh	27
H.E. U Ko Ko Hlaing	41
H.E. Prof. Satryo Soemantri Brodjonegoro	47
Dr. Sthabandith Insisienmay	65
Prof. Rosalie Arcala Hall	71
Dr. Piti Srisangnam	79
SESSION 2 – Strengthening State Capacity for Smart Innovation: Policy Development and Korea-ASEAN Cooperation	
Dr. Khairul Naim Bin Adham	91
Prof. Suhono Harso Supangkat	103
Dr. En Sovann	121
Mr. Nuon Samnavuth	125
Dr. Saowaruj Rattanakhamfu	139

SESSION 3 – Sustainable Smart Innovation Industries: Advancing Industrial and Economic Development	
Mr. Dong Yun Kang	147
Mr. Muhamad Muhtazam bin Noor Din	167
Ms. Nguyen Thi Hoang Nguyen	177
Mr. Taing Bunhong	191
Dr. Thida Kyu	203
SESSION 4 – Forging Korea-ASEAN Value Chains: Enhancing Mutual Development in Sustainable Smart Innovation Industries	
Ms. Latdavanh Songvilay	241
Closing Remarks	
H.E. Dr. Korm Ribaun	249

ASEAN - the world's fifth-largest economic bloc

Founded in 1967, ASEAN unites ten diverse member states and is a key player in regional cooperation. With 670 million people, it represents nine percent of the global population and is the world's fifth-largest economy. ASEAN's market and resources drive global economic progress, while its role in regional security and multilateral forums addresses global challenges. Culturally, its rich traditions and growing exchange of ideas enhance its global influence. ASEAN's economic, geopolitical, and cultural significance positions it as an increasingly influential global player.

The ASEAN Community Vision 2045 (ACV 2045) is set to be launched at the 46th ASEAN Summit in Kuala Lumpur, Malaysia, in May 2025, outlining ASEAN's direction for the next two decades to foster a united and prosperous Southeast Asia as one community. ASEAN's integration progress, assessed through the four Cs framework, is about 50%, with COVID-19 posing challenges. The ASEAN Community Vision 2045 (ACV 2045) sets a roadmap for cohesion through three pillars: Political-Security (stability, conflict resolution, human rights), Economic (integration, sustainability), and Socio-Cultural (human development, cultural exchange, inclusivity). It prioritizes digitalization, sustainability, human capital, social inclusion, security, and external relations. ACV 2045 aims to strengthen regional solidarity, centrality, and resilience against external pressures, fostering a rule-based, people-centered ASEAN.

ASEAN with South Korea

To achieve its goals, ASEAN will maintain its autonomy and neutrality while enhancing cooperation with external countries. As it aims for Vision 2045, however, ASEAN faces both opportunities and challenges, requiring commitment from member states and international collaboration. Strategically positioned in the Indo-Pacific, ASEAN must navigate the US-China rivalry to maintain strategic autonomy and regional stability.

Over the decades, both ASEAN and Korea have become important strategic partners for shared growth. ASEAN serves as both a complementary and alternative market for Korean exports, and a key collaborative base for Korean industries. Korea's trade with ASEAN has reached record highs, with ASEAN becoming Korea's second-largest trading partner in 2023, exceeding the 2000 trade volume by eightfold. In 2023, bilateral trade reached \$201.5 billion, and

Foreign Direct Investment from Korea to ASEAN totaled \$7 billion. Korean investment in ASEAN, particularly in manufacturing, demonstrates the region's vital role as a hub for Korean industries. People-to-people exchanges between Korea and ASEAN have also significantly expanded, with increased tourism and migration. In 2023, approximately 300,000 Korean diaspora reside in ASEAN, and Korean soft power, particularly Hallyu (Korean Wave), has a significant impact on the region. Politically and diplomatically, the elevation of the Korea-ASEAN partnership to a "Comprehensive Strategic Partnership" in 2024 signifies an expansion of substantive cooperation.

In 2024, Korea elevated its partnership with ASEAN to the highest level by establishing the "Comprehensive Strategic Partnership between Korea and ASEAN." During the 2024 ASEAN-ROK Dialogue, both sides reviewed the current state of cooperation and exchanged views on future development directions and regional and international issues. Korea declared its commitment to actively contribute to the realization of ACV 2045.

ASEAN Community Vision 2045 and Korea's strategic initiatives

The next phase of Korea-ASEAN relations demands a long-term strategic approach to foster a tangible and future-oriented community relationship encompassing political-security, socio-cultural, and economic dimensions. Strategic contributions to the implementation of ACV 2045 are crucial, transforming key areas of Korean cooperation with ASEAN into shared benefits that support ASEAN's development.

Reinforcing the comprehensive strategic partnership between Korea and ASEAN for future shared growth necessitates identifying and cultivating specific key cooperation areas, particularly within the framework of the ASEAN Community Vision 2045 (ACV 2045). Aligning Korea's initiatives with ACV 2045 is pivotal for fostering a more concrete and sustainable partnership, thereby driving shared prosperity for both regions. Among these strategic domains, **the development and exchange of advanced industries is a foremost area of collaboration, especially in sustainable smart innovation** where Korea holds significant global competitiveness. Key facets encompass **smart cities, eco-friendly smart mobility, green energy development, digital transformation, and the application of AI and robotics to industrial development**. Therefore, identifying pivotal policy issues for collaboration within these specific areas is imperative for solidifying robust future Korea-ASEAN cooperation.

2025 KACPE International Public Policy Symposium

Strategic Korea-ASEAN cooperation requires a high-level policy dialogue complementing existing sector-specific collaborations. Facilitating dialogue among government officials, researchers, and academics will enhance issue identification, knowledge sharing, and public discourse, ultimately fostering broader and more integrated synergies. Since 2012, Korea Research Initiatives (KRI) at the University of New South Wales (UNSW), Australia, has organized symposiums and seminars in Southeast Asia for knowledge sharing, and policy development and implementation. In 2019, **KRI@UNSW re-established the Korea-ASEAN Community of Policy Exchange (KACPE) to advance cooperation in the area of public policy between Korea and ASEAN. KACPE serves as a vital platform for two-track 1.5 policy dialogues.**

In 2025, KACPE will organize its International Public Policy Symposium, themed "Advancing Together: Korea-ASEAN Strategic Alliance Toward ASEAN Vision 2045." The theme "Advancing Together" highlights a cooperative partnership emphasizing mutual progress. "Korea-ASEAN Strategic Alliance" underscores a long-term collaboration across key sectors.

Against the backdrop of ongoing global flux and reconfiguration of global supply chains, the Symposium will examine new challenges and opportunities facing Korea and Southeast Asian countries (Session 1). A key collaborative domain is Sustainable Smart Innovation, a vital driver and emerging advanced industry sector for regional prosperity. The development and exchange of expertise, particularly in sustainable smart innovation, represents a crucial area of cooperation within the broader framework of economic and industrial development (Sessions 2, 3, and 4). The identified sessions and presenters are outlined below.

The Symposium Overview

Shangri-La Phnom Penh

Wednesday 12 November 2025 Strategic Cooperation for 2025 KACPE Public Policy Symposium	Thursday 13 November 2025 Strengthening the Comprehensive Strategic partnership between Korea and ASEAN
	Registration / Opening Session / Session 1 - Keynote Global Paradigm Shifts in Geopolitics and Economy: New Korea-ASEAN Partnership for Shared Growth 08:00 – 10:40
	Tea Break 10:40 – 11:00
	Session 2 Strengthening State Capacity for Smart Innovation: Policy Development and Korea-ASEAN Cooperation 11:00 – 12:20
	Lunch 12:20 – 13:30
	Session 3 Sustainable Smart Innovation Industries: Advancing Industrial and Economic Development 13:30 – 14:50
	Afternoon Tea 14:50 – 15:10
	Session 4 - Plenary Session 15:10 – 16:20
Welcome Dinner Strategic Cooperation for 2025 KACPE International Public Policy Symposium 18:30 – 21:00	Farewell Dinner New Friendship and Partnership for the Shared Future Development of ASEAN and Korea 18:30 – 21:00

2025 KACPE International Public Policy Symposium

PROGRAM

**Advancing Together: Korea-ASEAN Strategic Alliance
Toward ASEAN Vision 2045**

**November 12-13, 2025
Phnom Penh, CAMBODIA**

Wednesday, 12 November 2025	
18:30-21:00	Welcome Dinner: Strategic Cooperation for 2025 KACPE Public Policy Symposium Chair: Mr. Sinet Kleung Technical Advisor Cambodian Mine Action and Victim Assistance Authority, Cambodia
	Registration
	Welcome Speeches Dr. Seung-Ho Kwon Executive Director Korea Research Initiatives, University of New South Wales, Australia Mr. Kwang-Cheol Lee Director-General, Global Programs Bureau II The Korea Foundation, Republic of Korea Mr. Jae Ho Choi Secretary-General Hyundai Motor Chung Mong-Koo Foundation, Republic of Korea H.E. U Ko Ko Hlaing Union Minister Ministry (2) of the President's Office, Myanmar H.E. Dr. Ly Thuch Senior Minister Council of Ministers, Cambodia

Thursday, 13 November 2025	
SYMPOSIUM: Strengthening the Comprehensive Strategic Partnership between Korea and ASEAN	
08:00-8:30	Registration
08:30-10:40	OPENING SESSION Chair: Mr. Ung Sirn Lee Advisor, Deputy Secretary-General National Committee for the Economic and Social Commission for Asia and the Pacific, Cambodia
	Welcome Addresses Dr. Seung-Ho Kwon Executive Director Korea Research Initiatives, University of New South Wales, Australia Congratulatory Addresses Mr. Kwang-Cheol Lee Director-General, Global Programs Bureau II The Korea Foundation, Republic of Korea Mr. Jae Ho Choi Secretary-General Hyundai Motor Chung Mong-Koo Foundation, Republic of Korea H.E. Amb. Jang-keun Lee Ambassador The Mission of the Republic of Korea to ASEAN, Republic of Korea H.E. U Ko Ko Hlaing Union Minister Ministry (2) of the President's Office, Myanmar Opening Addresses H.E. Dr. Ly Thuch Senior Minister Council of Ministers, Cambodia
	SESSION 1–Keynote: Global Paradigm Shifts in Geopolitics and Economy: New Korea-ASEAN Partnership for Shared Growth Chair: Mr. Veara Kim Deputy Secretary-General National Committee of the Economic and Social Commission for Asia and the Pacific, Cambodia
	H.E. Amb. Jeong-in Suh Former Ambassador, The Mission of the Republic of Korea to the Association of Southeast Asian Nations (2015-17), Republic of Korea H.E. U Ko Ko Hlaing Union Minister Ministry (2) of the President's Office, Myanmar H.E. Prof. Satryo Soemantri Brodjonegoro Former Minister Ministry of Higher Education, Science, and Technology, Indonesia Dr. Sthabandith Insisienmay Vice President, Lao Academy of Social and Economic Science & Former Vice Minister, Ministry of Planning and Investment, Laos Prof. Rosalie Arcala Hall Executive Director, UP Center for Integrative and Development Studies University of the Philippines, The Philippines Dr. Piti Srisangnam Executive Director ASEAN Foundation, ASEAN
	Discussion

10:40-11:00	Tea Break
11:00-12:20	SESSION 2: Strengthening State Capacity for Smart Innovation: Policy Development and Korea-ASEAN Cooperation Chair: Prof. Jae Hyeok Shin Director, ASEAN Center & Prof. Political Science and International Relations Korea University, Korea Dr. Khairul Naim Bin Adham Deputy Undersecretary, Biodiversity and Forestry Management Division Ministry of Natural Resources and Environmental Sustainability, Malaysia Prof. Suhono Harso Supangkat Director, Smart Cities and Communities Innovation Center Institut Teknologi Bandung, Indonesia Dr. En Sovann Director, Dept of Digital Government Transformation, General Secretariat of the Digital Government Committee, Ministry of Post and Telecommunications, Cambodia Mr. Nuon Samnavuth Director, Waste Management and Environment Division Capital City of Phnom Penh, Cambodia Dr. Saowaruj Rattanakhomfu Research Director, Innovation Policy for Sustainable Development Thailand Development Research Institute, Thailand Discussion
12:20-13:30	Lunch
13:30-14:50	SESSION 3: Sustainable Smart Innovation Industries: Advancing Industrial and Economic Development Chair: Dr. Khairul Naim Bin Adham Deputy Undersecretary, Biodiversity and Forestry Management Division Ministry of Natural Resources and Environmental Sustainability, Malaysia Mr. Dong Yun Kang Carbon Neutral (Mobility) Program Director, Mobility Dept., Transport Div. Korea Agency for Infrastructure Technology Advancement, Republic of Korea Mr. Muhamad Muhtazam bin Noor Din Manager, Sustainable Cities, Climate Action Division Malaysian Green Technology and Climate Change Corporation, Malaysia Ms. Nguyen Thi Hoang Nguyen Vice Director, Center for Information, Strategic Analysis Forecast and Public Services Institute of State Organizational and Labour Sciences, Ministry of Home Affairs, Vietnam Mr. Taing Bunhong Director, Dept of Policy and Legal Affairs, General Secretariat of the Digital Government Committee Ministry of Post and Telecommunications, Cambodia Dr. Thida Kyu Director General, Union Minister's Office Ministry of Investment and Foreign Economic Relation, Myanmar Discussion
14:50-15:10	Tea Break

15:10-16:20	SESSION 4 – Plenary Session: Forging Korea-ASEAN Value Chains: Enhancing Mutual Development in Sustainable Smart Innovation Industries Chair: Prof. Rosalie Arcala Hall Executive Director, UP Center for Integrative and Development Studies University of the Philippines, The Philippines
	H.E. Amb. Jeong-in Suh Former Ambassador, The Mission of the Republic of Korea to the Association of Southeast Asian Nations (2015-17), Republic of Korea Prof. Suhono Harso Supangkat Director, Smart Cities and Communities Innovation Center Institut Teknologi Bandung, Indonesia Mr. Muhamad Muhtazam bin Noor Din Manager, Sustainable Cities, Climate Action Division Malaysian Green Technology and Climate Change Corporation, Malaysia Dr. En Sovann Director, Dept of Digital Government Transformation, General Secretariat of the Digital Government Committee, Ministry of Post and Telecommunications, Cambodia Ms. Latdavanh Songvilay Director General, Macroeconomic Research Institute Lao Academy of Social and Economic Sciences, Laos
Closing Remarks	

18:30-21:00	Farewell Dinner: New Friendship and Partnership for the Shared Future Development of ASEAN and Korea Chair: Mr. Sinet Kleung Technical Advisor Cambodian Mine Action and Victim Assistance Authority, Cambodia
	Registration
	Farewell Speeches H.E. Amb. Jeong-in Suh Former Ambassador, The Mission of the Republic of Korea to the Association of Southeast Asian Nations (2015-17), Republic of Korea H.E. Prof. Satryo Soemantri Brodjonegoro Former Minister Ministry of Higher Education, Science, and Technology, Indonesia Dr. Khairul Naim Bin Adham Deputy Undersecretary, Biodiversity and Forestry Management Division Ministry of Natural Resources and Environmental Sustainability, Malaysia Dr. Sthabandith Insisienmay Vice President, Lao Academy of Social and Economic Science & Former Vice Minister, Ministry of Planning and Investment, Laos Dr. Korm Ribaun Secretary General, National Committee of the Economic and Social Commission for Asia and the Pacific, Council of Ministers, Cambodia

OPENING SESSION

OPENING SESSION: Strengthening the Comprehensive Strategic Partnership between Korea and ASEAN

Dr. Seung-Ho Kwon

Executive Director, Korea Research Initiatives
University of New South Wales
AUSTRALIA

Mr. Kwang-Cheol Lee

Director- General, Global Programs Bureau II
The Korea Foundation
REPUBLIC OF KOREA

Mr. Jae Ho Choi

Secretary-General
Hyundai Motor Chung Mong-Koo Foundation
REPUBLIC OF KOREA

H.E. Amb. Jang-keun Lee

Ambassador
Mission of the Republic of Korea to ASEAN
REPUBLIC OF KOREA

H.E. U Ko Ko Hlaing

Union Minister
Ministry (2) of the President's Office
MYANMAR

H.E. Dr. Ly Thuch

Senior Minister
Council of Ministers
CAMBODIA

WELCOME ADDRESS

Dr. Seung-Ho Kwon
Executive Director, Korea Research Initiatives
University of New South Wales
AUSTRALIA

Excellencies, Distinguished Guests, Ladies and Gentlemen,

It is my great honor and privilege to welcome you to the 2025 KACPE International Public Policy Symposium, held in Phnom Penh, Cambodia. On behalf of the Korea Research Initiatives (KRI) at the University of New South Wales (UNSW), I extend my sincere gratitude to all distinguished delegates, policymakers, and scholars from Korea, ASEAN member states, and Australia who have gathered here to share their insights and commitment to the future of regional cooperation.

I would like to begin by expressing my deepest appreciation to our co-organizer, the National Committee for the Economic and Social Commission for Asia and the Pacific under the Council of Ministers of Cambodia, and to our sponsors, the Hyundai Motor Chung Mong-Koo Foundation and the Korea Foundation, for their invaluable support and partnership in making this symposium possible.

A Gathering for Shared Vision and Partnership

The 2025 KACPE International Public Policy Symposium, themed “Advancing Together: Korea–ASEAN Strategic Alliance Toward ASEAN Vision 2045,” serves as a vital platform to explore the evolving landscape of Korea–ASEAN cooperation. More than a policy dialogue, it is a strategic forum to envision a shared future based on trust, mutual growth, and sustainable innovation.

ASEAN today stands as the world’s fifth-largest economy, home to over 670 million people, and a key pillar of global economic dynamism. As the region prepares to launch the ASEAN Community Vision 2045 (ACV 2045) in Kuala Lumpur next year, ASEAN is entering a new phase of transformation — one that prioritizes integration, inclusivity, and resilience across its three pillars: Political-Security, Economic, and Socio-Cultural.

At this critical juncture, Korea stands as a trusted and proactive partner. Since the establishment of the Comprehensive Strategic Partnership (CSP) in 2024, Korea and ASEAN have deepened their cooperation across a wide range of sectors. Bilateral trade now exceeds 200 billion USD, while cultural, educational, and technological exchanges continue to flourish. The expansion of people-to-people ties — reinforced by the growing influence of the Korean Wave (Hallyu) — reflects the dynamism and depth of this enduring partnership.

Korea and ASEAN: Advancing Together Toward a Shared Future

We live in an era defined by geopolitical change, technological disruption, and the urgent pursuit of sustainability. In such times, partnerships rooted in mutual respect and shared vision are indispensable. The Korea–ASEAN relationship exemplifies such collaboration — one built upon complementarity, openness, and a collective pursuit of innovation and resilience.

As both regions navigate digital transformation, green transition, and industrial restructuring, their cooperation has become an essential foundation for sustainable and inclusive growth. The evolution of this partnership underscores a vital truth: the prosperity of one is inseparable from the well-being of the other.

This symposium provides an opportunity to exchange forward-looking perspectives, share evidence-based policy insights, and identify actionable strategies to reinforce Korea–ASEAN collaboration. It aims not only to advance academic dialogue but also to function as a policy catalyst — translating ideas into tangible pathways for regional innovation and prosperity.

Building a Strategic Alliance for ASEAN Vision 2045

The central question before us is how to align Korea's strategic initiatives with ASEAN's long-term development goals under ASEAN Vision 2045. Over the course of this symposium, discussions will focus on sustainable smart innovation as a core driver of shared growth.

Key themes include smart cities, eco-friendly smart mobility, green energy, digital transformation, and the application of AI and robotics to industrial development. These are not merely technical sectors but strategic pillars for the next phase of Korea–ASEAN cooperation. Through our policy dialogue today, we

aspire to outline practical frameworks that support ASEAN's regional integration while strengthening Korea's role as a constructive, responsible, and innovative partner.

The Role of KACPE and the Korea Research Initiatives

Since its establishment in 2012, the Korea Research Initiatives (KRI) at UNSW has been devoted to promoting research-based policy exchange and academic collaboration between Korea and Southeast Asia. Recognizing the importance of institutionalized dialogue, KRI re-established the Korea–ASEAN Community of Policy Exchange (KACPE) in 2019.

The KACPE platform fosters two-track (1.5-track) policy dialogues, bringing together government officials, scholars, and practitioners to address emerging policy challenges affecting both Korea and ASEAN. Through symposiums, policy forums, and collaborative research projects, KACPE has become a vital bridge for mutual learning, policy innovation, and regional understanding.

The 2025 KACPE International Public Policy Symposium continues this tradition, convening over 140 senior policymakers, scholars, and analysts to deliberate on strategies that will shape the next chapter of Korea–ASEAN cooperation.

It is a great privilege to acknowledge and welcome our distinguished guests:

I wish to extend our deepest gratitude to the exceptional leaders who honor us with their presence today:

First and foremost, to His Excellency Dr. Ly Thuch, Senior Minister of the Council of Ministers of Cambodia, whose leadership and vision have been instrumental in making this Symposium possible. Your commitment to regional cooperation exemplifies the spirit of ASEAN community building.

To Dr. Korm Ribaun, Secretary General of the National Committee of the Economic and Social Commission for Asia and the Pacific, Council of Ministers, Cambodia, thank you for your invaluable partnership as our co-organizer and your dedication to advancing regional development initiatives.

To His Excellency Ambassador Jang-keun Lee of the Mission of the Republic of Korea to ASEAN, we are honored by your support and grateful for your tireless efforts in strengthening Korea-ASEAN relations at the highest diplomatic level.

To His Excellency Ambassador Jeong-in Suh, Former Ambassador to ASEAN (2015-17), thank you for your active engagement and the foundational work you established during your distinguished tenure, which continues to benefit Korea-ASEAN cooperation today.

To Mr. Jae Ho Choi, Secretary-General of the Hyundai Motor Chung Mong-Koo Foundation, we deeply appreciate your Foundation's generous support, which demonstrates the private sector's commitment to fostering Korea-ASEAN partnership and regional development.

To His Excellency U Ko Ko Hlaing, Union Minister of Ministry (2) of the President's Office of Myanmar, we are grateful for your participation and Myanmar's continued engagement in strengthening ASEAN unity and cooperation.

To His Excellency Professor Satryo Soemantri Brodjonegoro, Former Minister of Higher Education, Science, and Technology of Indonesia, your expertise and experience in advancing educational and technological cooperation provide invaluable insights for our discussions on innovation and development.

To Dr. Khairul Naim Adham, Deputy Undersecretary of the Biodiversity and Forestry Management Division, Ministry of Natural Resources and Environmental Sustainability Malaysia, thank you for bringing your critical expertise on environmental sustainability, a cornerstone of our sustainable smart innovation agenda.

And to Dr. Sthabandith Insisienmay, Vice President of the Lao Academy of Social and Economic Science and Former Vice Minister of the Ministry of Planning and Investment of Laos, thank you for sharing your extensive experience in economic planning and policy development, which will enrich our strategic discussions.

Your collective presence here today—representing the highest levels of government, diplomacy, academia, and research institutes across ASEAN and Korea—demonstrates the shared commitment to our partnership and the importance of the issues we will address.

The journey toward ASEAN Vision 2045 is one that requires collaboration, shared responsibility, and mutual trust. No single nation can advance this vision alone. It calls for the collective effort of partners who believe in the strength of community and the power of cooperation.

As we engage in thoughtful dialogue throughout this symposium, may we together lay the foundation for a more resilient, innovative, and inclusive Korea–ASEAN partnership that contributes meaningfully to regional and global progress.

Thank you once again for your participation and commitment.

I wish you all a productive and inspiring symposium.

CONGRATULATORY ADDRESSES

Mr. Jae Ho Choi
Secretary-General
Hyundai Motor Chung Mong-Koo Foundation
REPUBLIC OF KOREA

Distinguished representatives of the ASEAN member states and the Korean government, and esteemed guests who have travelled from near and far.

Good morning.

I am Jae-ho Choi, Secretary-General of the Hyundai Motor Chung Mong-Koo Foundation.

It is a great honour to deliver these remarks on behalf of the Foundation at this symposium under the theme, “Korea–ASEAN Strategic Partnership Toward ASEAN Vision 2045.”

At a time when both Korea and ASEAN face an era of complex global transition, today’s gathering carries deep meaning as we seek new directions for shared growth and collaboration.

The theme of Smart Innovation to be discussed today represent more than technological or industrial transformation. They challenge us to redefine our partnership for cooperation and to envision how we can build a sustainable value chain that serves future generations.

In this context, the Hyundai Motor Chung Mong-Koo Foundation’s “Green Society” initiative stands as a practical model for how innovation can take root in society. The Green Society fosters entrepreneurial researchers in the field of Climate-Tech, encouraging them to move beyond the laboratory and bring their innovations to industry and the wider community.

By 2030, the Foundation aims to invest KRW 18 billion in more than 18 projects across climate, resource, and ecological innovation, and nurture over 15 leading Climate-Tech ventures. Through collaboration with universities, government research institutes, startups, and social ventures, we provide not only research funding but also commercialization support, investment connections, and global networking opportunities that help these innovations reach society.

This initiative goes far beyond academic research. It seeks to build an ecosystem based on the philosophy of “Lab to Society,” where innovative technologies are translated into real social value. In this ecosystem, research outcomes do not remain confined to laboratories they are linked with enterprises, local communities, and public policy to create a virtuous cycle of sustainable social innovation.

This vision aligns perfectly with the themes of today’s symposium, Smart Industrial Innovation and Value Chain Integration.

By placing people and society at the heart of innovation, the Green Society represents a shared model for change that both Korea and ASEAN can pursue together. One of the key challenges facing us all is Sustainable Smart Innovation. In the industrial sphere, this includes digital transformation, smart cities, and mobility innovation. In the social sphere, it demands talent development and the creation of collaborative innovation ecosystems.

In response to these changes, our Foundation has built a collaborative platform that connects education, technology, and social innovation.

Through this, we believe that people, technology, and knowledge — working in harmony can form an ecosystem that drives sustainable development for both Korea and ASEAN.

I hope this symposium will serve as an important milestone in presenting new models of cooperative innovation and in charting a shared path toward sustainable growth and prosperity.

The Hyundai Motor Chung Mong-Koo Foundation views this symposium as the beginning of a continued journey with ASEAN. We look forward to deepening our dialogue and partnership in the years ahead, as a trusted companion in learning and growth.

Once again, I would like to express my sincere appreciation to all of you for joining us for this meaningful occasion. May today’s discussions open new possibilities for future generations and for a more sustainable tomorrow.

Thank you.

The **Hyundai Motor Chung Mong-Koo Foundation** is dedicated to creating a sustainable world together with the next generation. Guided by its mission to contribute to the benefit of humanity and society, and under the slogan “**Together with Next Generation**,” the Foundation pursues future innovation and social value through people, space, and knowledge.

Through its **Future Innovation Platform**, the Foundation nurtures young talents who will lead sustainable development, operates open spaces for collaboration and communication, and builds a knowledge-sharing ecosystem that prepares society for the future. The **Knowledge Platform**, represented by initiatives such as **Green Society**, transforms innovative research into practical solutions, bridging technology and society under the vision of “**Lab to Society**.”

The **Social Contribution Platform** promotes culture and arts to narrow cultural gaps, cultivates creativity and leadership through education, and extends hope through medical support. By combining innovation and inclusion, the Hyundai Motor Chung Mong-Koo Foundation continues to empower people, strengthen communities, and drive collective growth toward a more sustainable and equitable future.

CONGRATULATORY ADDRESSES

H.E. Amb. Jang-keun Lee
Ambassador
The Mission of the Republic of Korea to ASEAN
REPUBLIC OF KOREA

Excellencies,

Distinguished Guests,

Ladies and Gentlemen,

It is a true pleasure to greet you at this year's Korea-ASEAN Community of Policy Exchange (KACPE) International Symposium.

Although I cannot be with you in person, I'm honored to take part in this meaningful gathering with many distinguished friends and key players of the ASEAN and Korea partnership.

This is my third time joining this annual Symposium as the Korean Ambassador to ASEAN, and I am delighted to witness how the dialogue in this forum has grown deeper and broader every year.

Let me first extend my heartfelt congratulations to KACPE for organizing this timely event under the theme "Advancing Together: Korea-ASEAN Strategic Alliance Toward ASEAN Vision 2045."

This year marks a historic milestone for ASEAN.

Under Malaysia's capable chairmanship, ASEAN demonstrated robust leadership and adopted the ASEAN Vision 2045. This is a profoundly ambitious course, accompanied by four strategic plans that chart a clear path for the next two decades, spanning the political-security, economic, socio-cultural, and connectivity pillars.

At the ASEAN and related Summit just two weeks ago, ASEAN further affirmed its vision for a shared future—one that is resilient, innovative, dynamic, and people-centered—through the unifying theme of "Inclusivity and Sustainability."

With Timor-Leste joining as ASEAN's 11th member state, ASEAN's aspiration to serve as a key engine of global peace and growth feels more tangible than ever.

Throughout this journey of ASEAN, Korea has remained one of ASEAN's closest and most trusted partners—steadfast, forward-looking, and cooperative.

At the same time, we must recognize the unprecedented challenges that both ASEAN and Korea face today.

In this new era of shifting supply chains and rapid technological transformation, export-driven economies like ours must adapt to realities shaped by growing protectionism and new economic uncertainties.

ASEAN has already taken proactive steps. The ASEAN Geoeconomic Task Force presented important recommendations last month to coordinate our collective responses to global change. Equally significant is the Digital Economy Framework Agreement—the world's first region-wide digital economy blueprint—expected to unlock a two-trillion-dollar market by 2030.

The ASEAN Plus Three Macroeconomic Research Office (AMRO) forecasts growth of around 4% for East Asia in the coming years. This is encouraging—but it should also motivate us to deepen our strategic partnership. We must ensure this growth translates into real benefits for all our people.

Distinguished Guests,

Let me share three key directions for advancing the Korea-ASEAN partnership toward ASEAN Vision 2045.

First, we must safeguard the rules-based international order.

The stable, rules-based system that has long supported peace and prosperity is under strain. Korea and ASEAN—open, like-minded, and export-oriented economies—should work together to uphold

these principles. With mutual trust and understanding, our businesses can invest confidently, create quality jobs, and contribute to lasting peace and stability in our shared region.

Second, we must embrace emerging technologies—especially artificial intelligence—with wisdom and responsibility.

AI brings tremendous opportunities but also new challenges. Deepfakes and online scams remind us that technology must be guided by ethics and digital literacy.

Korea's sovereign AI initiative is part of that effort, and we look forward to sharing experiences and working with ASEAN to build a digitally inclusive and secure future.

Third, we must strengthen people-to-people connections.

Cultural and educational exchange, creative industries, and youth networks are essential to building mutual trust. These initiatives bring our societies closer together and make our partnership enduring and resilient.

Ladies and Gentlemen,

As reaffirmed at the ASEAN-Korea Summit in Kuala Lumpur last month, my government remains firmly committed to supporting ASEAN Centrality and ASEAN's leading role in the region.

Peace and stability on the Korean Peninsula are equally vital—not only for Korea but for ASEAN and the broader Indo-Pacific. That is why my government introduced the END Initiative—Exchange, Normalization, and Denuclearization—to foster peaceful coexistence and shared growth.

We believe ASEAN's continued support, with its unique convening power, can play a crucial role in this process.

Over the past thirty-five years, our partnership has achieved remarkable milestones.

Looking ahead, Korea will remain a steadfast partner in ASEAN's journey toward a resilient, innovative, and people-centered ASEAN Vision 2045.

I hope today's Symposium becomes a platform for open dialogue and fresh ideas from government, academia, and the private sector—ideas that will guide us toward a more prosperous, inclusive, and sustainable ASEAN-Korea partnership.

Once again, congratulations to KACPE on hosting the 2025 Symposium. I wish you all great success. Thank you.

CONGRATULATORY ADDRESSES

H.E. U Ko Ko Hlaing
Union Minister
Ministry (2) of the President's Office
MYANMAR

Good morning, distinguished guests, esteemed organizers and partners, respected speakers, and dear friends from across ASEAN and the Republic of Korea.

It is indeed a great honor and pleasure for me to deliver this congratulatory address at the opening of such an important and inspiring event — the International Symposium organized under the theme, “Advancing Together: Korea-ASEAN Strategic Alliance Toward ASEAN Vision 2045.”

First of all, I would like to express my heartfelt gratitude to the organizers and partners who have made this meaningful gathering possible — the National Committee for the Economic and Social Commission for Asia and the Pacific (NC-ESCAP), Cambodia; the Korea Research Initiative, University of New South Wales; the Hyundai Motor Chun Mong-Koo Foundation, Korea; and the Korea Foundation, Korea. Your collective efforts and dedication have provided us with a valuable platform for dialogue, cooperation, and forward-looking exchange.

This symposium comes at a very significant moment — a time when our region and the world at large are facing rapid transformations. The global paradigm shifts in geopolitics and the economy are reshaping how nations interact, how policies are designed, and how partnerships are built. In this context, gatherings like this one are not just academic or policy discussions — they are, in fact, acts of regional leadership and friendship.

The topics to be discussed during this symposium — Global Paradigm Shifts in Geopolitics and Economy; Strengthening State Capacity for Smart Innovation; Sustainable Smart Innovation Industries; and Forging Korea-ASEAN Value Chains — all point toward one essential truth: that our future progress depends on how effectively we can innovate, collaborate, and adapt together.

ASEAN Vision 2045, as we all know, aims to build a peaceful, prosperous, resilient, and dynamic regional community. To realize this vision, it is crucial that we align our strategies and policies with trusted and

like-minded partners. The Republic of Korea has long been one of ASEAN's most active and reliable partners — not only in trade and investment but also in knowledge sharing, technology transfer, and human resource development.

The Korea-ASEAN Community of Policy Exchange (KACPE), supported by the Korea Research Initiative and other dedicated partners, has played a crucial role in building these bridges of understanding and trust. Through dialogues, joint research, and people-to-people exchange, we have strengthened the very foundation of our partnership — friendship.

I have had the privilege to engage with KRI and KACPE in the past, and I can sincerely say that their contributions have made a lasting impact in nurturing cooperation between our nations. To me, both KRI and Cambodia are old friends — and as the saying goes, “A new friend is valuable, but an old friend is priceless.” Today, standing among both familiar and new faces, I am reminded of how powerful friendship can be as a force for regional development.

This symposium is more than just an exchange of ideas — it is a reaffirmation of our shared commitment to a future of sustainable progress and inclusive prosperity. As we explore strategies to build smart innovation industries, to strengthen value chains, and to navigate complex global dynamics, let us remember that our ultimate goal is not only economic growth but human development — ensuring that all people in our region can benefit from peace, innovation, and opportunity.

I am confident that through the discussions and collaborations in this symposium, new perspectives will emerge, new partnerships will be forged, and new pathways will open for Korea and ASEAN to work hand in hand toward our shared vision of 2045.

In closing, let me once again express my sincere appreciation to the organizers, speakers, and participants who have made this event possible. May this symposium serve as a milestone in strengthening the Korea-ASEAN Strategic Alliance — built on mutual respect, friendship, and the shared aspiration to advance together toward a brighter future.

Thank you very much.

OPENING ADDRESS

H.E. Dr. Ly Thuch
Senior Minister
Council of Ministers
CAMBODIA

Dr. Seung-Ho Kwon, Executive Director of Korea Research Initiatives, University of New South Wales,

Mr. Kwang-Cheol Lee, Director General, Korea Foundation,

Mr. Jae Ho Choi, Secretary-General, Hyundai Motor Chung Mong-Koo Foundation

Your Excellency Ambassador Jang-keun Lee

Your Excellency U Ko Ko Hlaing, Union Minister, Ministry of the President's Office, Myanmar

Honorable Scholars and Researchers

Your Excellencies, Distinguished Leaders, Brilliant Minds Gathered Here Today,

Good morning.

I have the great honor and pleasure to welcome all of you — distinguished delegates, colleagues, and friends — to the Kingdom of Cambodia, and to our vibrant capital city of Phnom Penh, and to this 2025 KACPE International Public Policy Symposium, a truly meaningful platform for dialogue and partnership.

To our friends from Korea, Australia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, Viet Nam, and of course, from across Cambodia — representing governments, provinces, academia, and the private sector — thank you for being here. Your presence reflects your deep commitment to advancing the Korea–ASEAN partnership toward our shared future.

My colleague has eloquently set the stage, and now I stand before you not to repeat what has been said, but to challenge us all to think bigger, act bolder, and commit more deeply to the transformation we seek.

Allow me first to express my deep gratitude to Samdech Moha Borvor Thipadei HUN MANET, Prime Minister of the Kingdom of Cambodia, for his visionary leadership in advancing Cambodia's role in regional integration and innovation.

Under his guidance, Cambodia is not only contributing to ASEAN's future but helping shape it through his strong commitment to digital transformation, sustainable development, and strategic partnerships, especially with the Republic of Korea.

His vision for a modern, connected, and resilient Cambodia perfectly aligns with ASEAN Vision 2045 and our Comprehensive Strategic Partnership with Korea.

Excellencies, ladies, and gentlemen,

Today I speak not as a minister reciting policy, but as a dreamer who has witnessed miracles, as a survivor who has seen nations rise from ashes, and as a believer in the power of collaborative ambition.

Let me take you back. When I was young, this region was synonymous with war, poverty, and division. Cambodia was in ruins. Vietnam was healing from conflict. Myanmar faced internal strife. Indonesia was finding its footing. Thailand, Malaysia, Singapore, they were building, but few believed Southeast Asia could become a unified force.

Yet here we are. ASEAN is not just surviving; we are thriving. We are not just cooperating; we are integrating. We represent the fifth-largest economy in the world, but more importantly, we represent something that cannot be measured in GDP alone: we represent hope, resilience, and the audacity to dream beyond our circumstances.

Cambodia's journey mirrors ASEAN's journey. We emerged from one of history's darkest chapters, the Khmer Rouge genocide that claimed two million lives, to become a nation of growth, stability, and opportunity. If we can do this, if ASEAN can do this, then together with Korea, there is nothing we cannot achieve.

This is the foundation upon which we build Vision 2045. Not theory. Not wishful thinking. But proven, lived experience that transformation is possible when we choose cooperation over conflict, when we choose integration over isolation.

Excellencies, ladies and gentlemen,

Why Korea? Why is this partnership so natural, so powerful, so necessary?

Because Korea understands us. In 1953, Korea emerged from a devastating war as one of the poorest nations on earth. Today, Korea is a global powerhouse in technology, manufacturing, culture, and innovation. Korea knows what it means to rebuild. Korea knows what it means to dream impossibly big and then deliver.

Korea did not achieve this miracle through natural resources, it was achieved through human capital, through education, through innovation, through an unrelenting focus on the future. These are lessons ASEAN can learn from and build upon.

But this is not a one-way street. Korea needs ASEAN as much as ASEAN needs Korea.

Korea needs our markets, our young demographics, our manufacturing ecosystems, our strategic position between the world's great powers. We are complementary forces. Where Korea has technology, ASEAN has scale. Where Korea has experience, ASEAN has energy. Where Korea has capital, ASEAN has opportunity.

The elevation to Comprehensive Strategic Partnership is not ceremonial. It is a recognition that our futures are intertwined, that our success is mutual, and that together we can shape the trajectory of this century.

My friends, let me be blunt. We cannot achieve Vision 2045 with incremental thinking. We cannot compete in the 21st century with 20th-century tools. We cannot build smart cities with analog bureaucracies. We cannot claim leadership in sustainability while clinging to fossil fuel dependency.

Innovation is not optional. It is existential.

By 2045, two-thirds of Southeast Asians will live in cities, turning this urban surge into either a crisis or an opportunity. With smart planning, it becomes an opportunity. Korea has the expertise; ASEAN cities have the ambition. Together, we can co-create smart urban models that show the world how developing nations can leapfrog to a sustainable, connected future.

Climate change is already upon us: rising seas, extreme weather, and disrupted agriculture threaten ASEAN's future. Our survival depends on a rapid shift to renewable energy. Korea's expertise in solar,

wind, hydrogen, and battery technology can drive ASEAN's green transformation. With shared commitment and action, carbon neutrality can become a reality, not a slogan, by 2045.

Digital inclusion empowers everyone, from rural farmers to urban citizens, by providing access to information, services, and opportunities. Korea's success in digital infrastructure and e-government offers valuable lessons, but our partnership must ensure universal connectivity so that no one is left behind.

Technology alone is not enough. It is people who drive progress. With ASEAN's young and dynamic population, our future depends on investing in education, skills, and lifelong learning. Korea's experience offers a model for collaboration through academic exchanges, research partnerships, and innovation. Education must also nurture critical thinking, creativity, and shared values to sustain our partnership for generations.

Excellencies, ladies and gentlemen,

I would be dishonest if I pretended the path ahead is smooth. It is not. We face real obstacles and acknowledging them is the first step to overcoming them.

ASEAN faces formidable challenges: geopolitical tensions, regulatory fragmentation, and the digital divide. We must safeguard strategic autonomy while deepening partnerships, harmonize standards to boost trade and investment, and ensure digital integration narrows rather than widens inequality. These tasks demand unity, courage, and creativity, but with commitment, they are all within our reach.

This symposium will produce recommendations. Documents will be drafted. Agreements will be signed. But I ask you a simple question: What will you personally do differently when you leave this room?

To the policymakers: Will you champion bold reforms even when they are politically risky?

To the scholars: Will you focus your research on problems that matter, on solutions that can be implemented?

To the business leaders: Will you invest not just where profits are guaranteed, but where impact is transformational?

To the young professionals: Will you dedicate your careers to building bridges between Korea and ASEAN?

Vision 2045 will not implement itself. It requires each of us to step beyond our comfort zones, to take risks, to lead with conviction.

Imagine ASEAN in 2045: our GDP has tripled, our cities are smart and sustainable, and our people are educated and empowered. Together with Korea, we have become true partners in innovation, culture, and sustainability. Peace and stability prevail, and cooperation defines our region's identity and future.

This is not utopian fantasy. This is achievable if we commit today to the actions required tomorrow.

Cambodia is not a passive participant but an active architect of ASEAN's future. Under Samdech Prime Minister HUN MANET's leadership, we are investing in digital infrastructure, partnering with Korea on smart cities, reforming education to strengthen STEM and critical thinking, and fostering an investment-friendly, responsible economy. Within ASEAN, we will champion integration, harmonized regulations, and inclusive growth that leaves no member behind.

Cambodia knows what it means to rebuild. We will share that experience, that resilience, that determination with our ASEAN family and our Korean partners.

My dear colleagues, we are here because we believe nations can rise from poverty, former adversaries can become partners, and technology can serve humanity. History will judge us not by our words, but by our actions, by the results we deliver and the lives we improve.

We are the architects of tomorrow. We hold the blueprints. We have the tools. We have the talent. All that remains is the will to build.

Excellencies, ladies, and gentlemen,

Let me also take this opportunity to express my deepest appreciation to our co-organizers and sponsors — the Korea Research Initiatives at the University of New South Wales, Australia, the Hyundai Motor Chung Mong-Koo Foundation, the Korea Foundation, Korea, and my dedicated team from the National

Committee for ESCAP. Your hard work, collaboration, and vision have made this symposium possible — and meaningful.

So let us leave this symposium not with polite applause but with fierce determination. Let us return to our offices not with reports to file but with projects to launch. Let us approach 2045 not with hope alone but with strategy, investment, and relentless execution.

Korea and ASEAN, we are stronger together. We are bolder together. We are unstoppable together.

The future is not something we await.

The future is something we create.

Let us build it together.

Thank you.

Global Paradigm Shifts in Geopolitics and Economy: New Korea-ASEAN Partnership for Shared Growth

H.E. Amb. Jeong-in Suh

Former Ambassador
The Mission of the Republic of Korea to the Association of Southeast Asian Nations
REPUBLIC OF KOREA

H.E. U Ko Ko Hlaing

Union Minister
Ministry (2) of the President's Office
MYANMAR

H.E. Prof. Satryo Soemantri Brodjonegoro

Former Minister
Ministry of Higher Education, Science, and Technology
INDONESIA

Dr. Sthabandith Insisienmay

Vice President, Lao Academy of Social and Economic Science
& Former Vice Minister, Ministry of Planning and Investment
LAOS

Prof. Rosalie Arcala Hall

Executive Director
UP Center for Integrative and Development Studies, University of the Philippines
THE PHILIPPINES

Dr. Piti Srisangnam

Executive Director
ASEAN Foundation
ASEAN

THE COMPLEX CHALLENGES OF MEGA TRENDS AND KOREA-ASEAN ECONOMIC COOPERATION

H.E. Amb. Jeong-in Suh
Former Ambassador

The Mission of the Republic of Korea to the Association of Southeast Asian Nations (2015-17)
REPUBLIC OF KOREA

1. ASEAN's Upward Evolution Over the Past 60 Years

Since its establishment in 1967, ASEAN has steadily and consistently evolved upward for nearly sixty years, responding to each era's internal and external environments.

Up to the current period marked by U.S.-China strategic competition, ASEAN's evolution has gone through four turning points.

First Turning Point: The 1967 Bangkok Declaration – Founding of ASEAN)

The first turning point, was the founding of ASEAN in 1967 through the Bangkok Declaration.

Confronted with external communist threats and internal insurgencies, ASEAN focused on regional security and sought to promote peace and stability in the region through the “ASEAN Principles” and the “ASEAN Way.”

While the Bangkok Declaration outwardly emphasized functional cooperation in less contentious socio-economic areas, in reality, security was the core concern.

Given differences in the political and economic system, and security perception among member states, infra-regional cooperation in security matters was difficult. As a result, ASEAN's collaboration was primarily centered on extra- regional partners such as the United States and the United Kingdom.

Second Turning Point: The 1976 Bali ASEAN Summit – Focus on Security

The second turning point came with the first ASEAN Summit held in Bali in 1976.

It was the first summit upgraded from the level of foreign ministers' meetings to heads of state, and it adopted the Treaty of Amity and Cooperation (TAC) and the Bali Concord I, which became guidelines for future ASEAN cooperation.

The latent agenda of regional security, which had been implicit at ASEAN's founding, was now brought to the forefront. This was in response to the global environment of cold war détente between U.S. and China, U.S.-Soviet détente, and the communist takeover of Vietnam in 1975.

During the subsequent ten years of the Third Indochina War, ASEAN realized that collective cooperation among member states significantly enhanced its negotiating power.

Third Turning Point: The 1992 Singapore Summit – Economic Cooperation and AFTA

The third turning point came with the 1992 ASEAN Summit in Singapore, which adopted the ASEAN Free Trade Area (AFTA).

With the end of the Cold War, ASEAN was relieved of the burden of having to align with either the United States or the Soviet Union, thereby gaining more flexibility in political and security affairs.

Amid globalization and the emergence of regionalism-such as NAFTA and the E-ASEAN began to focus on the economy. This marked the beginning of ASEAN's "golden era."

Although the Asian Financial Crisis of 1997 was a major challenge, ASEAN turned the crisis into an opportunity. At the 1997 ASEAN Summit, ASEAN Vision 2020 was adopted.

Fourth Turning Point: Formation of the ASEAN Community

The fourth turning point began with the 2003 ASEAN Summit in Bali, which launched the process of establishing the ASEAN Community.

This period includes the adoption of the ASEAN Community Vision 2015, 2025, and 2045, which are currently in progress.

The ASEAN Community consists of three pillars: the Political-Security Community (APSC), the Economic Community (AEC), and the Socio-Cultural Community (ASCC).

Among these, the **ASEAN Economic Community (AEC)** serves as the catalyst. The AEC aims to establish a **single market and production base** by promoting the free movement of goods, services, capital, and unskilled labor across the region to enhance ASEAN's competitiveness.

2. The Multi-Complex Challenges of the 3D Mega Trends and Korea-ASEAN Economic Cooperation

Paradigm Shift

For about thirty years after the end of the Cold War in the early 1990s, the world maintained a unipolar international order led by the United States.

However, this order began to shake around the emergence of the Trump Administration in 2017, marking a paradigm shift toward a multipolar international order.

The United States and China are no longer cooperative partners but strategic competitors. Like many middle powers, ASEAN is now facing an external environment where it is being pressured to choose sides in this new Cold War context.

This U.S.-China geopolitical rivalry will likely continue for decades. Politics and security, the economy, and technology are no longer separate domains—they are increasingly **coupled**.

Under these dynamics of geopolitics, geoeconomics, and geotechnology, it is no longer feasible to approach economic issues in a **siloed manner**. Integrated cooperation is now essential.

At the 2025 ASEAN Summit held earlier this year, the ASEAN Community Vision 2045 identified **17 existing and future mega trends**.

These reflect the external challenges ASEAN faces today. Among them, I wish to focus on three—what I call the **3D Mega Trends**—and discuss how Korea and ASEAN can turn these complex challenges into opportunities for economic cooperation.

(1) Deglobalization and Decoupling

The first challenge is **deglobalization** and **decoupling**.

The world is now dividing into two systems, largely driven by U.S.-China decoupling, especially in advanced technologies such as AI, and semiconductor.

The trend is moving toward “**America First**”–style **protectionism** and **bilateralism**, while the WTO is becoming increasingly paralyzed. President Trump even coined the term “Trump Round,” which effectively signals the end of the WTO era.

The U.S. is pursuing **reshoring**, **nearshoring** and friendshoring to build production networks separated from China, with an even stronger emphasis on reshoring expected during Trump’s second term.

He is attempting to revive U.S. manufacturing by imposing tariffs on countries like Korea and ASEAN members.

In this situation, export-driven economies like Korea and Southeast Asian nations—whose growth relied on both the U.S. and Chinese markets—are now facing a harsh reality of having to choose between the two.

This external paralysis facing export-dependent ASEAN in 2025 is strikingly similar to that of 1992 when AFTA was created.

Back then, ASEAN faced deadlock in the GATT Round and the rise of regional blocs such as NAFTA and the EU, which led ASEAN to promote **intra- regional trade** through AFTA as a survival strategy.

Now, with the paralysis of the WTO system and the resurgence of U.S. protectionism through tariffs, ASEAN once again needs alternatives.

Korea and ASEAN must find markets **beyond** the U.S. and China. Potential candidates include ASEAN itself, Northeast Asia (including Korea, China, and Japan), India, the Middle East, and the EU—essentially **a strategy of economic diversification**.

It is time to heed the wisdom of the investment proverb: “*Do not put all your eggs in one basket.*”

Although these diversification targets will also pursue protective measures, realistically, the immediate market to focus on is **Southeast Asia's 700 million people**, as well as the broader **Northeast Asian market**.

While ASEAN's average per capita income remains below USD 5,000, its middle class is growing rapidly, and consumers in metropolitan areas like Jakarta and Bangkok now possess purchasing power comparable to Korea's.

Historically, ASEAN economies have relied on external exports due to similar industrial structures. Now, they should strengthen **intra-ASEAN trade** as a safety mechanism.

Currently, intra-ASEAN trade remains stagnant at 23–25% for over a decade. As agreed during previous ASEAN Economic Ministers (AEM) Meetings, it should be increased to at least **35%**.

This difficult external environment presents a timely opportunity to achieve that goal.

Korea, likewise, should not limit its engagement to exporting intermediates to Southeast Asia and re-exporting finished goods to external markets like the U.S. Instead, it should adopt a “**produce locally, consume locally**” (**local production and local consumption**) model within ASEAN.

Korea and ASEAN should also activate **East Asian trade** encompassing ASEAN and the three Northeast Asian countries (Korea, China, Japan). This would create a market equivalent in scale to the integrated European market.

In this process, Korea and ASEAN can cooperate on **supply chain restructuring**.

The once-dominant “Just-in-Time” production model, driven purely by efficiency, has shown its fragility during the COVID-19 pandemic and the Trump era. Now is the time to adopt a “**Just-in-Case**” model for crisis preparedness.

To expand intra-ASEAN and East Asian trade, both sides should reduce **non-tariff barriers (NTBs)** and strengthen local firms' **technological capabilities and know-how** to build regional supply chains.

Korean government and companies can play a crucial role here. By doing so, a **Korea-ASEAN supply chain** could mitigate the risks arising from the U.S.- China decoupling.

(2) Digitalization

The second challenge is **digitalization**.

ASEAN's economic growth rate in 2025 is projected to be around **5%**, which surpasses the global average and that of Korea or advanced economies.

This vitality stems from various factors, but one key driver is ASEAN's rapid transformation toward the **digital economy**.

Digitalization across all sectors is emerging as a **game changer** capable of upgrading ASEAN's economy to a new level.

ASEAN's digital economy currently stands at approximately **USD 300 billion annually**, but by 2030, it is projected to surge to **USD 1–2 trillion**, accounting for **30% of ASEAN's total GDP**.

At the ASEAN Summit held in late October 2025 in Malaysia, the **ASEAN Digital Economy Framework Agreement (DEFA)**—a blueprint outlining the fundamental direction and approach for ASEAN's digital transformation—was adopted.

This offers significant opportunities for cooperation between Korean firms— already advanced in the digital economy—and ASEAN companies that seek digital know-how.

The major opportunity factors include ASEAN's **young, digital-native population**, a **growing middle class (51% of the population)** that prefers digital products and services, and **rapid urbanization (over 50%)** that drives demand for smart city and digital infrastructure.

However, there are also key challenges to address:

- Digital divides among member states, between urban and rural areas, and between large and small firms;

- Protectionist regulations and fragmented standards aimed at safeguarding domestic digital industries;
- Shortages of human capital to sustain the digital economy.

Without addressing these issues, ASEAN's digital governance may remain limited to a "lowest common denominator" level of cooperation.

In overcoming these barriers, Korea-ASEAN cooperation in the digital sector has great potential.

(3) Decarbonization

The third challenge is **decarbonization**, that is, the green industry and responses to climate change.

According to KOTRA's 2025 report, Southeast Asia has favorable geographic conditions for renewable energy development—**solar power (Vietnam), wind power (Vietnam), and geothermal energy (Indonesia, the Philippines)**—as well as abundant resources for eco-friendly industries (aluminum, nickel, cobalt), and strong governmental will to pursue green agendas.

However, given the limitations of expanding renewable energy capacity, ASEAN countries are also investing in **clean coal** and **carbon capture and storage (CCS)** technologies as complementary alternatives.

As digital transformation, manufacturing relocation, and data center construction accelerate across ASEAN, the region's electricity demand is surging.

Yet, amid efforts to reduce fossil fuel generation for carbon neutrality and severe droughts reducing hydropower output, **energy security risks** are growing.

In this context, ASEAN's interest in renewable energy, as well as **nuclear power and CCS technologies**, presents strong opportunities for cooperation with Korea, which possesses world-class expertise in these fields.

3. The Lee Jae-Myung Administration's Policy Direction Toward ASEAN

The Lee Jae-Myung Administration, inaugurated in June 2025, announced as a national agenda item that it will “**inherit and advance the New Southern Policy (NSP)**.”

Although a detailed roadmap has yet to be unveiled, the administration has clearly expressed its intention to continue emphasizing ASEAN.

Three Principles for ASEAN Cooperation

Having long worked within ASEAN, I would like to emphasize three principles that I hope the Lee Administration will incorporate into its ASEAN-centered policy:

1. **Consistency**,
2. **Concreteness**—aligning with ASEAN's needs, and
3. **Comprehensiveness**—encompassing not only economic cooperation but also social, cultural, and non-traditional security issues.

Two Concrete Cooperation Proposals

Under these principles, I propose two specific initiatives for the Lee Administration to pursue during its term:

1. The President should complete **bilateral visits to all ten ASEAN member states** within his term.
2. In **2029**, marking the **40th anniversary** of Korea-ASEAN Dialogue Relations, Korea should host a **Korea-ASEAN Special Summit**.

If Korea makes such a proposal, ASEAN is expected to respond positively.

By doing so, Korea would become the **first Dialogue Partner outside ASEAN** to host Special Summits in **2009, 2014, 2019, and again in 2029**—a remarkable testament to enduring partnership.

Korea-ASEAN Economic Cooperation

The Complex Challenges of Mega Trends and Strategic Partnership for the Future

by Ambassador SuhJeong-In
2025 KACPE International Public Policy Symposium

1

Contents

01. ASEAN Evolution

Sixty years of upward evolution through four major turning points in regional development.

02. 3D Mega Trends and Cooperation Suggestions

Complex challenges of deglobalization, digitalization, and decarbonization with strategic partnership opportunities for Korea-ASEAN economic cooperation.

03. Policy Direction

Lee Administration's approach and three key principles for future ASEAN engagement with concrete proposals.

2

ASEAN's Remarkable 60-Year Journey

Foundation and Growth

Since 1967, ASEAN has steadily evolved through four major turning points, responding to internal and external challenges while maintaining consistent upward trajectory toward regional integration and cooperation.



Security Foundation

From initial focus on regional security against communist threats to comprehensive community building through collective cooperation mechanisms.



Economic Integration

Evolution from basic functional cooperation to sophisticated economic community with free trade agreements and digital transformation.



3

Four Critical Turning Points in ASEAN History

1967 Bangkok Declaration

ASEAN founding focused on regional security against communist threats, establishing ASEAN Principles and Way.



1992 Singapore Summit

Launch of ASEAN Free Trade Area marking shift to economic cooperation and beginning of golden era.



1976 Bali Summit

First heads of state summit adopting Treaty of Amity and Cooperation, formalizing security cooperation framework.



2003 ASEAN Community

Establishment of three-pillar community structure with Political-Security, Economic, and Socio-Cultural pillars for comprehensive integration.



4

4

Paradigm Shift Challenges

Multipolar World Order

Transition from US-led unipolar system to multipolar order with US-China strategic competition reshaping global dynamics.



Middle Power Dilemma

ASEAN and Korea face pressure to choose sides in new Cold War context between competing superpowers.

Mega Trends Impact

17 identified mega trends from ASEAN Vision 2045 present both complex challenges and transformation opportunities.



Coupled Domains

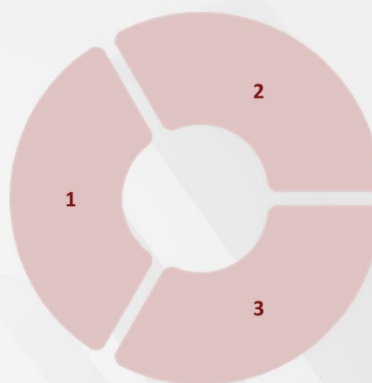
Politics, security, economy, and technology are increasingly interconnected, requiring integrated cooperation approaches rather than siloed strategies.

5

The 3D Mega Trends

Deglobalization & Decoupling

US-China strategic competition driving supply chain restructuring and forcing export-dependent economies to diversify markets.



Digitalization Revolution

ASEAN's digital economy projected to reach \$1-2 trillion by 2030, creating opportunities for Korea-ASEAN cooperation.

Decarbonization Imperative

Green industry transformation and climate change responses offering new avenues for sustainable economic partnership.

6

Deglobalization: From Challenge to Opportunity

Market Diversification Strategy

Export-driven economies must find alternatives beyond US and China markets, focusing on regional integration and intra-ASEAN trade expansion.

Regional Market Focus

- ASEAN's 700 million consumer market with growing middle class purchasing power
- Northeast Asian integration encompassing Korea, China, and Japan for scale
- Increase intra-ASEAN trade from current 23-25% to target 35%

Supply Chain Restructuring

- Shift from Just-in-Time to Just-in-Case production models for resilience
- Local production and local consumption within ASEAN markets
- Korea-ASEAN supply chain cooperation to mitigate US-China decoupling risks

Consumer Markets

Jakarta and Bangkok consumers now match Korean purchasing power.

East Asian Trade

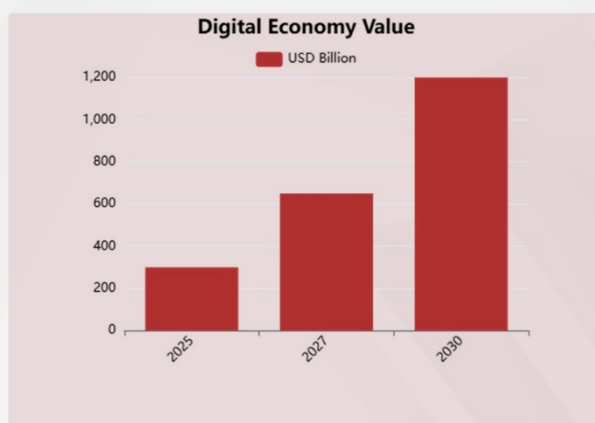
Create European-scale integrated market through regional cooperation.

Crisis Preparedness

Build resilient supply chains capable of weathering future disruptions.

7

Digitalization: ASEAN Digital Economy Growth Projection



Rapid Growth Trajectory

From \$300B annually to \$1-2T by 2030, representing 30% of ASEAN's total GDP.



Digital-Native Population

Young demographics with 51% middle class preferring digital products and services across urban areas.

8

Decarbonization: Green Industry Cooperation Opportunities



Renewable Energy Potential

- Vietnam's solar and wind power advantages with favorable geographic conditions.
- Indonesia and Philippines geothermal energy resources for sustainable power generation.
- Abundant eco-friendly industry materials including aluminum, nickel, and cobalt reserves.

Advanced Clean Technology

- Nuclear power solutions to address renewable energy capacity limitations.
- Carbon capture and storage technologies as complementary alternatives to fossil fuels.
- Korea's world-class expertise in clean energy technologies for regional cooperation.



9

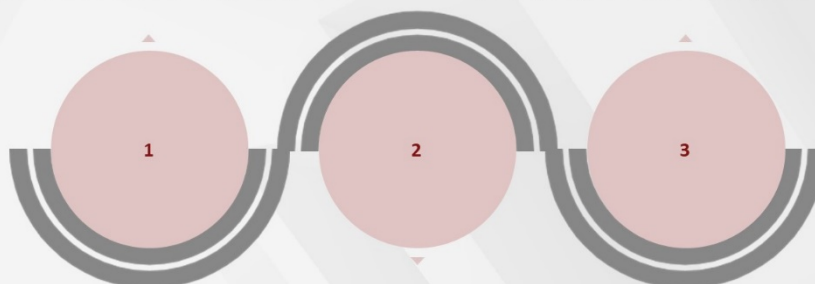
Lee Administration Policy Framework

Consistency in Engagement

Inherit and advance New Southern Policy with sustained commitment to ASEAN partnership development.

Comprehensive Multi-Sector Approach

Encompass economic, social, cultural, and non-traditional security cooperation for holistic regional integration.



Concrete Needs-Based Cooperation

Align Korean capabilities with ASEAN priorities for practical and mutually beneficial economic partnerships.

10

Two Concrete Cooperation Proposals for Lee Administration

Strategic Partnership Initiative

Concrete actions to strengthen Korea-ASEAN relations through high-level diplomatic engagement and comprehensive summit hosting to demonstrate enduring commitment to regional cooperation.



Presidential Visits

Complete bilateral visits to all ten ASEAN member states within the presidential term for comprehensive relationship building.



2029 Special Summit

Host Korea-ASEAN Special Summit marking 40th anniversary of dialogue relations, becoming the first non-ASEAN dialogue partner to host summits in 2009, 2014, 2019 and 2029.

11

Thank You For Your Attention

Questions and discussions are welcome to advance Korea-ASEAN partnership.

12

KOREA–ASEAN STRATEGIC ALLIANCE TOWARD ASEAN VISION 2045

H.E. U Ko Ko Hlaing
Union Minister
Ministry (2) of the President's Office
THE REPUBLIC OF THE UNION OF MYANMAR

Excellencies, honorable ministers, esteemed delegates, ladies and gentlemen,

Good morning. It is a privilege to stand before you today as we gather to reaffirm our shared vision — a vision of peace, stability, and prosperity across our region through the Korea–ASEAN Strategic Alliance.

This forum takes place at a time of profound uncertainty. We are living through a period shaped by geopolitical realignments, global economic and financial volatility, and the escalating threat of climate change. These forces are reshaping not only our economies and societies but also the very fabric of international relations.

Yet, amid these uncertainties, there is also hope — hope born from cooperation, shared values, and the recognition that our destinies are intertwined. The Republic of Korea and ASEAN share not only geographical proximity but also a deep commitment to peace, mutual respect, and inclusive growth.

Today, as we look toward the realization of ASEAN Vision 2025, it is time to deepen this partnership and align our efforts for a shared future.

The Context of Uncertainty and Transformation

Ladies and gentlemen,

Our region stands at a critical crossroads. The global landscape is witnessing a rapid geopolitical paradigm shift. Strategic competition among major powers is intensifying, testing the unity and resilience of smaller and medium-sized states. Several complex, high-intensity conflicts, such as war in Ukraine and Middle East, pose immediate humanitarian and geopolitical risks, often exacerbated by external interferences and resource competition.

At the same time, the global economy faces increasing turbulence — from supply chain disruptions and inflationary pressures to technological inequality and financial instability. Coercive tariff policy is affectively interrupting the international order of commerce and trade. Meanwhile, the climate crisis continues to affect our people's lives and livelihoods, through rising sea levels, extreme weather events, and threats to food and water security.

These challenges do not recognize borders. They are transnational, interconnected, and deeply human in their consequences. They remind us that no nation can stand alone. Our responses must therefore be collective, not isolated; cooperative, not competitive.

A Shared Future — Korea and ASEAN Together

This is why the partnership between the Republic of Korea and ASEAN carries such significance. For decades, our cooperation has been grounded in friendship, trust, and a shared belief in regional peace and prosperity. But today, we must take this relationship to a new level — one that moves from collaboration to strategic alliance, from dialogue to joint action, and from short-term projects to long-term vision.

Our shared future must focus on four critical areas of cooperation: food security, technology, disaster management, and transnational crime prevention.

1. Food Security

In a time when global food supply chains are vulnerable to shocks — from conflict, pandemic, or climate impact — we must ensure that our region has stable, sustainable, and equitable access to food.

Korea stands ready to partner with ASEAN in developing smart agriculture, sustainable farming practices, and research on food innovation. By integrating technology with traditional wisdom, we can strengthen food systems that feed not only our people but also future generations.

2. Technology and Innovation

Technology is both a driver of progress and a potential divider of societies. Together, ASEAN and Korea can bridge the digital divide through cooperation in digital infrastructure, AI ethics, cyber-security, and the digital economy.

Our collaboration should empower youth, entrepreneurs, and innovators across Southeast Asia to harness technology for inclusive growth — ensuring that digital transformation benefits all, not just a few.

3. Disaster Management and Climate Resilience

Our region is one of the most disaster-prone areas in the world. Typhoons, floods, and droughts are now part of our shared reality. We must therefore build stronger early warning systems, joint emergency response mechanisms, and knowledge-sharing networks.

Korea's experience in technology and data management can support ASEAN's initiatives on climate adaptation and green transition, contributing to a safer and more sustainable future.

4. Combating Transnational Crimes

Challenges such as human trafficking, illicit drug, cybercrime, and illegal trade threaten not only security but also human dignity. By strengthening intelligence sharing, law enforcement cooperation, and judicial collaboration, Korea and ASEAN can build a region where safety, justice, and rule of law prevail.

Building the Foundations — the Core Requirements

For our alliance to succeed, we must also strengthen the foundations that sustain peace and cooperation. I wish to highlight four essential pillars.

1. Regional Peace and Stability

The first requirement is unwavering commitment to peace.

We must continue to strengthen mechanisms for conflict resolution, confidence-building, and preventive diplomacy. ASEAN's tradition of dialogue and Korea's commitment to diplomacy of peace can combine to foster an environment where disputes are resolved through understanding, not force.

Peace is not merely the absence of conflict; it is the presence of trust, justice, and cooperation.

2. Unity and Cooperation

The second pillar is unity. The strength of ASEAN lies in its diversity — of cultures, faiths, and political systems. Korea deeply respects this diversity and believes it can be a foundation for collective strength.

Our alliance should promote solidarity, where no nation is left behind and every partner feels heard and valued. Together, we can ensure that the Indo-Pacific remains a region of stability and mutual respect.

3. Human Resource Development — IQ and EQ

The third requirement is human resource development. In this century of rapid change, knowledge and technology are vital — but so too are ethics, empathy, and moral responsibility.

Korea and ASEAN must invest not only in intellectual intelligence (IQ) but also in emotional and moral intelligence (EQ). Education, cultural exchange, and leadership development should foster individuals who are smart and compassionate —capable of building bridges across nations.

4. Strengthening State Capacity

Finally, we must strengthen our institutional and governance capacities. Effective states are the backbone of sustainable development. Through sharing best practices in digital governance, public administration, and policy innovation, we can enhance the ability of our governments to serve people efficiently and transparently.

A Vision for the Future

Friends and colleagues,

The Korea–ASEAN Strategic Alliance is not merely an idea — it is a promise. A promise to future generations that our region will remain a zone of peace, cooperation, and innovation.

When we combine ASEAN’s vision of a “politically cohesive, economically integrated, socially responsible, and people-oriented community” with Korea’s commitment to shared prosperity and sustainable development, we can truly create a partnership that stands the test of time.

As we look toward 2025 and beyond, let us imagine what this alliance can achieve:

A region where technology connects people rather than divides them.

A region where food, energy, and water security are guaranteed for all.

A region where young leaders are guided by both wisdom and compassion.

And a region where nations, despite differences, work together for peace and human dignity.

Conclusion

Distinguished guests,

Our world may be changing faster than ever before, but our shared values remain constant — respect, harmony, and cooperation. The Korea–ASEAN partnership is not only a diplomatic relationship; it is a human bond, built on trust and shared dreams.

Let us therefore move forward together — with courage in uncertainty, wisdom in decision-making, and unity in action.

Together, let us turn challenges into opportunities and make the Korea–ASEAN Strategic Alliance a cornerstone of regional peace and prosperity, contributing meaningfully to the realization of ASEAN Vision 2025.

Thank you.

SUSTAINABLE SMART INNOVATION IN INDONESIA: GOVERNMENT POLICIES AND KOREA–SOUTHEAST ASIA COOPERATION

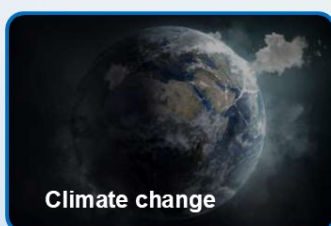
H.E. Prof. Satryo Soemantri Brodjonegoro
Former Minister
Ministry of Higher Education, Science, and Technology
INDONESIA

Sustainable Smart Innovation in Indonesia: Government Policies and Korea–Southeast Asia Cooperation

Satryo Soemantri Brodjonegoro

Visiting Scholar, National Graduate Research Institute for Policy Studies (GRIPS), Japan
Former Minister of Higher Education Science and Technology, Indonesia

Challenges for Indonesia

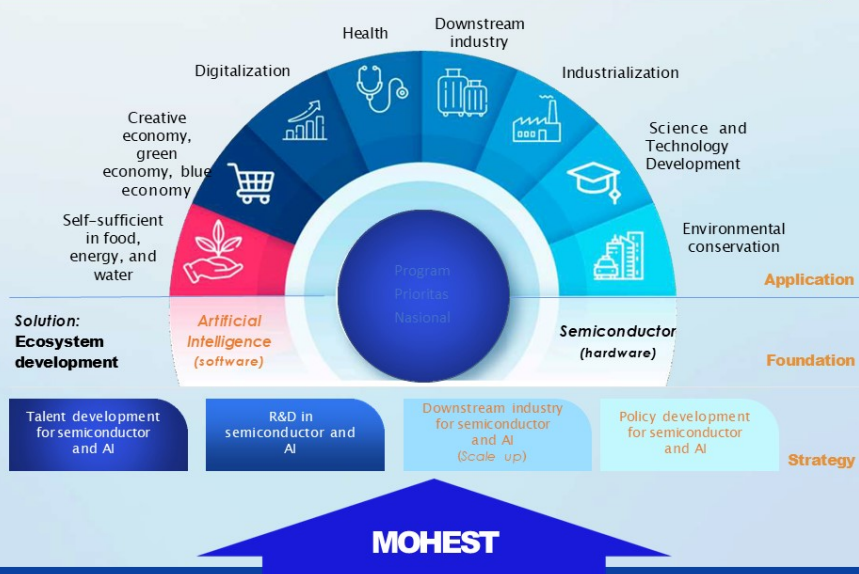


7 priority investment sectors

	Sector	Investment opportunity		Sector	Investment opportunity
	Renewable energy	- Hydro power - Solar power - Bioenergy - Geothermal		Export oriented manufacturing industry	Global value chain potential
	Downstream Industry	28 commodities.		Health	Pharmaceutical industry, medical equipment industry, and health care
	Food resilience	Food estates			
	Semiconductor	Availability of silica, copper, bauxite, and gold as raw materials			
	Digital economy & Data center	- Digital markets growth - Data center capacity			

3

Challenges for Indonesia



Research and development leading to down streaming industries



Transformational Paradigm

Encourage global collaboration to improve national competitiveness through high quality R & D

Research based future technology (deep tech) to support sustainable economic development

5

ROADMAP OF SEMICONDUCTOR ECOSYSTEM DEVELOPMENT



World Bank: Indonesia needs 70 years to be equal to USA

Arrijal Rachman, CNBC Indonesia

02 August 2024

World Bank predicts that Indonesia needs 70 years to achieve GDP per capita equal to of developed nations. Even, within that time Indonesia could only achieve a quarter of USA GDP per capita.

Currently USA GDP per capita is around US\$ 80.300, therefore the target for Indonesia is US\$ 20.075. Meanwhile Indonesia GDP per capita in 2023 was US\$ 4.580, that puts Indonesia in the category of upper middle income country.

11/13/2025

KACPE Symposium 2025

7

Middle income trap

World Bank economist Indermit Gill said that the projection could happen if government of Indonesia **do not make great breakthrough** in pushing GDP per capita. Much longer than their projection towards China which could reach that point in 10 years.

“With the current trend, China will need about 10 years to achieve GDP per capita equal to a quarter of US GDP per capita. Indonesia will need 70 years and India 75 years”, Indermit Gill mentioned in the report of the World Development Report 2024 : The Middle Income Trap, Thursday (1/8/2024).

11/13/2025

KACPE Symposium 2025

8

How to escape

According to World Bank, those 108 countries in the category of middle income country (with annual GDP per capita of US\$1.136-US\$13.845) will have **difficulty to escape** from middle income trap.

The reason is that country like China, India, Brazil, South Africa, and Indonesia will face **tougher challenges** than those which could escape from middle income trap in 1970s.

11/13/2025

KACPE Symposium 2025

9

Old strategy

In the document of World Development Report 2024 : The Middle Income Trap, it is mentioned that the challenges are among others accelerated aging population, increased protectionism by developed countries, and the need to enhance energy transition.

According to Indermit Gill, the condition is worsened by the old strategy designed by the government of those countries to escape from middle income trap i.e. too dependent on investment and too early to innovate.

11/13/2025

KACPE Symposium 2025

10

3i strategy

"Too many of such countries rely on old strategy to become developed country. They rely too long only on investment and shift too early into innovation," Indermit Gill said.

In order to overcome the problem and to speed up GDP per capita increase, World Bank suggest the government of middle income countries to adopt 3i strategy i.e. investment, infusion, and innovation. The strategy is divided into 3 phases depending on their GDP per capita.

11/13/2025

KACPE Symposium 2025

11

3i strategy

Phase 1i (investment) is specifically for low income countries. In this phase they have to focus on policy design to increase investment, such that they are able to be in the category of low middle income countries.

Phase 2i (investment and infusion) is for countries which already passed phase 1i to be able to combine the incoming investment with infusion or to adopt foreign technology implemented in all economic lines. Eventually they will move up to upper middle income countries.

11/13/2025

KACPE Symposium 2025

12

3i strategy

Phase 3i (investment, infusion, dan innovation) is for countries already in the category of upper middle income. They should no longer adopt nor borrow technology concept in their economic productive sectors, but they **should reach innovation stage** i.e. to break technology development barriers.

According to World Bank, South Korea has successfully implemented the 3 phases of 3i strategy. In 1960, GDP per capita was only \$1.200 and in 2023 it reached \$33.000.

11/13/2025

KACPE Symposium 2025

13

An alternative to the middle-income trap

Luiz Carlos Bresser-Pereira , Eliane Cristina Araújo , Samuel Costa Peres
2020

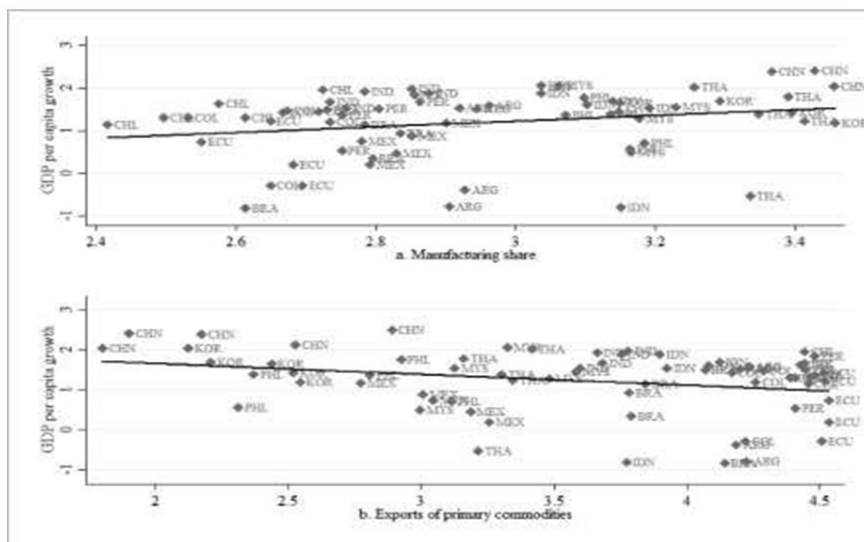
The main conclusion of this study is that, in the 1990 - 2016 period, the Latin American countries didn't fall into a middle income but a liberalization trap.

While the East Asian countries already exported manufactured goods and were relatively open, the Latin American countries adopted trade liberalization that dismantled the pragmatic mechanisms that neutralized the Dutch disease which were imbedded in they trade system, and financial liberalization that limited their ability to control the capital flow while facilitating the increase in the interest rates.

11/13/2025

KACPE Symposium 2025

14



11/13/2025

KACPE Symposium 2025

15

Productive investment

In a context of strong competition between nation-states, the maintenance of a more favorable environment for productive investment requires overcoming the interest rate-exchange rate trap; it requires the rejection of growth using foreign savings and the policy of using the exchange rate to control inflation; it requires also that the current and the fiscal accounts are kept balanced, the latter being expansive only countercyclically. In other words, it involves offering to the companies in the country (national or multinational companies) equal conditions of competition in relation to companies abroad.

11/13/2025

KACPE Symposium 2025

16

The Dutch Disease Revisited: Theory and Evidence
Arsham Reisinezhad, 2020

Contrary to empirical evidence, the Dutch disease hypothesis, driven by Learning By Doing (LBD), does not predict the steady-state real exchange rate appreciation and economic growth deceleration due to a resource boom

The main findings are threefold. *First*, a resource boom appreciates the real exchange rate. *Second*, the real exchange rate appreciation decelerates the rate of growth in both sectors such that the shrinkage is larger in the manufacturing sector than in the service sector. This, in turn, makes the relative output level of the manufacturing sector to the service sector be smaller and economic growth **be slower**. *Third*, these effects are more intensive in resource-rich countries than in resource-poor countries.

11/13/2025

KACPE Symposium 2025

17

The Middle-Income Trap Turns Ten
Indermit S. Gill & Homi Kharas, 2015

We believe that there are predictable economic transitions that middle-income countries must manage. Forewarned, policy makers can make adjustments so that passage through transitions becomes an opportunity for continued rapid growth. Several countries have demonstrated an ability to do this and to converge rapidly with high-income countries.

Some have found their own way; others have used the external environment, or integration with their neighborhood, to bind themselves to policy and institutional reforms that support higher income levels.

11/13/2025

KACPE Symposium 2025

18

Optimism

In middle-income countries the incentives for inaction can be strong. These incentives can be political (the short-termism of politicians in a democratic system), technical (the concentration of costs and the diffusion of reform benefits), or social (rent-seeking by elites). The result is policy drift and sub-par economic performance. Countries can all too easily become trapped in such states.

Our review of East Asian countries suggests reasons for optimism. Outward orientation, financial deepening and a focus on technology and innovation are becoming policy norms. These have been helped by a historical focus on infrastructure investments to connect East Asian economies to the rest of the world.

11/13/2025

KACPE Symposium 2025

19

Pessimism

Asian governments seeking to avoid a middle-income trap will need to look to their own domestic political and institutional reform processes, however hard that may be, rather than relying on external commitments as much as they could in the past.

As a final observation, we are somewhat disappointed that the economics profession has yet to provide a reliable theory of growth to help policy makers in middle-income economies navigate the transition from low to high income status.

Since close to three-quarters of the people in the world now live in middle-income economies, a better growth framework to inform policy making is sorely needed.

11/13/2025

KACPE Symposium 2025

20

Indonesia case

As the case study on Indonesia shows, ambivalence toward trade is one reason why Indonesia has not grown faster. Continued problems with customs bureaucracy as well as poor infrastructure have led to Indonesia slipping steadily down from 43rd to 53rd in the World Bank's Logistics Performance Index. Malaysia, meanwhile, has improved its ranking, now standing at 25th globally.

11/13/2025

KACPE Symposium 2025

21

Aid, Dutch disease, and manufacturing growth
Raghuram G. Rajan , Arvind Subramanian, 2009

More generally, the theory does not suggest that the adverse effects of aid on competitiveness are inevitable, but our evidence indicates that the historical experience has not been positive.

From a research perspective, it is perhaps more fruitful now to move beyond the inconclusive debate of whether aid is effective, and focus on specific ways it can be made to work better, by better understanding the reasons that might impair or enhance its effectiveness.

11/13/2025

KACPE Symposium 2025

22

Emin Afandiyev, Indiana University-Purdue University, Fort Wayne, 2013

An influx of foreign currency from any sources is more likely to cause Dutch Disease. Even though windfall of foreign cash and subsequent real exchange rate appreciation benefits a country, these benefits occur only in the short term.

In the long term decrease in employment rate, **shrinkage of manufacturing sector**, decrease in country's overall productivity and inflation happen. However researchers indicate that by implementations of wise state policies negative effects of the Dutch Disease can be prevented.

11/13/2025

KACPE Symposium 2025

23

Dutch Disease

- The term was introduced by The Economist in 1977 to describe the weakening in manufacturing sector in Dutch, after gas resource was found in Groningen in 1959 which was the largest in Europe.
- Booming sector which is commonly based on natural resource extraction or commodity crops production, could create the weakening of other sector (lagging sector) such as manufacturing or agriculture.
- 2008-2009 post-crisis commodity price boom made Indonesia focus more on commodity-based sector. Commodity downstream industry has not yet developed. When commodity price decreased in 2015, Indonesia economic growth was stuck at 5%.

11/13/2025

KACPE Symposium 2025

24

Deindustrialization (focus on commodity)

- Will shift labor from high added value industry to low added value industry
- Will slow down GDP per capita growth, only high added value industry could accelerate GDP per capita growth.
- Will cause scarcity of manufactured products needed domestically, this will cause significant import.

11/13/2025

KACPE Symposium 2025

25

How to increase GDP per capita

$$\frac{GDP}{Population} = \frac{GDP}{Hours\ worked} \times \frac{Hours\ worked}{Employment} \times \frac{Employment}{Labour\ Force} \times \frac{Labour\ Force}{Population}$$

Increase productivity per hour (green)

Decrease unemployment and increase labor force participation (yellow)

Based on OECD data, it is concluded that an effort to increase productivity per hour (unlimited) will create fast and sustainable economic growth rate in comparison with the effort to decrease unemployment rate and to increase labor force participation rate (limited). The capacity of a country to increase productivity per hour depends on intellectual capital and technology.

11/13/2025

KACPE Symposium 2025

26

Progress and promise for science in Indonesia

- Indonesian government recognizes the importance of science and technology in achieving its Vision Indonesia 2045, which includes “human development and mastery of science and technology” as one of its four pillars. However, it remains to be seen whether this vision will translate into a strong budget for science. Improving the way that research funds are distributed will also be critical;
- The government continues to underinvest in science, and a multitude of policies and institutional reforms since independence, quite promisingly during the decade of economic growth before Asian financial crisis of 1998, have failed to achieve scientific excellence.

11/13/2025

KACPE Symposium 2025

27

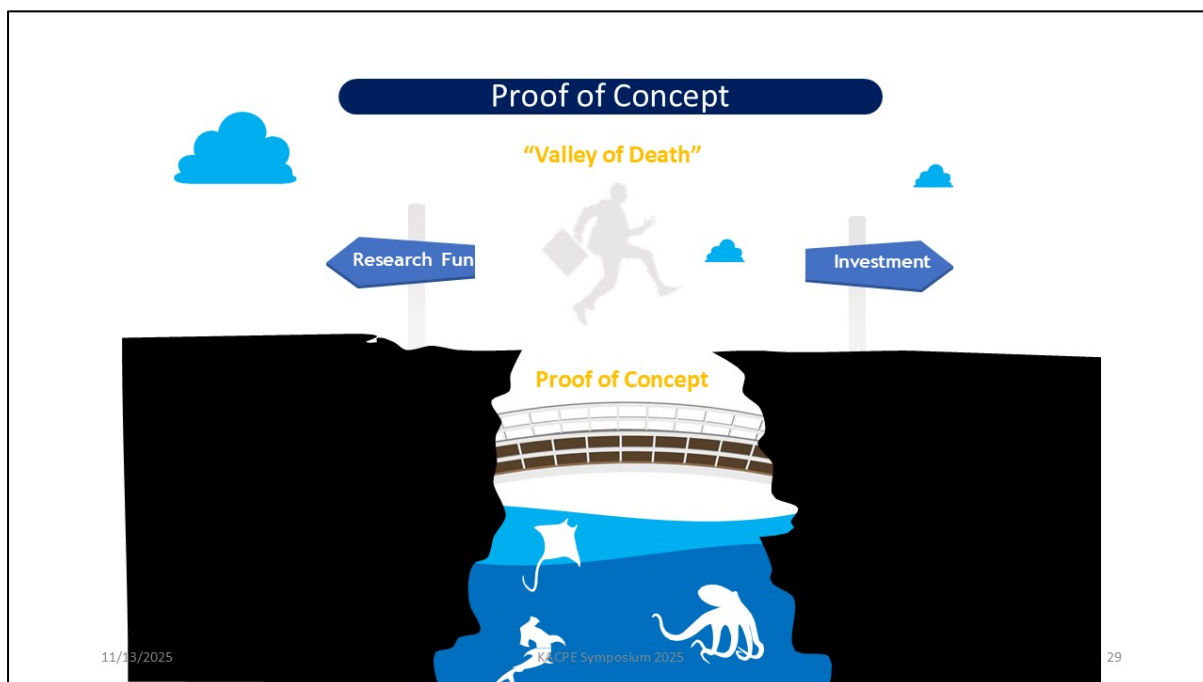
Improperly managed

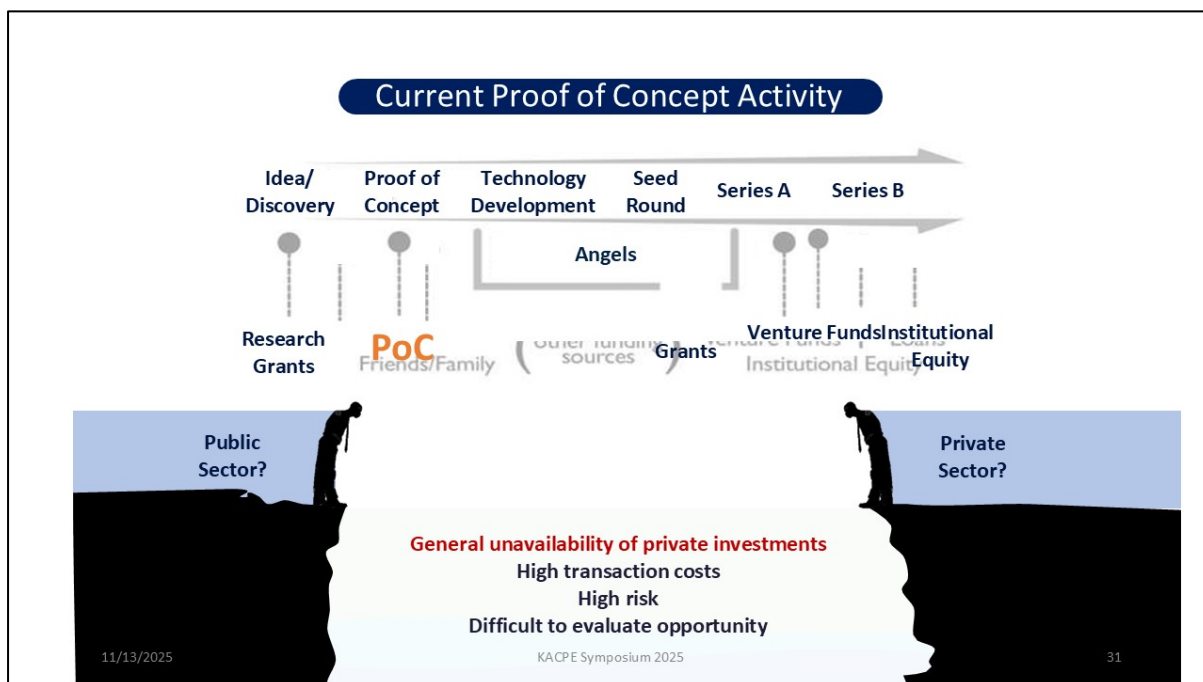
- The resources that the government devotes to scientific research are poorly managed, making it hard to use the limited fund effectively;
- The country’s science eco-system sector has been severely damaged by authoritarian legacies that tend to produce results that are short-term, myopic, and reactive.

11/13/2025

KACPE Symposium 2025

28





Affirmative policies

- Government should conduct long term investment in education (basic, secondary, and tertiary / higher education);
- Simultaneously government should conduct long term investment in research and development;
- Every fiscal year government should perform domestic spending on domestic manufacturing products using state budget, while importing manufacturing products should be minimized;
- All regulations that hinder investment in education and R&D should be removed and replaced by investment enabling regulations;
- Determination of return on investment should consider the long term intangible benefit.

11/13/2025

KACPE Symposium 2025

32

Thank you

ACCELERATING LAO PDR'S GREEN TRANSFORMATION: UNLOCKING SDG SUCCESS THROUGH ASEAN-KOREA COOPERATION

Dr. Sthabandith Insisienmay
Vice President, Lao Academy of Social and Economic Science
& Former Vice Minister, Ministry of Planning and Investment
LAOS



Lao Green National Commitments

Strategic Frameworks Driving Green Transformation

- **National Green Growth Strategy 2030:** A long-term vision to harmonize economic development with environmental sustainability, focusing on low-carbon growth, resource efficiency, and climate resilience.
- **National Socio-Economic Development Plan (NSEDP):** Integrates green growth principles into national planning, emphasizing inclusive development, poverty reduction, and environmental protection.

Key National Commitments

- **Nationally Determined Contributions (NDC) 3.0 – In Development:** Lao PDR is updating its climate targets to reflect enhanced ambition and sectoral integration.
 - **Carbon Credit Decree:** Establishes a legal framework for carbon trading, enabling participation in international carbon markets and incentivizing green investments.
 - **Forest Cover Target – 70%:** A bold national goal to restore and maintain forest ecosystems, contributing to carbon sequestration and biodiversity conservation.

3

Opportunities

Abundant Renewable Resources

- **Solar:** High solar irradiance (4.5–5.0 kWh/m²/day)
- **Wind:** Viable in mountainous regions (e.g., Xieng Khouang, Sekong)
- **Biomass:** From rice husks, wood waste, and animal manure

Regional Integration

- Participation in the **ASEAN Power Grid**
- Potential to become a **regional green energy hub**

Investment Incentives

- Tax holidays (up to 10 years)
- Import duty exemptions
- Land lease incentives

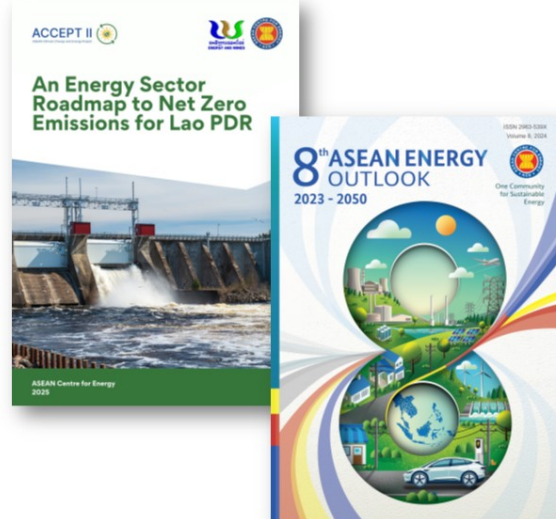
International Support

- **World Bank and IFC** (e.g., Nam Theun 2, solar pilot projects, Power distribution improvement, **green bonds**)
- **Asian Development Bank** (e.g., Rural power distribution, green energy hub)
- **Norwegian, Luxembourg, Korean and Japanese governments** (e.g., Theun-Hinboun, Nam Ngum 1, technical assistance)

4

Key Initiatives

- **Energy Sector Roadmap to Net Zero Emissions (2025):**
 - Developed with international partners
 - Focus on decarbonizing power and transport sectors
- **8th ASEAN Energy Outlook (AEO8):**
 - Lao PDR projected to increase renewable share to 85% by 2040
- **Capacity Building:**
 - Training on **LEAP** (Long-range Energy Alternatives Planning)
 - Use of **NEMO** (Next Energy Modeling system for Optimization)



5

Alignment with Sustainable Development Goals (SDGs)

- **SDG 7 – Affordable and Clean Energy:** Expansion of renewable energy sources, including hydropower, solar, and biomass, to ensure energy access and sustainability.
- **SDG 12 – Responsible Consumption and Production:** Promotion of circular economy models, sustainable agriculture, and waste reduction initiatives.
- **SDG 13 – Climate Action:** Strengthening climate resilience through adaptation strategies, emissions reduction, and participation in global climate frameworks.
- **SDG 15 – Life on Land:** Commitment to forest conservation, biodiversity protection, and sustainable land management.



6

Achievements and Milestones

Progress Toward Green Growth Goals

- **Renewable Energy Expansion:** Significant investments in hydropower, solar, and biomass projects to diversify the energy mix and reduce carbon emissions.
- **Carbon Credit Decree Implementation:** Establishment of enabling policies and pilot projects to operationalize carbon trading and attract climate finance.
- **Solid Waste Management Strategy:** Completion of a national assessment and investment roadmap to modernize waste infrastructure and promote recycling.

Strategic Partnerships and Platforms

- **Korea–Laos Net-Zero Forum:** A bilateral platform fostering dialogue and cooperation on climate neutrality and green innovation.
- **K-GREEN AGRO Partnering:** Joint initiatives to promote sustainable agriculture, agroforestry, and green value chains.
- **FAO and GGGI Collaborations:** Technical assistance and policy support for climate-smart agriculture, forest governance, and green finance.

7

Conclusion and Call for Collaboration

We invite continued ASEAN collaboration—through the APAEC, SDG peer learning platforms, circular economy and energy integration initiatives.



- ASEAN Platforms: Continued engagement through the ASEAN Plan of Action for Energy Cooperation (APAEC), SDG peer learning networks, and circular economy initiatives.
- Energy Integration: Support for regional power grid connectivity and harmonized renewable energy standards.

We welcome Korea's strategic partnership at all levels



- Strategic Partnership with Korea: Deepening collaboration across policy, technology, and investment to accelerate Lao PDR's green transformation.

8

Thank you



ASEAN-KOREAN RELATIONS

Prof. Rosalie Arcala Hall
Executive Director, UP Center for Integrative and Development Studies
University of the Philippines
THE PHILIPPINES



ASEAN-Korean Relations

Rosalie Arcala Hall

*University of the Philippines Visayas
University of the Philippines Center for Integrative and Development Studies*

13 November 2025
Phnom Penh, Cambodia

Shaping minds that shape the nation



Outline of presentation



Embassy of the Republic of Korea
in the Philippines



UP Korea
Research Center
필리핀한국대학원 한국학연구소

NEW SOUTHERN POLICY PLUS

Reinforced Commitment Towards Building
Prosperous Partnerships

26 NOVEMBER 2025
10:00 - 12:00 (GMT)



- Rationale
- Conceptual anchors
- Key Arguments
- Takeaways

Shaping minds that shape the nation

Regional frameworks and their importance

- Multilateral organizations as institutions- *normative frames*; provide a sense of *identity* for a community; *external structure* that frame social interactions and power relationships
- Institutions provide possibilities for *cooperation*- reduced transaction costs and information exchange
- Rules of the game- *products* of deliberative efforts of state; states are *socialized* into
- ASEAN centrality and ASEAN-centered structures in regional matters (economy, security, politics)

interaksyon

Home Trends + Spotlights Politics + Issues C

defense, shipbuilding cooperation at APEC

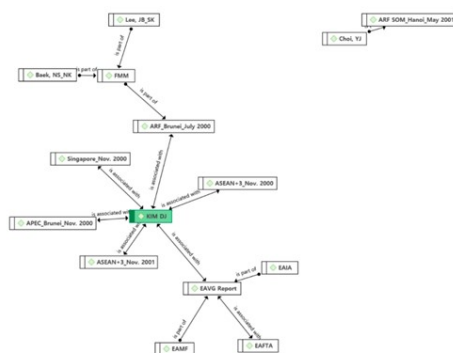
By Reuters - November 3, 2025 - 9:11 AM

Share



Shaping minds that shape the nation

Regional frameworks and their importance



[Fig. 1] President Kim's visits to Southeast Asia and attendance at ASEAN Meetings

- Great powers- US-centered rules of the game (post WWII international rules-based order) versus China challenge
- ASEAN centrality and ASEAN-centered structures in regional matters (economy, security, politics)
- ASEAN way- non-intervention, inclusivity, consensus-based decisionmaking, non-use of force in settling disputes
- External partners *socialized* into ASEAN way through dialogue platforms and formal cooperation agreements

Shaping minds that shape the nation

Regional frameworks and their importance



- Socialization into ASEAN shapes S. Korean assessment of China and US
- ASEAN *mitigates* US-China rivalry in the region, provides another way of framing strategic interactions with these Great Powers
- ARF and ASEAN Plus 3- institutionalization of collective security as an idea
- Institutional layering in network activities and policy discussions on global economic cooperation- *expanded issue coverage and priorities*



COLLABORATE

COMMUNICATE

COEXIST

AKCF

ASEAN-KOREA
COOPERATION
FUND

한 - 아세안 협력기금

Shaping minds that shape the nation

ASEAN and South Korean in Network(s)



Episode 20

AOIP Unboxed

Exploring the ASEAN Blueprint of Regional
Engagement

- Network power- social access, brokerage links, and exit potential (alternative regional architecture)
 - Network position (central or not)
 - How weaker actors can leverage network position to extend influence in external environment
 - Middle power diplomacy
- Convergence in ideas- ASEAN Outlook in the Indo-Pacific (AOIP) and South Korean New Southern Policy (NSP) which also prioritizes Indo-Pacific region

Shaping minds that shape the nation

ASEAN and South Korean in Network(s)



S. Korea unique presence in nontraditional security cooperation

S. Korea present in ASEAN-led engagements but does not stand out

Why? prioritize N. Korean threat

ASEAN public opinion survey -little confidence in SK leadership on global matters

Thin network ties between ASEAN and South Korea in defense cooperation

Thick socio-economic cooperation - niche areas in ODA, digital governance

But *uneven* between ASEAN member states- more focused on Vietnam



Shaping minds that shape the nation

ASEAN-ROK relations

Longest external dialogue partners (1991)- ASEAN plus 3; ADMM plus; Expanded Maritime Forum; East Asian Summit

Evolution of partnership from dialogue to concrete cooperation agreements

Trade in goods (2006) Trade in services (2007)

Investment (2009) Free Trade Agreement (2010)

From economic cooperation to strategic partnership for *peace and prosperity*

Cultural cooperation- ASEAN-Korea Center, ASEAN Culture House; people-to-people ties; enhanced mobilities (tourism, exchanges)



Shaping minds that shape the nation

ASEAN-ROK relations

Manila Bulletin > Philippines > National > Marcos, Lee vow stronger regional cooperation vs transnational crime

Philippines | National

Marcos, Lee vow stronger regional cooperation vs transnational crime



Participation in ASEAN-led platforms and engagements to advance, get support for denuclearization of the N. Korea agenda

New Southern Policy- Southeast Asia and India within Indo-Pacific frame
People-centered, community of peace, prosperous community
Pivot away from North Korea and Northeast Asia orientation

Greater diversity in cooperation areas- non-traditional security, HA/DR, maritime security, military medicine, peacekeeping operations, cybersecurity

Transnational crime, human rights, AICHR anti-trafficking in persons

Shaping minds that shape the nation

ASEAN-ROK relations



Diversification of types of economic cooperation

Involvement of private sector (Association of ASEAN-Korean Chambers)

Infrastructure, energy, connectivity, digital and green economy
Support for public research institutions (water resources, forest, biodiversity)

Minilateral cooperation within ASEAN

Mekong-ROK summits

BIMP EAGA ROK fund

Dedicated bureaucracy for ASEAN within MOFA; ASEAN missions

Shaping minds that shape the nation

ASEAN-ROK relations



ASEAN Cooperation Fund + ODA to ASEAN countries

SK role as middle power, how it navigates relationship with US and China

Can its relationship w/ ASEAN imbue neutrality?
Network centrality of SK?

Expanding defense international cooperation with ASEAN member states- arms sales

Formula- achieve peace and prosperity in the peninsula —> expand cooperation in defense —> improve resilience in the face of contingency

Shaping minds that shape the nation

Critical points of view



Primacy of mercantile interest- New Southern Policy intends to make up for loss due to US-China trade war

Government follows business; economic integration between ASEAN and ROK short on depth- late market entry; weak ties with local private sector

Asymmetric relationship, selective; SK investment to ASEAN, not other way around

ASEAN-Korea normative discourse- regional peacebuilding, Korean Peninsula, high tech non-traditional security

Philippines-Korea Free Trade Agreement (PH-KR FTA)

Agreement

The Philippines – Korea Free Trade Agreement (PH-KR FTA) was signed by the leaders of the Philippines and South Korea on 07 September 2023. It was ratified by the Philippine Senate on 23 September 2024 and by the National Assembly of the Republic of Korea in November 2024.

The agreement will enter into force on 31 December 2024.

Shaping minds that shape the nation

Key takeaways



Nation

PH, South Korea to boost shipbuilding, defense ties after Marcos-Lee meet at APEC 2025

Katrina Domingo, ABS-CBN News

Published Nov 01, 2025 10:12 AM PHT | Updated Nov 01, 2025 02:53 PM PHT



ASEAN-ROK relations- maturity with SK giving more attention to Southeast Asia under NSP and NSP Plus; from economic to strategic cooperation with AMS

Broader and more targeted scope of cooperation (non-traditional security, high technology, infrastructure); but integration with local economy of AMS still weak

Mobilities and exchanges (people-pillar) gaining traction

Typical middle power foreign policy? Or has S. Korea been socialized into ASEAN way?

Shaping minds that shape the nation

STRATEGIC COOPERATION BETWEEN ASEAN AND KOREA FOR ECONOMIC AND INDUSTRIAL DEVELOPMENT: A PERSPECTIVE FROM THE SOCIO- CULTURAL EXCHANGE OF ASEAN

Dr. Piti Srisangnam
Executive Director
ASEAN Foundation
ASEAN

Abstract

The paper examines the strategic imperative for deepening cooperation between ASEAN and Korea amidst a new global geo-economic landscape. The analysis posits that both ASEAN and Korea, as middle powers, are uniquely positioned to act as "connectors" within an increasingly fragmented global value chain (GVC). The report outlines a multi-faceted approach to cooperation across three key pillars: geo-economic alignment, digital security, and socio-cultural exchange. It argues that while economic and technological collaboration is critical, long-term sustainability hinges on nurturing human connections and mutual trust. The report also highlights specific initiatives and proposes a framework for future collaboration, aiming to foster a "co-evolution" of partnership that moves beyond traditional, one-directional models.

Introduction

In the 21st century, the global environment is defined by profound and rapid shifts, presenting both significant risks and new opportunities for international cooperation. The traditional paradigms of globalization, which once fostered a seamless global production network, are now being challenged by powerful forces of economic nationalism and geopolitical fragmentation. This report, building upon a strategic perspective from the ASEAN Foundation, analyzes how ASEAN and Korea can navigate this complex landscape. The central thesis is that our shared position as middle powers, deeply integrated into the global economy, mandates a strategic re-evaluation of our partnership. We must transform our relationship from one of simple economic exchange into a model of "constructive middle-power

collaboration" (Srisangnam, 2025). This requires a synchronized approach across three critical domains: geo-economic strategy, technological governance, and people-to-people development. The report's objective is to provide a detailed, evidence-based framework for this expanded cooperation, ensuring that it is pragmatic, sustainable, and aligned with the long-term vision of shared prosperity.

The New Geo-economic Landscape and the Imperative for ASEAN-Korea Cooperation

The global economic order is undergoing a fundamental transformation, moving away from the integrated, hyper-globalized system of the late 20th century. Geopolitical conflicts are increasingly fought not through conventional military force but through geo-economics, where tools such as sanctions, subsidies, and control over critical supply chains are weaponized to pursue strategic dominance (Bremmer, 2021). This shift has profound implications for global trade and investment, leading to the fragmentation of global value chains (GVCs) that were once the backbone of globalization.

Current trends, exacerbated by the COVID-19 pandemic and rising protectionism, indicate the emergence of three distinct, and increasingly non-overlapping, value chains. The first is a U.S.-led value chain, anchored by policy initiatives such as the CHIPS and Science Act and the Inflation Reduction Act, which aim to onshore and friend-shore production of critical technologies and green industries. The second is a China-led value chain, driven by state-led strategies like "Made in China 2025" and the Digital Silk Road, which seek technological self-sufficiency and expanded regional influence. The third, often referred to as the "Rest of the World" chain, comprises nations that are heavily integrated into the global economy but seek neutrality and flexibility, refusing to align fully with either of the two superpowers. This new reality is not a temporary disruption; it signals the end of a single, unified global production network and the beginning of a new era of competing, semi-overlapping economic systems (Srisangnam, 2025).

For both ASEAN and Korea, this fragmentation presents a unique and existential challenge. Both are quintessential middle powers, whose economic prosperity is deeply integrated into global trade and investment flows. They are highly dependent on open markets, stable, rule-based international systems, and regional stability. A trade war or a full-scale decoupling of the world's two largest economies would disproportionately harm them. Consequently, neither Korea nor any individual ASEAN member can afford to be fully contained within a single hegemonic value chain. Their shared interest in maintaining open economic channels and preventing a complete bifurcation of the global economy positions them perfectly to become "connectors"—the strategic centerpiece that bridges these fragmented systems (Srisangnam, 2025). This strategy of "pragmatic partnerships" involves pursuing diversified trade agreements, such as

the Regional Comprehensive Economic Partnership (RCEP), and proactively building supply chain resilience to turn their geographic centrality and economic complementarity into a formidable geostrategic advantage.

The economic complementarity between the two regions is particularly strong and provides a robust foundation for this connector role. Korea's economy is characterized by its leadership in advanced manufacturing, green technology, and innovation. The nation has world-class capabilities in high-value industries, holding a significant lead in sectors such as semiconductors, electric vehicle (EV) batteries, and AI. A 2024 report by the Ministry of Trade, Industry and Energy (MOTIE, 2024) highlighted Korea's dominant position in the global memory semiconductor market, where it holds a majority share. Furthermore, its battery industry, led by companies like LG Energy Solution and Samsung SDI, is a critical component of the global EV supply chain. This technological prowess is complemented by Korea's robust R&D infrastructure and a highly skilled workforce, which are essential for navigating the complexities of a technology-driven global economy.

In contrast, ASEAN presents a powerful demographic and economic force. With a combined population of over 680 million and a rapidly growing consumer market, the region is a major hub for global production and logistics. Its workforce is young and dynamic, providing a cost-effective and scalable labor pool for manufacturing and assembly. This has made ASEAN a key beneficiary of the "China+1" strategy, where multinational corporations diversify their manufacturing bases away from China (KOTRA, 2024). This strategic position is further enhanced by ASEAN's rich endowment of natural resources. For example, Indonesia is a global leader in nickel production, a critical component of EV batteries, making it a pivotal partner in the green energy transition. The region's digital dynamism is also a powerful asset, with its digital economy projected to reach a value of \$1 trillion by 2030 (Google, Temasek, Bain & Company, 2022). This growth is driven by rising internet penetration, a burgeoning e-commerce sector, and increasing digital adoption across various industries.

By integrating these complementary strengths, ASEAN and Korea can co-anchor an inclusive and balanced regional economy. This collaboration would not only enhance their individual economic security but also directly contribute to the "ASEAN Community Vision 2045," which aims for a cohesive, innovative, and resilient community (ASEAN Secretariat, 2023). This vision recognizes that a strong, interconnected ASEAN is vital for regional and global stability. Through joint initiatives in smart cities, renewable energy, and digital infrastructure, Korea can share its expertise to help ASEAN nations build resilient, high-tech economies, while simultaneously securing new markets and diversifying its own supply chains. This

cooperative model allows both partners to leverage each other's strengths to mitigate the risks of global fragmentation and create a new, resilient economic bloc that can stand as a stabilizing force in the new geo-economic landscape.

Addressing Non-Traditional Threats in the Digital Age

The digital revolution, while a source of immense innovation, has also given rise to a new wave of non-traditional security threats. Technologies such as AI, automation, and digital platforms are reshaping societies at a pace that often outstrips the capacity of existing policy frameworks to adapt. The irresponsible and unethical use of these technologies has created significant risks, including cyber-attacks, large-scale online scams, data theft, and the proliferation of misinformation and disinformation (UN ESCAP, 2023). These threats are transnational in nature, affecting citizens, small businesses, and government institutions without regard for national borders.

Given Korea's status as a global leader in digital governance and advanced cybersecurity, and ASEAN's rapid digital transformation, there is a clear imperative for joint cooperation (Srisangnam, 2025). The focus of this cooperation should extend beyond mere infrastructure development to include digital ethics, safety, and resilience. A human-centered approach to digital transformation is essential to protect people and societies. The ASEAN Foundation has already taken concrete steps in this direction with several key initiatives. The ASEAN Digital Literacy Programme (ADLP), for example, has successfully empowered over 190,000 ASEAN citizens with the skills to detect fake news and misinformation. The AI Ready ASEAN Initiative promotes the responsible and ethical use of AI, reaching more than 5.5 million people and emphasizing respect for intellectual property and human creativity. Furthermore, the AI for MSMEs Advancement (AIM ASEAN) initiative aims to equip 120,000 micro, small, and medium-sized enterprises (MSMEs) with the knowledge to adopt AI technology, while the new Scam Ready ASEAN initiative seeks to educate at least 3 million citizens on how to protect themselves from online fraud (ASEAN Foundation, 2024).

Korea, as a trusted partner, can play a pivotal role in scaling these efforts. By sharing its best practices in cybersecurity, digital ethics, and responsible AI governance, Korea can help build joint capacity to protect citizens in this new digital frontier. This collaboration could include joint R&D projects on cybersecurity technologies, capacity-building workshops for government officials, and the co-development of ethical AI frameworks that respect cultural diversity while promoting universal principles

of fairness and transparency. Such a partnership would not only enhance the digital security of the ASEAN region but also contribute to a more secure and trustworthy global digital commons.

People-to-People Development through Cultural Linkages

The ultimate foundation of sustainable and long-term cooperation is not solely economic or technological, but deeply rooted in human connections and mutual trust. As Dr. Srisangnam emphasized, "Economic and industrial cooperation may build structures, but cultural understanding builds trust. And trust is what sustains long-term partnerships." (Srisangnam, 2025). Over the past decades, people-to-people linkages between ASEAN and Korea have flourished, driven by a powerful wave of cultural soft power known as the Hallyu, or the Korean Wave. This phenomenon, encompassing K-Pop, K-Dramas, and K-Culture, has created a strong shared emotional connection, particularly among the youth of both regions (Korea Foundation, 2023). This provides a fertile ground for deeper collaboration.

This soft power can be a two-way street, reciprocated and amplified by ASEAN's own rich and diverse cultural heritage. The ASEAN Foundation's initiatives demonstrate how culture, creativity, and commerce can intertwine to create inclusive growth. The ASEAN-Korea KONNECT program fosters a network of artists and cultural professionals, while the ASEAN-Korea Innovative Culture Forum provides a platform for creative dialogue. Additionally, initiatives like the ASEAN SOAR Together—which supports artisans and retailers—and the ASEAN Social Enterprise Development Programme (SEDP), which nurtures youth-led social enterprises, illustrate how culture can be a catalyst for economic empowerment and social good.

The ASEAN Foundation is ready to deepen these linkages with Korean partners from universities, cultural foundations, and creative industries. The vision includes joint youth leadership camps that foster intercultural dialogue, creative industry incubators that support cross-border startups, and cross-cultural innovation labs that cultivate not only practical skills but also empathy and mutual respect (ASEAN Foundation, 2024).

As both regions prepare for the ASEAN Community Vision 2045, the focus is clear: the future will not be defined solely by GDP growth but by how effectively we nurture human connections, shared values, and collective resilience. Investing in people-to-people cooperation, therefore, represents the most enduring and critical foundation for a strategic partnership. It is through these cultural and social ties that economic and technological cooperation can find its true purpose and achieve lasting impact.

Conclusion and Policy Implications

In an era of geo-economic fragmentation, technological disruption, and social polarization, the ASEAN-Korea partnership offers a compelling model of constructive middle-power collaboration. The key message of this report is a synthesis of the three pillars of cooperation: economic, technological, and cultural.

First, economically, ASEAN and Korea must strategically position themselves together at the center of global value chain realignment. This requires moving beyond a simple technology-transfer relationship to a sophisticated, mutually beneficial partnership. As middle powers, their collective strength in bridging fragmented GVCs, particularly in critical sectors like semiconductors and EV batteries, will be a key determinant of their future economic security and influence.

Second, technologically, our cooperation must prioritize safeguarding our societies from new digital threats. As digital transformation accelerates, so do the risks of cyber-attacks and disinformation. Therefore, a joint commitment to responsible innovation, the sharing of best practices in cybersecurity and digital ethics, and collaborative capacity-building initiatives are essential to protect citizens and ensure a human-centered digital future.

Third, and most fundamentally, our partnership must be anchored in people-to-people cooperation. Cultural linkages and socio-cultural exchange are the most enduring foundation for a strategic partnership. Initiatives that foster mutual respect, empathy, and shared values through joint creative projects, educational programs, and youth leadership initiatives are not just ancillary activities but are at the very heart of building a resilient and trust-based community.

The ASEAN Foundation stands ready to work with all stakeholders—governments, academic institutions, and private sectors—to ensure that this cooperation moves beyond policy papers and into the tangible lives of people. By advancing as partners, thriving as communities, and inspiring as friends, ASEAN and Korea can jointly shape a more stable, prosperous, and connected future.

References

ASEAN Foundation. (2024). Annual Report on Digital and Cultural Initiatives.

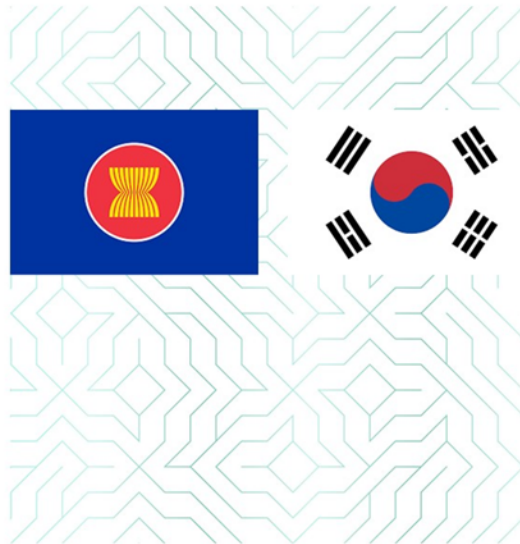
- ASEAN Secretariat. (2023). ASEAN Community Vision 2045: A Forward-Looking Perspective. Jakarta, Indonesia.
- Bremmer, I. (2021). The G-Zero World: A Foreign Policy for the Rest of Us. Penguin Press.
- Google, Temasek, Bain & Company. (2022). e-Conomy SEA 2022 Report: A New Era for Southeast Asia's Digital Economy. Retrieved from <https://www.bain.com/e-conomy-sea-2022/>
- Korea Foundation. (2023). The Rise of Hallyu and its Impact on Global Culture. Seoul, South Korea.
- Ministry of Trade, Industry and Energy (MOTIE), Republic of Korea. (2024). Korea's Strategic Industries and Export Promotion Policy. Seoul, South Korea.
- Srisangnam, P. (2025). Strategic Cooperation between ASEAN and Korea for Economic and Industrial Development: A Perspective from the Socio-Cultural Exchange of ASEAN. Keynote speech delivered at the ASEAN-Korea Dialogue.
- UN ESCAP. (2023). Digital Transformation and Cybersecurity: A Framework for Asia and the Pacific. Bangkok, Thailand.

Strategic Cooperation between ASEAN and Korea for Economic and Industrial Development:

A Perspective from the Socio-Cultural Exchange of ASEAN

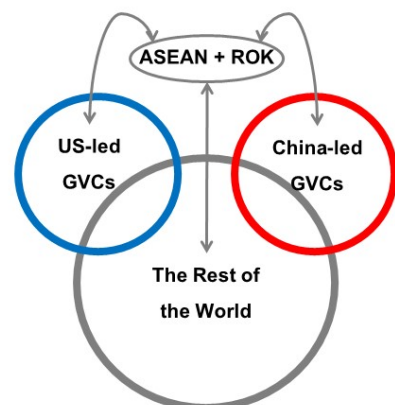
Piti Srisangnam, PhD

Executive Director, ASEAN
Foundation



Navigating the New Geo-economic Landscape

- Geo-Political Conflicts + Geo-Economic Clashes
 - Anti-Globalization + Economic Nationalism
 - Global Value Chains (GVCs)
 - Three Non-Overlapping Value Chains
- Risks and Opportunities for the Middle Powers like ASEAN and ROK
- Geographic Centrality + Economic Complementarity = Geostrategic Advantage
- Together, we can anchor an **inclusive, balanced, and connected regional economy** that contributes to the ASEAN Community Vision 2045.



Facing New Non-Traditional Threats in the Digital Age

- Irresponsible + Unethical Use = A New Wave of Non-Traditional Security Threats
→ Cyber-Attacks, Online Scams, Data Theft, Mis- and Dis-Information.
- ASEAN and Korea should therefore expand our digital cooperation beyond infrastructure to include ethics, safety, and resilience. We must ensure that our digital transformation is human-centered and secure.
- Korea, as a global leader in digital governance, can be our trusted partner—sharing best practices on cybersecurity, digital ethics, and responsible AI, while building ASEAN-ROK joint capacity to protect people in this new digital frontier.



ASEAN
DIGITAL LITERACY
PROGRAMME

+190,000 ASEAN Citizens: how to verify information, fact-check responsibly, and build digital empathy.



AI Ready ASEAN

This 2.5-year programme, supported by a USD 5 million grant from Google.org, is set to empower 5.5 million individuals in all ten ASEAN nations with essential AI skills.

Key Interventions



www.DigitalClassASEAN.org

www.AIClassASEAN.org



Empower
120,000 MSMEs
from ASEAN
and Timor-
Leste to know
how to adopt
AI technology
into their
business

Scam Ready ASEAN

- Train 550,000 individuals through a network of 2,000 master trainers;
- Reach 3 million people through community-based awareness activities; "Be Scam Ready" educational game, which applies inoculation theory to teach users how to spot scam tactics before they fall for them

People Development through Cultural Linkages: The Heart of Cooperation



- Economic and industrial cooperation may build structures, but **cultural understanding builds trust**. And trust is what sustains long-term partnerships.
 - ASEAN-Korea KONNECT for the network of artists and cultural people
 - ASEAN-Korea Innovative Culture Forum
 - ASEAN SOAR Together initiative—Supporting Our Artisans and Retailers
 - ASEAN Social Enterprise Development Programme (SEDP) – which nurtures youth-led social enterprises
- The ASEAN Foundation stands **ready to collaborate** with Korean partners.
- We envision **joint youth leadership camps, creative industry incubators**, and **cross-cultural innovation labs** that cultivate not only skills but empathy and mutual respect.
- As we prepare for ASEAN Community Vision 2045: how well we nurture **human connections, shared values, and collective resilience**.



3-key message



1. **Economically**, ASEAN and Korea must stand together at the **center of global value chain realignment**;
2. **Technologically**, we must cooperate to **safeguard our societies from digital threats** through responsible innovation; and
3. **Culturally**, we must invest in **people-to-people cooperation** as the most enduring foundation for strategic partnership.

The ASEAN Foundation is ready – ready to work with all of you to ensure that our cooperation moves beyond policies into **people's lives**. Together, ASEAN and Korea can **advance as partners, thrive as communities, and inspire as friends**.

Community Building, P2P, Networking | Education, Re-skill and Up-skill, Scholar Networks | Media and Media Engagement
Environment and Sustainable Development | Art and Culture | Business Community Engagement (MSMEs Development)



ASEAN FOUNDATION



To Raise ASEAN Awareness, Strengthen ASEAN Identity, and Build a Sustain and Prosperous ASEAN Community for All ASEAN citizens in Collaboration with ASEAN Secretariat and All Partners.

SESSION 2

Strengthening State Capacity for Smart Innovation: Policy Development and Korea-ASEAN Cooperation

Dr. Khairul Naim Bin Adham

Deputy Undersecretary, Biodiversity and Forestry Management Division
Ministry of Natural Resources and Environmental Sustainability
MALAYSIA

Prof. Suhono Harso Supangkat

Director, Smart Cities and Communities Innovation Center
Institut Teknologi Bandung
INDONESIA

Dr. En Sovann

Director, Dept of Digital Government Transformation, General Secretariat of the
Digital Government Committee, Ministry of Post and Telecommunications
CAMBODIA

Mr. Nuon Samnavuth

Director, Waste Management and Environment Division
Capital City of Phnom Penh
CAMBODIA

Dr. Saowaruj Rattanakhomfu

Research Director, Innovation Policy for Sustainable Development
Thailand Development Research Institute
THAILAND

MALAYSIA'S VISION 2026-2030: SUSTAINABLE FUTURES THROUGH SMART INNOVATION AND COLLABORATIVE OPPORTUNITIES WITH SOUTH KOREA

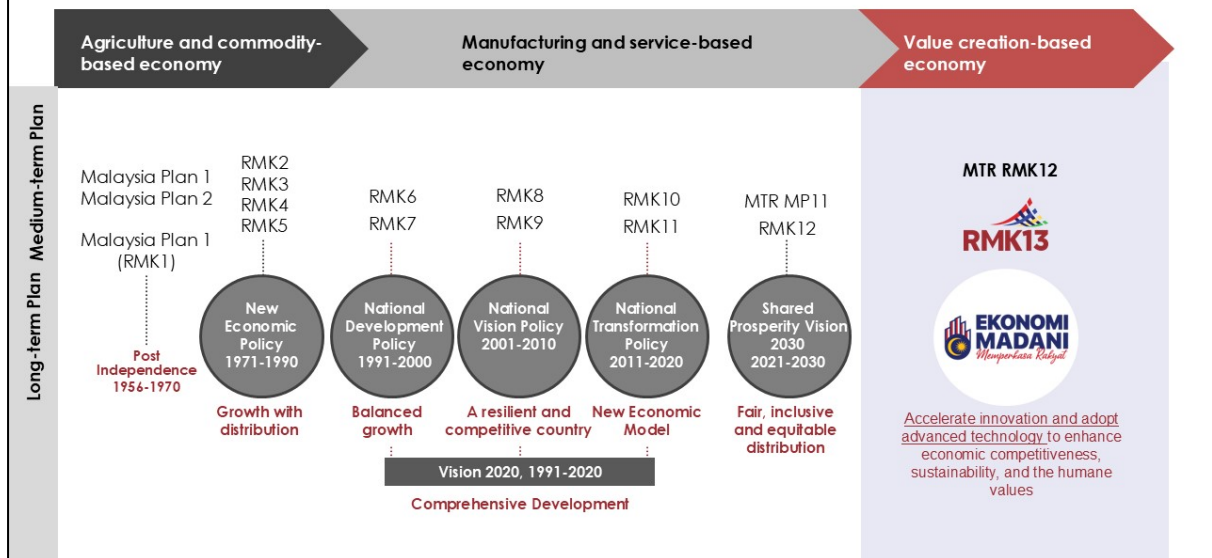
Dr. Khairul Naim Bin Adham
Deputy Undersecretary, Biodiversity and Forestry Management Division
Ministry of Natural Resources and Environmental Sustainability
MALAYSIA



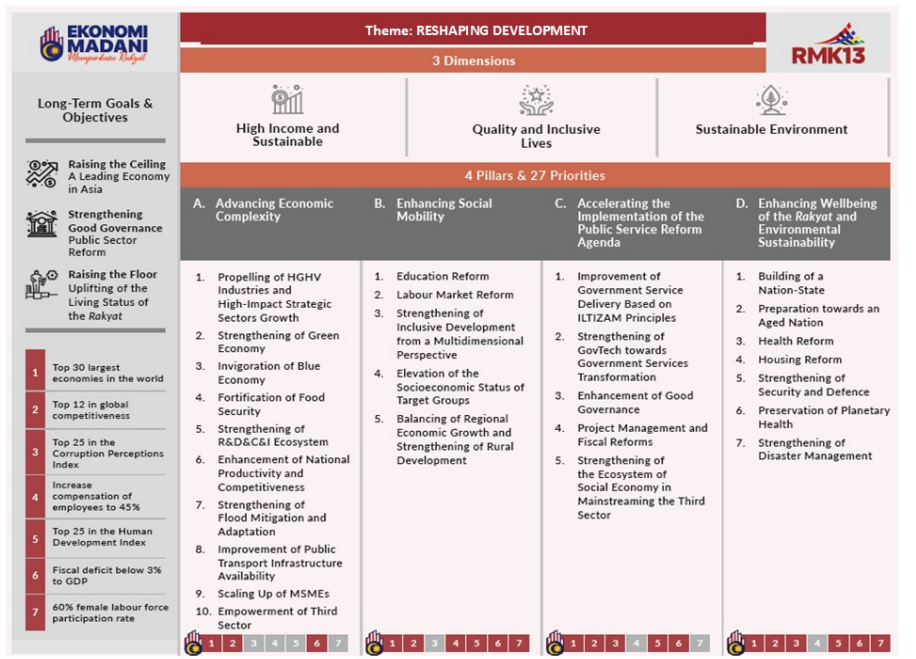
Presentation Outline	1	Introduction
	2	The Thirteenth Malaysia Plan Framework 2026-2030
	3	Thrusts, Pillars and Priorities
	4	Selected Initiatives
	5	Key Innovation Areas and Collaborative Opportunities
	6	Conclusion

National Socioeconomic Policies

National development towards value creation-based economy



The 13MP Framework



Thrusts

- **Raising the ceiling (advance economic complexity to increase efficiency, innovation and competitiveness)**
 - Transform Malaysia into a consumption powerhouse that produces 'Made by Malaysia' products
 - Shifting to value creation based economy on digitisation and artificial intelligence (AI) (i.e. integrated automation, predictive analytics and robotic systems)
 - Inculcating innovation culture towards an AI-based nation
 - Boosting the growth of the HGV industry and strategic sectors
 - Balancing economic progress between regions and strengthening rural development
 - Intensifying Malaysia's involvement and role in the world economy (i.e. quality and high-value investment in AI, semiconductors and renewable energy industries)
- **Raising the floor (elevating living status/wellbeing)**
 - Addressing the cost of living burden
 - Engineering a social system based on INSAN MADANI
 - Improving the quality of people's lives
 - Achieving social justice and equal opportunities
- **Strengthening good governance**
 - Ensuring transparent, agile and thorough services

Pillars

- **Advancing economic complexity**
 - Accelerating the structural transition towards a high-value economy based on innovation and technology
- **Enhancing social mobility**
 - Enhancing social mobility to enable the people to benefit from the economic growth spillover and improve the position in social hierarchy
- **Accelerating the implementation of the Public Service Reform Agenda**
 - Improving service delivery based on the ILTIZAM (commitment) principles, mainstream the GovTech and enhance good governance
- **Enhancing the wellbeing of the people and environment sustainability**
 - Enhancing the wellbeing of the people and environmental sustainability to achieve inclusive and sustainable socioeconomic development objectives

Advancing economic complexity

- **Driving Force - Digitisation & AI**
 - Shift to value creation
 - Diversify high-value products
 - Nurture culture of innovation
- **Strategic Technology Plans**
 - National AI Action Plan 2030
 - National Science, Technology and Innovation Policy
 - National Fourth Industrial Revolution (4IR) Policy
 - New Industrial Master Plan (NIMP) 2030
 - National Semiconductor Strategy (NSS)
 - National Energy Policy (NEP) 2022-2040
 - National Energy Transition Roadmap (NETR)
 - Natural Gas Roadmap
 - Hydrogen Economy and Technology Roadmap
- **Sustainable Industries**
 - Green economy (i.e. energy transitions initiatives, green electricity supply, green financing)
 - Blue economy (i.e. enhance shipbuilding & ship repair, logistics, develop blue carbon initiatives)

Advancing economic complexity (Cont.)

- **Research, Development, Commercialisation and Innovation (R&D&C&I) Ecosystem Strengthening**
 - Establish AI-based incubation centres, hubs, sandboxes
 - Increase commercialisation of high-value intellectual property (IP)
 - Improve R&D&C&I Investment Model
 - Increase high-value research through targeted incentives and the provision of research facilities
- **Advanced Manufacturing & Sectors**
 - Semiconductor industry reform (complex, high-value products)
 - Air mobility expansion (aerial vehicles, unmanned aircraft system, advanced air mobility technologies)
 - Construction modernisation - Industrialised Building System (IBS), Building Information Modeling (BIM)

Enhancing wellbeing and sustainability



- **Planetary Health Preservation**
 - AI for accurate air/water quality monitoring
 - AI for smart waste management
 - Accelerate green technology innovation (low-carbon economy)
 - 45% GHG emissions intensity reduction by 2030
 - National adaptation plan and climate change legislation
 - Circular economy
 - Biodiversity conservation
- **Disaster Management**
 - AI for forecasting & response effectiveness
 - Strengthen AI flood early warning systems
 - Expedite high-priority flood mitigation projects
- **Healthcare Reform**
 - Digitisation with big data, AI, emerging technologies
 - AI for accurate early diagnosis & treatment customisation
 - Non-communicable diseases (NCD) prevention
- **Agriculture**
 - AI for high-precision crop monitoring
 - Real-time weather forecasting
 - Robotic technology

Enhancing wellbeing and sustainability (Cont.)



- **Urban Development & Lifestyle**
 - Expand transit-oriented development zones
 - Kota MADANI (Putrajaya) Pioneer Model

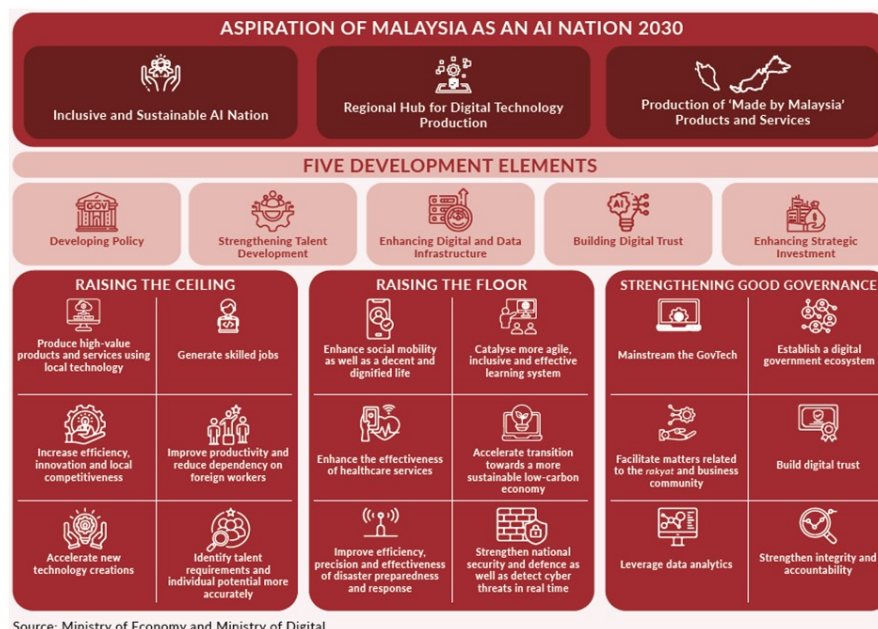
Accelerating public service reform (governance)

- **GovTech Mainstreaming**
 - Adopt advanced technologies (AI, internet of things, augmented reality)
 - Enhance efficiency and transparency
- **Digital Ecosystem Creation**
 - Connect government, people and business
 - Ensure transparent, timely and thorough services
- **AI for Data-Driven Decision Making**
 - Real-time information analysis

AI nation development framework

- **Developing Policy**
 - Develop National AI Action Plan 2030
- **Strengthening Talent Development**
 - Nurture AI literacy
 - Strengthen specialisation programmes
- **Enhancing Digital and Data Infrastructure**
 - Provide comprehensive infrastructures (data centres, cloud computing, high-speed connectivity) to support AI adoption
- **Building Digital Trusts**
 - Enhance public confidence in AI through literacy and cybersecurity measures
- **Enhancing Strategic Investment**
 - Intensify Public-private partnership (PPP) to increase strategic AI-related investments

AI Nation 2030



HGHV Industry Initiatives

- **Reforming Local Semiconductor Industry**
 - Implement the New Industrial Master Plan (NIMP) 2030 and the National Semiconductor Strategy (NSS)
 - Establish Malaysia as a competitive high-tech semiconductor hub
 - Implement strategic collaborations with global and local semiconductor companies based on a technology and IP centric investment model
 - Strengthen the investment ecosystem encompassing alternative financing, incentives, skilled talent development and digitalisation
-
- **Developing the Entire REE Value Chain**
 - Develop local capacity, especially in mining technology, purification and separation of rare earth elements (REE)
 - Develop local talent, provide modern infrastructure and comprehensive funding and incentives
 - Implement more detailed REE resource mapping
 - Improve policy and governance and strengthen cooperation between the Federal Government and state governments

HGHV Industry Initiatives (Cont.)

• Advancing Agrofood and Agricommodity Subsectors

- Increase high-value production, productivity and technology adoption
- Enhance productivity through large-scale agriculture and smart farming by adopting modern technologies
- Intensify R&D&C&I to produce resilient and high yielding agricultural inputs
- Expanding the market through export trials and targeted promotions
- Increase innovation in producing high-value products
- Expand the replanting programmes and strengthen the implementation of the circular economy of the agricommodity subsector
- Provide an integrated infrastructure and improve targeted incentives
- Strengthen adoption of environmental, social and governance (ESG) principles



Energy Transition Initiatives

• Strengthening the natural gas supply industry

- Positioning Malaysia as a leading regional gas trading hub
- Implementing the Natural Gas Roadmap
- Strengthening cooperation in trade and infrastructure development with the ASEAN member states

• Increasing access to green electricity supply

- Enhancing green electricity supply initiatives based on third-party access
- Implementation of the collective installation of solar photovoltaic systems on rooftops of residential premises

• Enhancing electricity supply

- Establishing an electricity market system based on a more innovative mechanism
- Encouraging the Time of Use (ToU) electricity tariffs scheme
- Utilisation of various renewable energy (RE) sources and new technologies
- Implementation of battery energy storage systems and smart grid
- Expansion of energy efficiency labelling for industrial sector equipment

• Introducing nuclear energy as a source of clean electricity

- Introducing the nuclear energy development programme for electricity generation as a clean energy source in the national energy mix in 2031
- Coordinate the governance of the country's nuclear programme through the Nuclear Energy Programme Implementing Organization (NEPIO)

16

Green Economy Initiatives

- **Facilitating carbon trading**

- Implementation of a national carbon market policy
- Enactment of a legislation related to climate change
- Establish a carbon emission trading scheme
- Coordinate incentives and regulatory compliance for the implementation of carbon credit projects

- **Boosting CCUS Industry**

- Intensify the implementation of CCUS initiatives
- Enhance the regulatory and governance framework
- Include CCUS activities as part of the green investment and financing taxonomy Strengthen the R&D&C&I activities particularly to identify appropriate and cost-effective technologies
- Sign bilateral agreements on CO₂ cross-border transportation activities with Japan, the Republic of Korea and Singapore
- Implement a pilot CO₂ capture project
- Encourage the participation of SMEs, including oil and gas services and equipment(OGSE) companies across the CCUS value chain
- Enhance the development of local talent and expertise

Green Economy Initiatives (Cont.)

- **Enhancing green financing**

- Enhance access to green financing
- Strengthen SMEs project viability
- Participation of more private financing providers
- Introduction of new financing programmes
- Intensify capacity building programmes for SMEs in designing viable green projects
- Develop a blended financing under the National Energy Transition Facility (NETF) and introduce a platform for blended financing
- Explore new green financing programmes that support decarbonisation

- **Fostering demand and supply of green product**

- Foster domestic demand for green products and services through green procurement and green city initiatives
- Enforce the government green procurement (GGP) Works guideline
- Expand the implementation of the GGP to state governments and local authorities (PBTs)
- Transformation of cities to be more sustainable through increased usage of RE and energy efficiency, green mobility and smart landscapes
- Improvement in green certification and capacity building of related industries
- Greening the agricommodity and supply chain and increase the traceability through the usage of advanced technology
- Develop a mechanism to set the environmental sustainability of imported agricommodity products

Digital Economy Initiatives

- **Establishing Malaysia as a regional producer of digital technologies**
 - Intensify the development and adoption of AI holistically across strategic sectors to increase productivity
 - Enhance the ecosystem, operational efficiency and policy implementation and infrastructure provision
 - Establish a national data bank as a centralised comprehensive information repository to facilitate a wider and safer sharing
 - Increase the usage of digital twin as virtual sandbox to support innovation simulation
 - Strengthen the cyber defence capabilities
 - Strengthen AI talent development
 - Improve digital infrastructure to enhance internet access, mainly high-speed connectivity
 - Introduce business digital identity to accelerate secured access to financing services and international markets
- **Mainstreaming science, technology and innovation**
 - Explore a more flexible collaborative model to attract investment in accelerating technology transfer and promoting innovation
 - Increase awareness and understanding on the application of STI, including the adoption of AI technology, among industry players through targeted communication, education and public awareness (CEPA) implementation
 - Provide AI-based interactive learning tools for science, technology, engineering, and mathematics (STEM) talent to ensure the talent meet the industry need

TVET Initiatives

- **Strengthening the TVET Ecosystem**
 - Strengthen Technical and Vocational Education and Training (TVET) governance by establishing the TVET Commission
 - Formulate a TVET act to improve TVET governance
 - Elevate TVET to be on par with the academic pathway in the national higher education system
 - Develop a TVET institution rating system
 - Expand TVET programmes offerings to include new skills under HGHV industries and strategic sectors
 - Intensify collaboration between public TVET institutions and the industry through sharing of expertise and latest technologies
 - Develop upskilling and reskilling programmes for TVET instructors
 - Expand TVET programmes to *tahfiz* and *huffaz* students

Key Innovation Areas

- | | |
|---|---|
| <ul style="list-style-type: none"> • AI and Digitalisation <ul style="list-style-type: none"> • Increase efficiency, innovation and competitiveness • Increase the production of high-value products and services • AI-based solutions in key sectors (i.e. energy, agriculture, healthcare, GovTech, planetary health, disaster management) • Research, Development, Commercialisation and Innovation <ul style="list-style-type: none"> • Accelerate new technology creation and commercialisation • Strengthen AI-based incubation centres, research hubs and sandboxes to accelerate new technology creations and facilitate the testing of local solutions • Increase the commercialization of high-value Intellectual Property (IP) • Prioritise IP-based Investment • Improve the R&D&C&I investment model to increase high-value research | <ul style="list-style-type: none"> • Green Technology and Climate Change Innovation <ul style="list-style-type: none"> • Innovation for achieving environmental sustainability and transitioning towards a low carbon economy (green economy growth, energy transition, green electricity supply, green financing, carbon management, circular economy) • Advanced Manufacturing and Strategic Sectors <ul style="list-style-type: none"> • Digital economy • Accelerate the transition to producing more complex and high-value products in semiconductor industry • Adoption of advanced technologies in air mobility for the creation and production of aerial vehicles • Prioritise advanced technologies in the construction sector such as IBS and BIM |
|---|---|

21

Colaborative Opportunities

- 1 AI & Digitisation
- 2 Semiconductor
- 3 Digital economy
- 4 GovTech
- 5 Sustainable, smart and inclusive urban development (smart cities smart mobility, smart infrastructure)
- 6 Green economy (renewable/clean energy, hydrogen technology, Carbon Capture, Utilization and Storage (CCUS), battery energy storage systems, smart grid & green financing)
- 7 Smart agriculture/farming
- 8 Blue economy and sustainable marine biodiversity
- 9 Micro, Small and Medium Enterprises (MSME) ecosystem
- 10 Planetary health (nature-based solutions, biodiversity conservation, circular economy and smart waste management)
- 11 Education, skills & talent (STEM, TVET)
- 12 Disaster management
- 13 Rare earth elements (REE) value chain

2025 Korea-ASEAN Community of Policy Exchange
(KACPE) International Public Policy Symposium

Thank you

13 November 2025
Phnom Penh, Cambodia



SUSTAINABLE SMART INNOVATION IN INDONESIA: GOVERNMENT POLICIES AND KOREA–SOUTHEAST ASIA COOPERATION

Prof. Suhono Harso Supangkat
Director, Smart Cities and Communities Innovation Center
Institut Teknologi Bandung
INDONESIA

Sustainable Smart Innovation in Indonesia:
Government Policies and
Korea–Southeast Asia Cooperation

"Green Energy Development and Its Relationship to Economic Growth"

Prof. Suhono Harso Supangkat

BRIN
BADAN PENELITIAN DAN PENGEMBANGAN NASIONAL

ITB
INSTITUT TEKNOLOGI BANDUNG

SCCIC
SMART CITY & COMMUNITY INNOVATION CENTER

AISX
AI FOR SMART-X

Artificial Intelligence and Cybersecurity
Research Collaboration Center

Center of Excellence Smart City &
Community Innovation Center (SCCIC)

Artificial Intelligence & Cyber Security for
Smart X (AISX) Research Collaboration
Center

Bandung Institute of Technology

Artificial Intelligence and Cyber Security Research Collaboration Center - AI For Smart X

Smart City & Community Innovation Center | ITB | Page-1

Smart City & Community Innovation Center

SCCIC
SMART CITY & COMMUNITY INNOVATION CENTER

A Innovation Center at **Bandung Institute of Technology (ITB)** focuses on developing Smart X solutions for the challenges faced by the 'X' sectors.

Health Agriculture Mobility Defense ... X Sectors

Village City Province Country

With a strong motivation to find systematic solutions for urban and industrial problems more quickly, cost-effectively, and with **better quality of life**.

Artificial Intelligence and Cyber Security Research Collaboration Center - AI For Smart X

Smart City & Community Innovation Center | ITB | Page-2

AI For Smart-X (AISX)



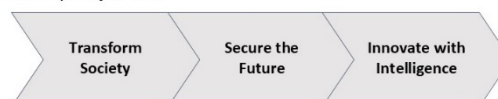
AI For Smart-X

Artificial Intelligence and Cybersecurity
Research Collaboration Center



Artificial Intelligence and Cybersecurity
Research Collaboration Center

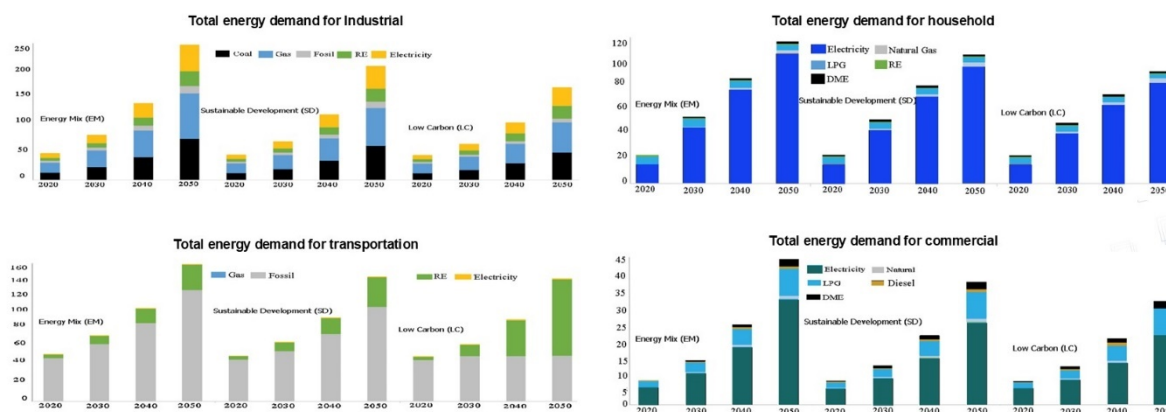
AISX (AI for Smart-X) aiming to become the leading hub in Southeast Asia in advancing **Artificial Intelligence (AI)** and **Cybersecurity innovations**, while upholding security and ethical responsibility to enhance quality of life.



Indonesia's Energy Transformation



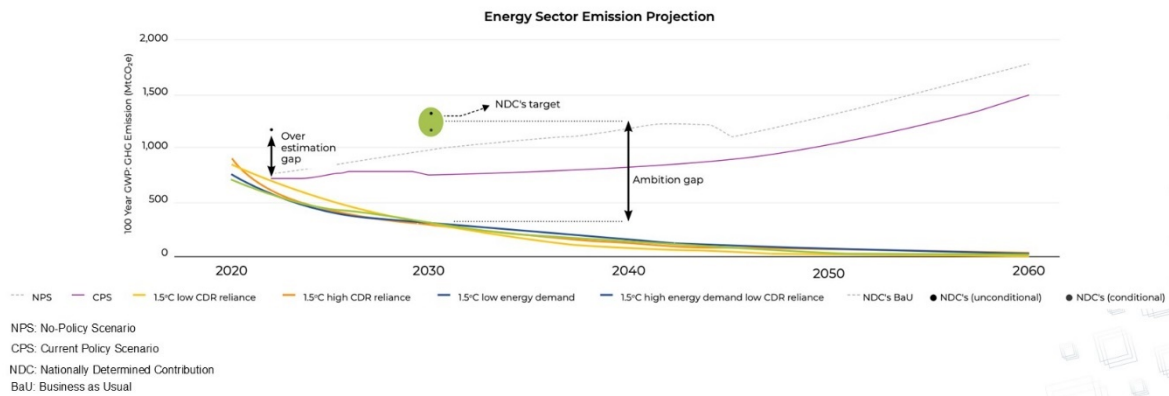
Indonesia's energy demand grows **4–5% annually**, driven by industrialization and urbanization.



Source: Investigation of availability, demand, targets, and development of renewable energy in 2017–2050: a case study in Indonesia (2021)

Indonesia's Energy Transformation

Indonesia Energy Transition Outlook: Peaking Indonesia's Energy Sector Emission by 2030



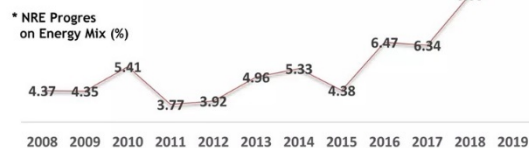
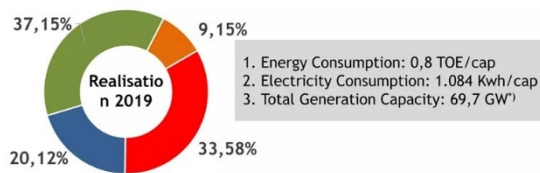
Source: Indonesia Energy Transition Outlook 2024

Artificial Intelligence and Cyber Security Research Collaboration Center - AI For Smart X

Smart City & Community Innovation Center| ITB | Page-5

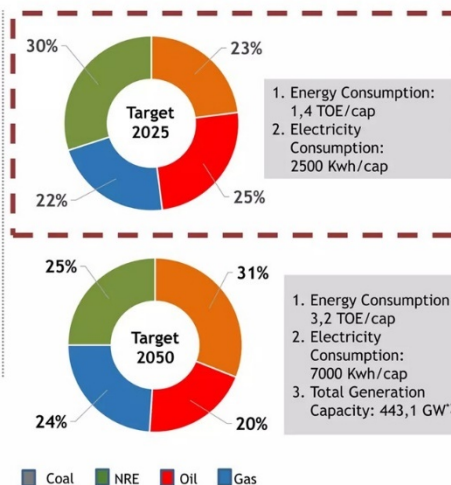
Indonesia's Energy Transformation

National target: 23% renewables by 2025, 31% by 2050 (RUEN target).



^{*)} Indonesia's population in 2019 was 267 million and by 2050 will reach 335 million (based on RUEN assumption).

Source: National Energy Council and Pusdatin



Artificial Intelligence and Cyber Security Research Collaboration Center - AI For Smart X

Smart City & Community Innovation Center| ITB | Page-6

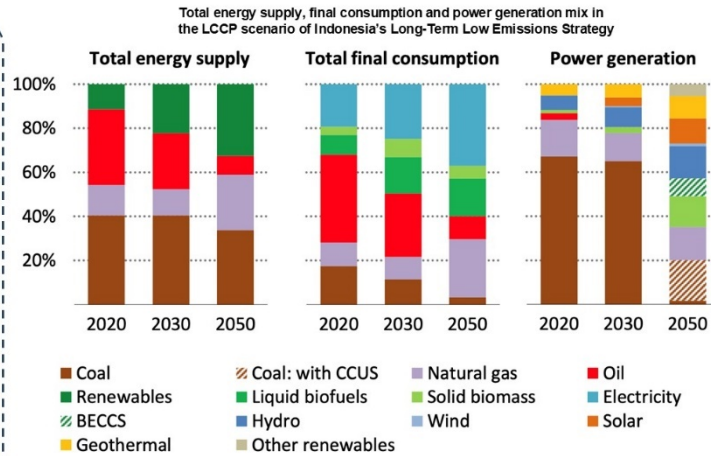
Indonesia's Energy Transformation



Supported by **Presidential Regulation No. 112/2022** on renewable energy acceleration and **Net Zero Emission roadmap 2060**.

Indonesia's PR 112/2022

- ✓ Government goal: Accelerate renewable energy development and reduce greenhouse-gas emissions.
- ✓ Prohibition on new coal-fired steam power plants, except under strict conditions; requirement to accelerate retirement of existing coal plants.
- ✓ New pricing regime for renewable electricity: adoption of a "maximum benchmark price" (ceiling) rather than linking to cost of existing generation.
- ✓ Simplified procurement: direct appointment (≈ 90 days) or direct selection (≈ 180 days) for renewable-energy power plants depending on type/size
- ✓ Fiscal & non-fiscal incentives provided for renewable energy projects; special support for geothermal.
- ✓ Transitional provisions: existing PPAs (power purchase agreements) remain valid; new ones must follow this regulation.



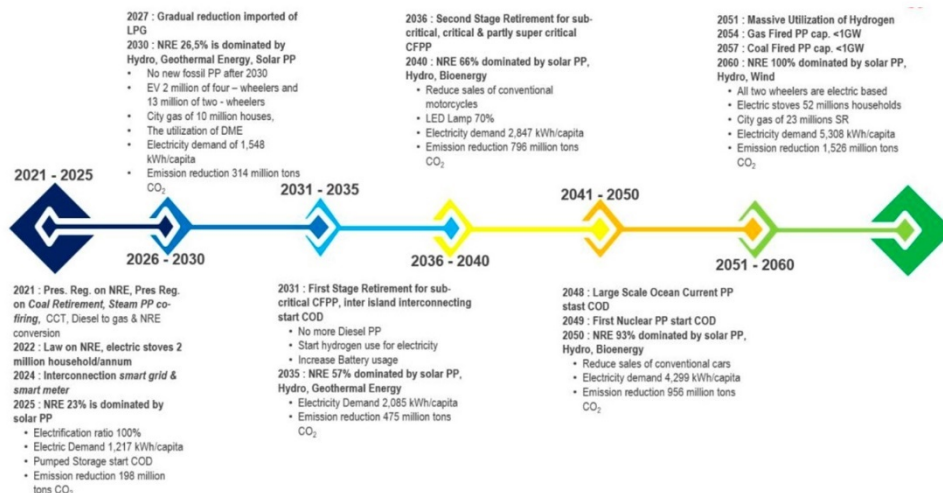
LCCP: Low Carbon Scenario Compatible with the Paris Agreement

IEA. All rights reserved.

Indonesia's Energy Transformation



Indonesian road map to Net Zero Emission commitment by 2060



Source: Carbon capture storage and carbon capture utilization storage as energy transition strategy for the Indonesian oil and gas sector towards net zero emissions (2024)

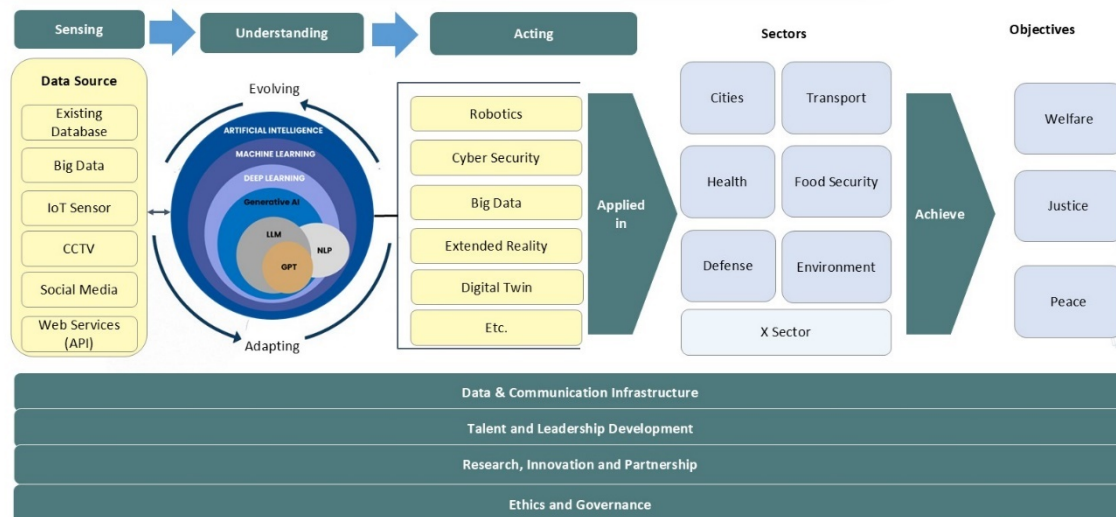
Government Policies Supporting Green Innovation



Indonesia's energy policy ecosystem demonstrates a strong synergy between **energy sustainability** and **digital innovation**. Through various strategic policy instruments, the government seeks to drive the transformation toward a competitive green economy.

Policy Instrument	Program	Impact
National Energy Policy (RUEN)	RUEN (Rencana Umum Energi Nasional) establishes Indonesia's long-term energy transition roadmap. It sets specific renewable energy targets (23 % by 2025 and 31 % by 2050) and emission-reduction goals in line with the Nationally Determined Contribution (NDC).	Promotes institutional coordination among ministries (ESDM, Bappenas, PLN) to align policies, budgets, and investment priorities for cleaner energy supply.
Green Industry Policy	Encourages industries to adopt low-carbon production processes through fiscal incentives, efficiency standards, and eco-label certification. It includes programs for energy auditing , cleaner technology adoption, and waste reduction.	Drives the creation of eco-industrial zones where industries share resources, recycle by-products, and reduce collective carbon footprints.
Smart City Programs	Integrates IoT, AI, and data analytics into urban energy systems to monitor consumption, optimize operations, and support predictive maintenance.	Enables local-level innovation and smarter decision-making in energy management, transport, and infrastructure.
Carbon Pricing Mechanisms	Introduces a market mechanism for emission reduction via carbon trading and carbon tax under Presidential Regulation No. 98/2021 and its 2023 implementation steps. It allows entities exceeding emission caps to buy credits from lower-emitting sectors.	Stimulates green investment and encourages companies to adopt cleaner technologies to reduce carbon liabilities.

Living Intelligence Concept



The Core Component: The Data-Driven Smart City



Data is the Lifeblood of the Smart City

Data is the indispensable raw material that fuels the “Sensing-Understanding-Acting” cycle

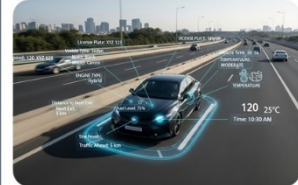
- **Sensing** is the act of **collecting** data.
- **Understanding** is the process of **analyzing** data.
- **Acting** is the ability to **respond** to insights derived from data.



City Sensing

City Sensing, as pioneered by the MIT Senseable City Lab, refers to the use of advanced sensing technologies, data analytics, and real-time data collection to understand and improve urban environments.

How cities can become more **efficient**, **sustainable**, and **livable** by **leveraging data** from sensors, mobile devices, and other sources embedded in the urban fabric



Real-Time Data Collection

Using sensors, cameras, GPS, and mobile devices to gather real-time information about urban activities (e.g., traffic, energy use, air quality)

Urban Analytics

Applying data science and machine learning to analyze patterns and trends in urban systems

Citizen Engagement

Involving residents in data collection and decision-making processes to create more participatory cities

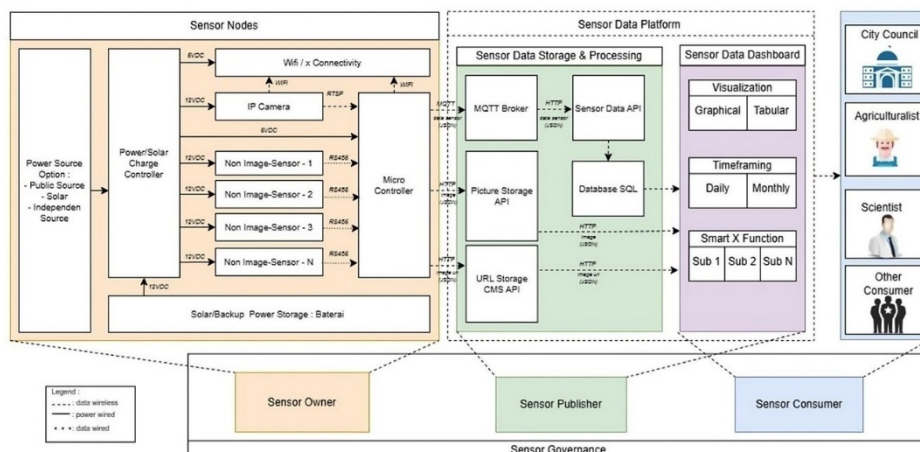
Sustainability

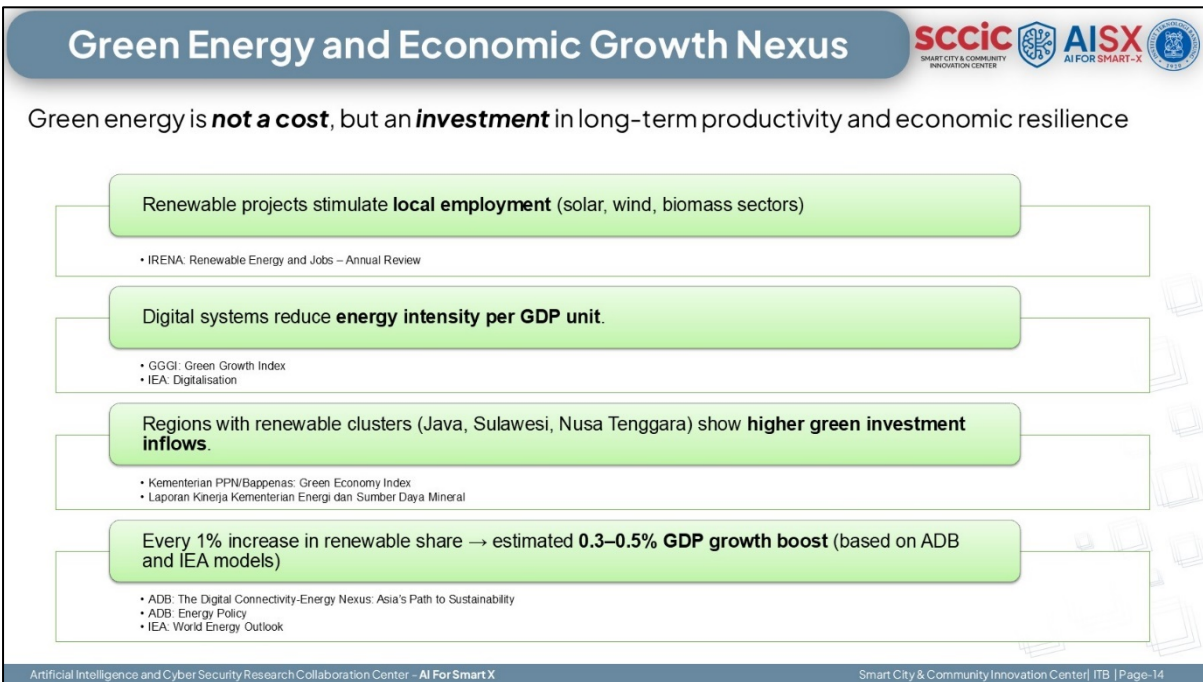
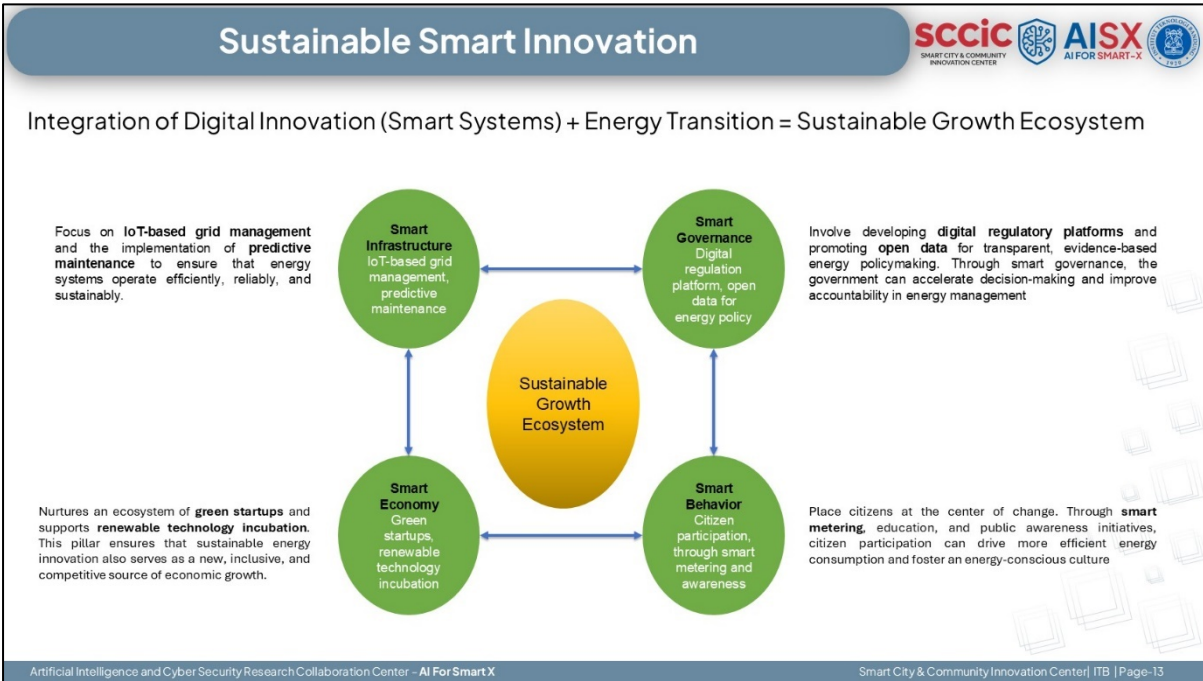
Using data to optimize resource use, reduce emissions, and improve quality of life

Democratizing Data: Sensing-as-a-Service (Se-aaS)

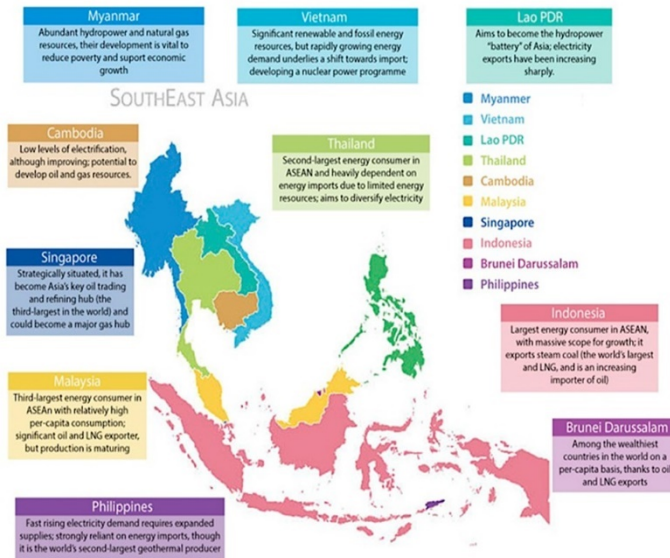


Sensing as a Service (Se-aaS) is a cloud-based service model that **allows sensor data to be shared and accessed by multiple clients and suppliers**. This model leverages the Internet of Things (IoT) ecosystem to provide efficient and scalable sensor data services.





Energy Information in the ASEAN region

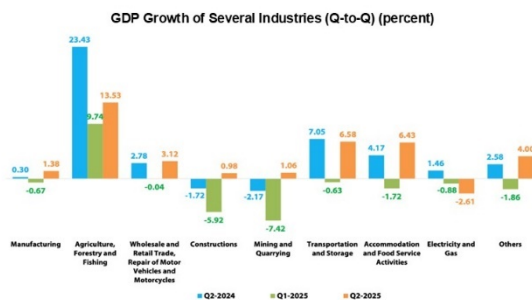


Southeast Asia's diverse energy landscape ranges from fossil fuel reliance and export (e.g., Indonesia, Malaysia) to renewable potential and regional energy trade (e.g., Laos as the "battery of Asia," Vietnam's renewable growth, and the Philippines' geothermal leadership).

Source: An evaluation of ASEAN renewable energy path to carbon neutrality (2023)

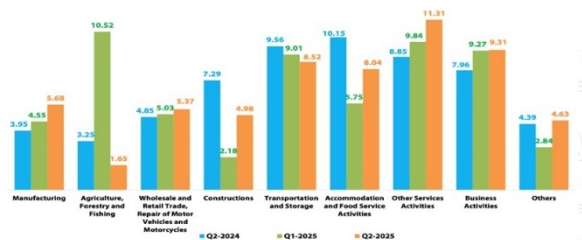
Indonesia's Economic Growth 2025

GDP by Industry



Indonesia's economy grew by 4.04% (q-to-q), driven mainly by strong performance in Agriculture, Forestry, and Fishing (13.53%), Transportation and Storage (6.58%), and Accommodation and Food Service Activities (6.43%), while Electricity and Gas was the only sector to experience a contraction at -2.61%.

GDP Growth of Several Industries (Y-on-Y) (percent)

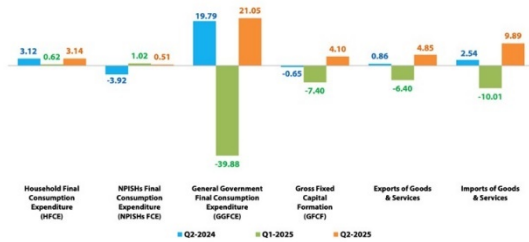


Indonesia's economy grew by 5.12% year-on-year (y-on-y) in Q2 2025, with growth recorded across all industries — led by Other Services Activities (11.31%), Business Activities (9.31%), Transportation and Storage (8.52%), and Accommodation and Food Service Activities (8.04%), reflecting broad-based economic expansion driven by services and logistics sectors.

Indonesia's Economic Growth 2025

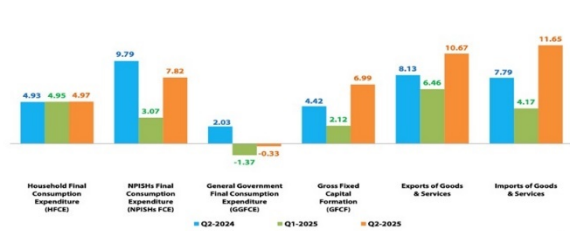
GDP by Expenditure

GDP Growth in Several Component of Expenditure (Q-to-Q) (percent)



Indonesia's GDP by expenditure grew by 4.04% in Q2 2025 (q-to-q), driven primarily by a sharp increase in Government Final Consumption Expenditure (GGFCE) at 21.05%, followed by Exports of Goods and Services (4.85%), Gross Fixed Capital Formation (4.10%), and Household Consumption (3.14%), while Imports of Goods and Services also rose by 9.89% as a reducing factor in total GDP.

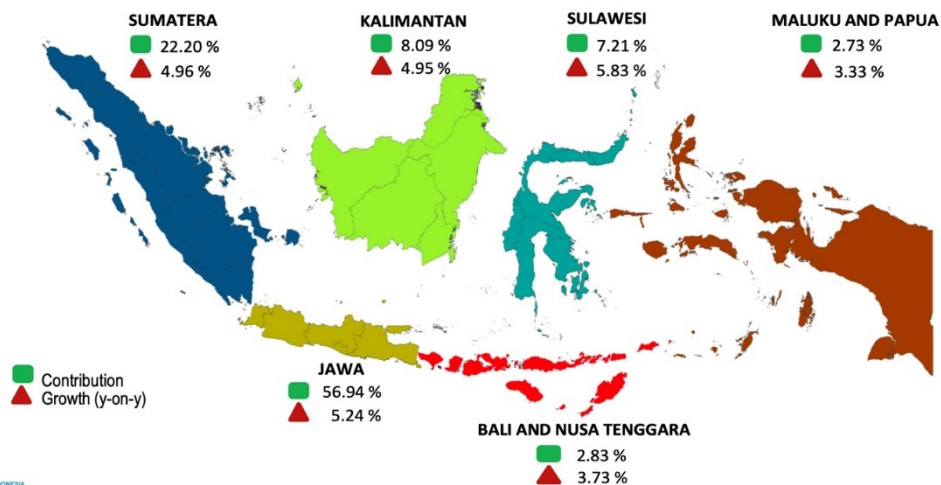
GDP Growth of Several Industries (Y-on-Y) (percent)



Indonesia's GDP by expenditure grew by 5.12% year-on-year (y-on-y) in Q2 2025, with the strongest expansion coming from Exports of Goods and Services (10.67%), followed by NPISHs Final Consumption Expenditure (7.82%), Gross Fixed Capital Formation (6.99%), and Household Consumption (4.97%), while Government Expenditure (GGFCE) slightly contracted by 0.33%, and Imports of Goods and Services increased by 11.65% as a reducing factor in total GDP.

Indonesia's Economic Growth 2025

Regional GDP Contribution and Regional GDP Growth by Island



Indonesia–Korea–ASEAN Cooperation



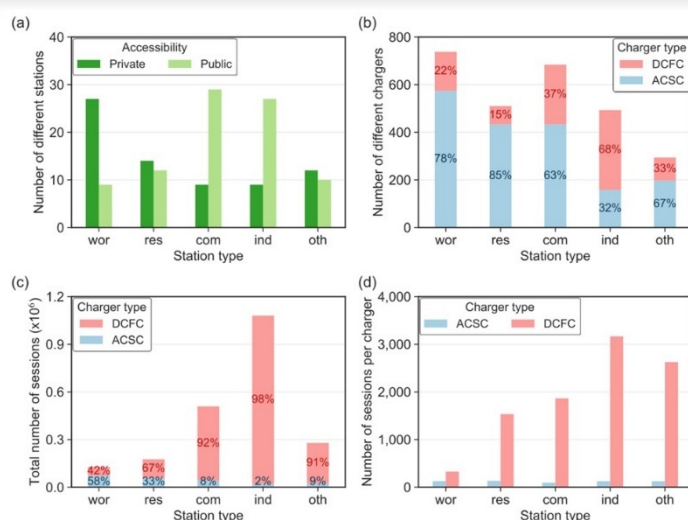
Collaboration Pathways:

Area	Initiative	Benefit
Joint R&D	Smart grids, green hydrogen, and AI-based energy forecasting systems	Technology transfer
Investment	Solar and electric vehicle (EV) battery sectors	Green industrial growth
Policy Dialogue	Korea–ASEAN Smart Innovation Forum	Shared standards
Capacity Building	Green skills training, vocational exchange initiatives	Human capital strengthening

Cases:

- ✓ Indonesia–Korea cooperation in **EV ecosystem** (Hyundai, LG, Pertamina NRE)
- ✓ ASEAN regional integration via **Energy Connectivity and Power Grid Interoperability**

Charging Station Information and Session Data



- Charging stations categorized as Workplace and Residential are not open to the public, i.e., only serving the employees and residents. Commercial and Independent categories are accessible to the public.
- The distribution of chargers across diverse building types. Residential stations have the highest proportion of ACSCs. Independent stations have the highest proportion of DCFCs.
- Workplace and Residential stations have a large share of sessions from ACSCs, whereas sessions from DCFCs are dominant in the other three types of stations.
- DCFCs exhibit a higher average number of sessions per charger than ACSCs across all the station types. This could be attributed to EV users' preference for a shorter charging duration associated with DCFCs.

wor: workplace; res: residential; com: commercial; ind: independent; oth: other

Source: Building-related electric vehicle charging behaviors and energy consumption patterns: An urban-scale analysis (2025)

EV Charging Point in Indonesia



Indonesia's growing **EV ecosystem**, with charging points concentrated in Jakarta, West Java, East Java, and Balikpapan, and gradual infrastructure expansion across other regions to support nationwide electric mobility.

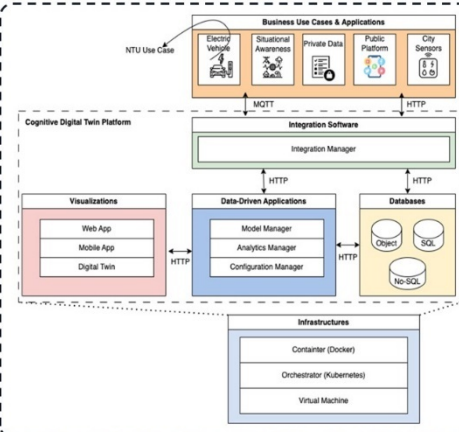
Research Programs: Case Study

INSPIRASI – Digital Twin for Smart Cities



The **INSPIRASI** (Indonesia – NTU Singapore Institute of Research for Sustainability and Innovation) program is a Joint Centre Program, a collaboration between the Directorate General of Higher Education (DIKTI) under the Ministry of Education and Culture and LPDP, aimed at developing and creating knowledge to address challenges in sustainable development by promoting the application of relevant SDG fields.

INSPIRASI strives to create smart city solutions through innovation and collaboration to **improve quality of life, reduce environmental impact, and enhance urban efficiency.**



Smart cities have made significant progress in utilizing **technology** to **enhance efficiency**. However, **cognitive cities** are now emerging as the next frontier, requiring a transition from simple automation to **adaptive processes** driven by **intelligence**.

The **Cognitive Digital Twin Platform** leverages modelling and real-time analytics to optimize city use cases, for example traffic, waste, water, and air pollution management. It enables data-driven decisions, enhances sustainability, and streamlines urban governance for smarter cities.

Research Aim

achieving multiple SDGs, promoting sustainability, lowering carbon emissions



Work Package 1
Smart Mobility for Lowering Carbon Emissions



Work Package 2
Digital Twin for Supporting Citizen Participation in Waste Management Circular Economy



Work Package 3
Digital Twin for Increase Water-Use Efficiency



Work Package 4
Enhancing City Situational Awareness for Environmental Control (Focus: Air Pollution, Heat Stress, and Citizen Health)



Work Package 5 (NTU)
Case Study: Charging Optimization for Electric Vehicle Fleets using Digital Twins

WP1 – Smart Mobility



Rapid urbanization worldwide, including in Indonesian cities, puts unprecedented pressure on urban transportation systems. Growing cities struggle to provide efficient, sustainable, and equitable mobility.

Smart mobility leverages advancements in **technology, data analytics, and connectivity**. It aims to transform how people move within cities.

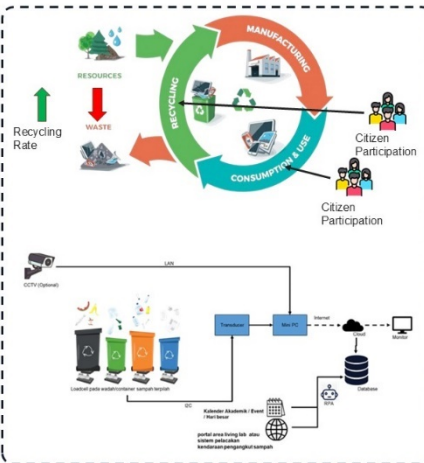
Smart Mobility's **role** in reducing carbon emissions is to map Green Capability to Artificial Intelligence towards Zero Carbon Cities by one way of conducting traffic engineering and controlling ATCS (Area Traffic Control System) on roads and intersections in adaptive and responsive actions using Artificial Intelligence-based video analysis through CCTV camera sources.



WP2 – Waste Management

The application of digital twins in **waste management** is the first step in supporting a **circular economy**. A digital twin is a digital representation of a physical system that allows for **real-time monitoring of waste data**. With this technology, the volume, type, and flow of waste can be tracked accurately to **optimize the waste management process**.

Digital twins serve as a crucial first step in supporting a circular economy by **providing a digital representation of the physical waste system**.



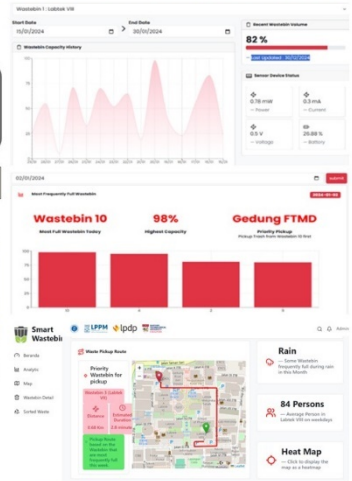
Smart Waste Bins (SWBs) Prototype for waste data visualization and predictive modeling

- Predictive Analytics**
Forecasts waste patterns to optimize collection schedules
- Prescriptive Analytics**
Recommendations for efficient collection routes and resource allocation
- Anomaly Detection**
Identifies unusual waste patterns and alerts for potential issues

Smart Bin Prototype

Basic Specs

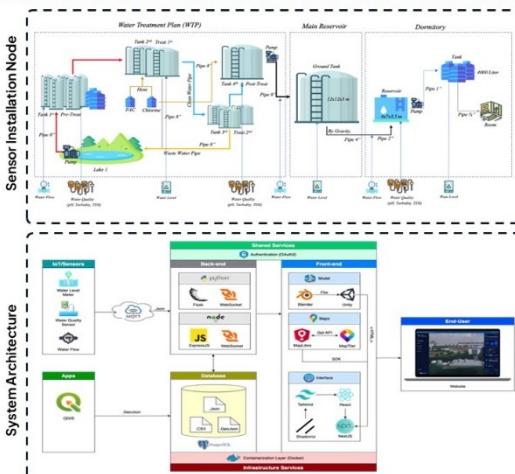
Flagship Specs



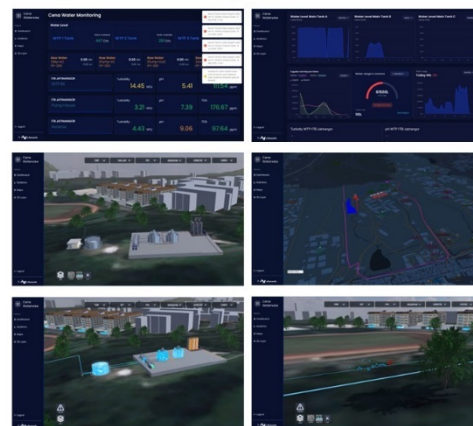
WP3 – Water Use Efficiency

WATERWISE Digital Twin Platform for optimizing water usage. Conducted initially in the **student dormitories of ITB Jatiningor campus**. This platform integrates real-time data and employs machine learning for efficient dashboard analytics, anomaly detection, automated leak detection, and simulating water quality.

Its primary goal is to support the achievement of **Sustainable Development Goal (SDG) 6**, focused on ensuring the availability and sustainable management of water and sanitation.



Waterwise Digital Twin Platform

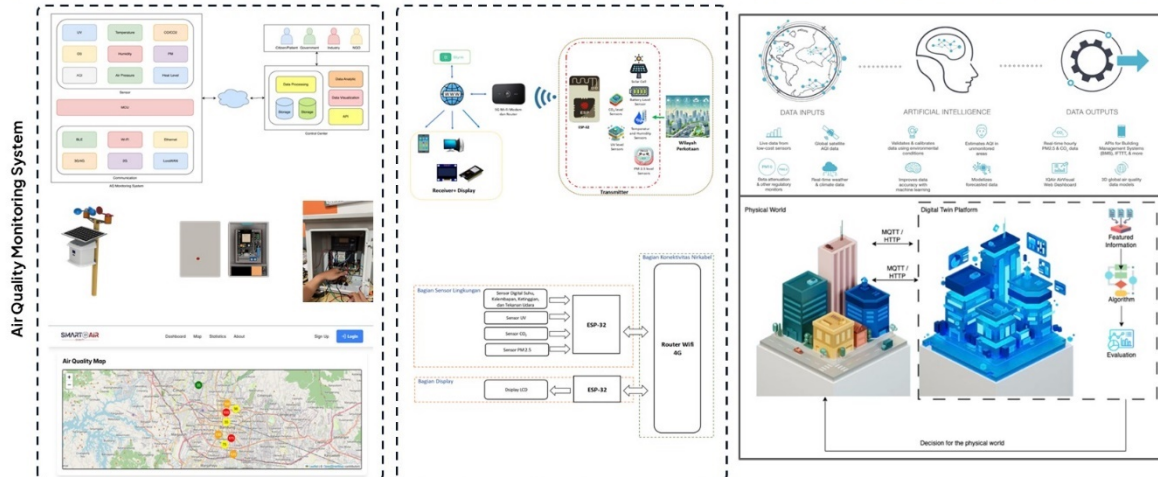


<https://waterwise.urbansolv.co.id>

WP4 – Environmental Control

Air quality refers to the condition of the air in a specific area, usually measured by the concentration of pollutants present in the air. These pollutants substances like particulate matter (PM), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), carbon monoxide (CO), ozone (O₃), volatile organic compounds (VOCs), and other harmful chemicals.

Air quality is a complex issue influenced by various interdependent factors, necessitating a substantial evidence base to construct accurate and trustworthy digital twins.

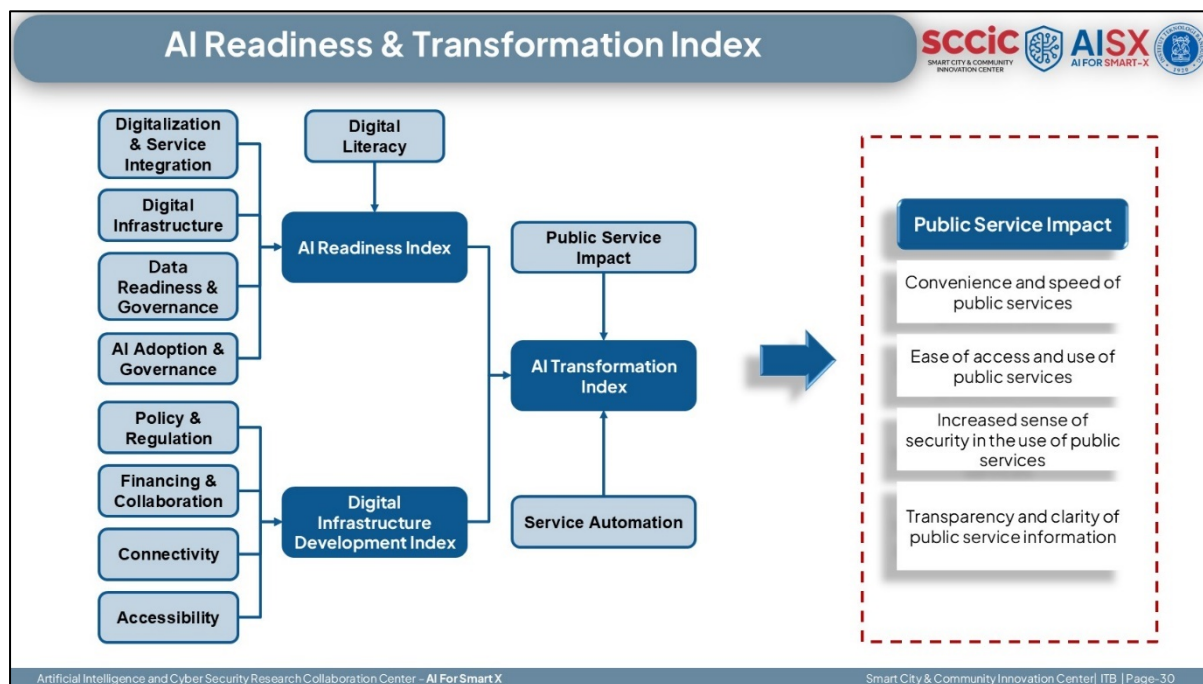
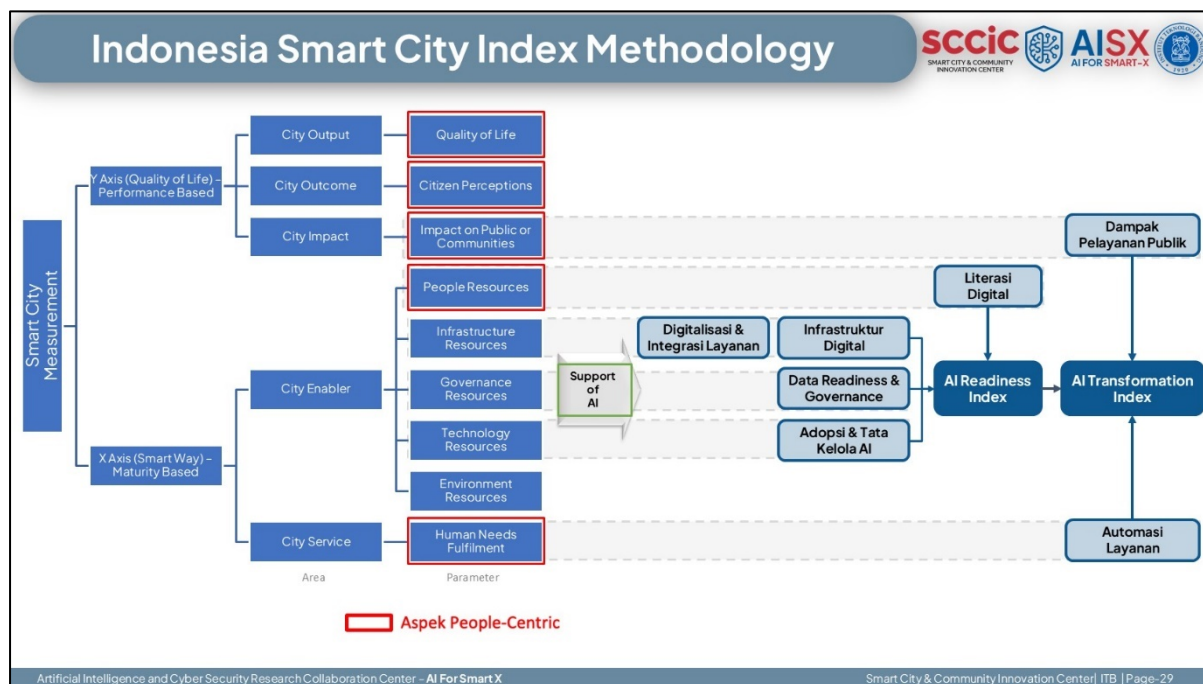


Indonesia Smart City Index

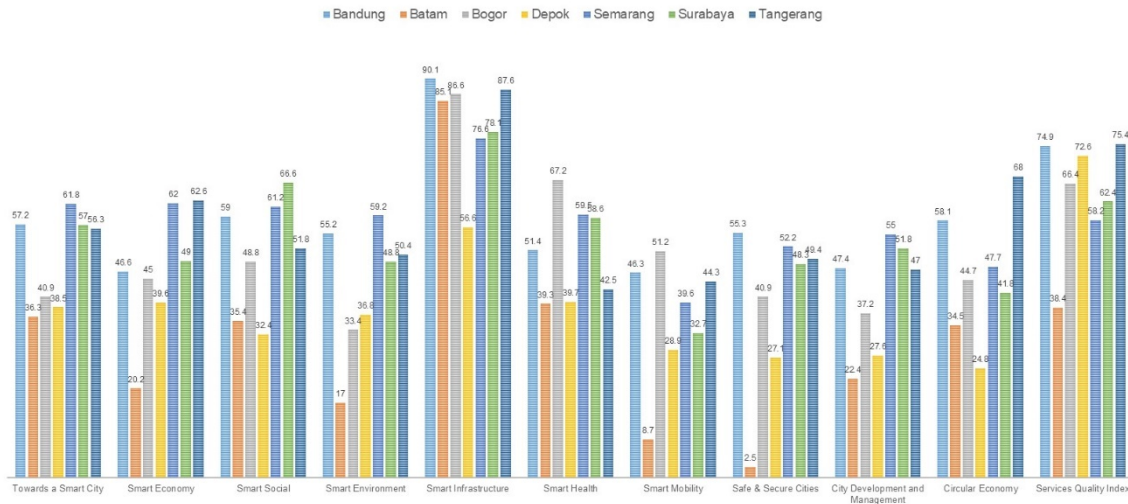
In **IKCI 2025**, measurement will no longer only record the existence of **technology**, but rather assess the extent to which **artificial intelligence** (AI) contributes to the changes felt by citizens. With an impact value chain approach and **people-centric** principles, IKCI makes AI a lever for urban transformation that is oriented towards **quality of life**.

The **2023 RKCI** uses **131 indicators**, but it has not systematically measured how AI is adopted and has a direct impact. In fact, the development of smart cities is currently greatly influenced by AI in the transportation, health, education, environment, and public service sectors. Therefore, **IKCI 2025** added the **AI Readiness Index** (readiness) and the **AI Transformation Index** (impact) so that the assessment is more relevant to global conditions.





Results of RKCI 2023: Large Cities



Artificial Intelligence and Cyber Security Research Collaboration Center - AI For Smart X

Smart City & Community Innovation Center| ITB | Page-31

Challenges, Opportunities, Recommendations

Artificial Intelligence and Cyber Security Research Collaboration Center - AI For Smart X

Smart City & Community Innovation Center| ITB | Page-32

Challenges and Opportunities





Challenges

- ☐ Complexity of Regulations and Slow Permitting Processes
- ☐ Financing Gap for Early-stage Green Energy
- ☐ Unequal Access to Green Technology Across Regions
- ☐ Data Interoperability Issues

Opportunities

- ☐ Regulatory Sandbox for Green-tech
- ☐ Green financial instruments, such as Green Bonds, Public-Private Partnerships (PPP), and Blended Finance
- ☐ Regional Innovation Clusters
- ☐ ASEAN Smart Data Framework

Artificial Intelligence and Cyber Security Research Collaboration Center – AI For Smart X
Smart City & Community Innovation Center| ITB | Page-33

Policy Recommendations





- 

Integrate Smart and Green Policies → Harmonize energy, digital, and innovation roadmaps.
- 

ASEAN–Korea Green Innovation Fund → Joint financing for technology pilots.
- 

Digital Twin for Energy Systems → Predictive modelling for optimization and transparency.
- 

Capacity Building Network → Collaborative education programs across ASEAN universities.
- 

Green Data Governance → Secure, interoperable data sharing among ASEAN partners.

Artificial Intelligence and Cyber Security Research Collaboration Center – AI For Smart X
Smart City & Community Innovation Center| ITB | Page-34

Conclusion



- **Sustainable Smart Innovation transforms the way nations grow – where digital intelligence powers green resilience.**
- Indonesia's green transition is embedded in its smart innovation ecosystem.
- Green energy fosters economic diversification and regional competitiveness.
- ASEAN-Korea cooperation is a catalyst for sustainable, inclusive prosperity.
- **Through shared innovation and collaborative policy, we can make the ASEAN Vision 2045 a reality – sustainable, smart, and united.**

Thank you!

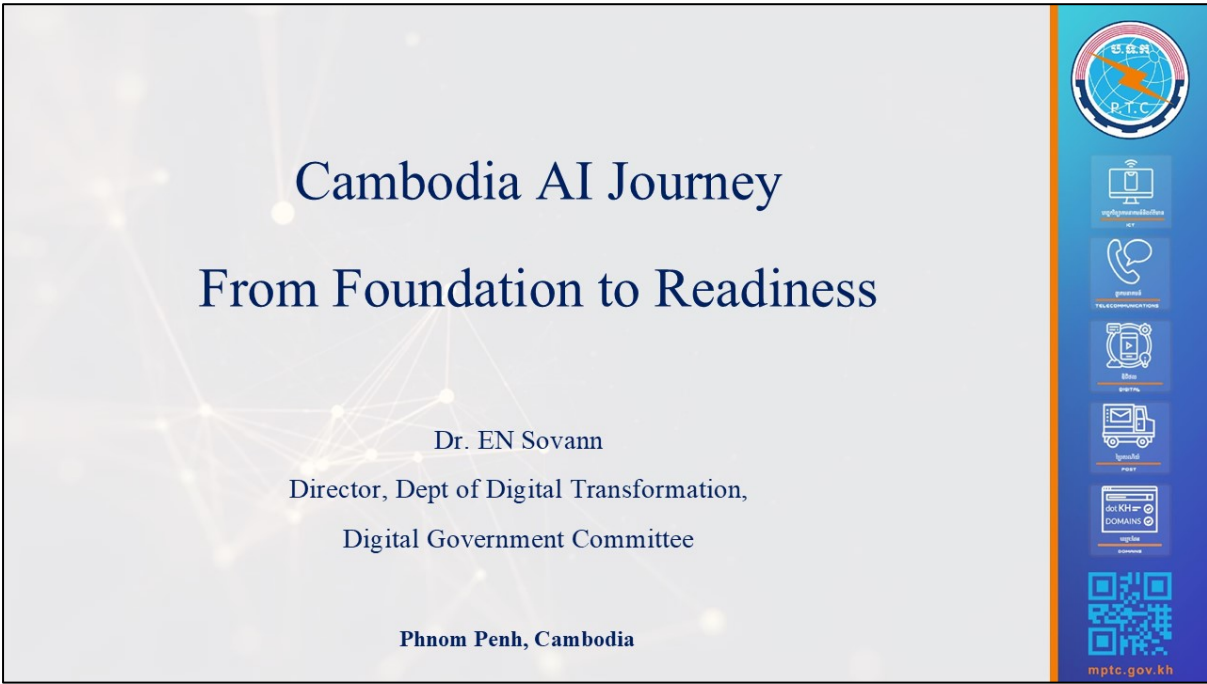


Contact Person:
Prof. Suhono Harso Supangkat
suhono@itb.ac.id

CAMBODIA AI JOURNEY

FROM FOUNDATION TO READINESS

Dr. En Sovann
Director, Dept of Digital Government Transformation
General Secretariat of the Digital Government Committee
Ministry of Post and Telecommunications
CAMBODIA



The slide features a light blue background with a network of white dots and lines. The title "Cambodia AI Journey" is in a large, dark blue serif font, followed by "From Foundation to Readiness" in a slightly smaller font of the same style. Below this, the speaker's name "Dr. EN Sovann" and title "Director, Dept of Digital Transformation, Digital Government Committee" are listed in a smaller, dark blue sans-serif font. At the bottom, "Phnom Penh, Cambodia" is written. On the right side, there is a vertical blue bar containing several icons: a circular logo with Khmer text and "P.T.C", a computer monitor with a Wi-Fi symbol, a telephone handset, a video camera, a truck, a document with "dot KH" and "DOMAINS", and a QR code. The URL "mptc.gov.kh" is at the bottom of the bar.

Cambodia AI Journey

From Foundation to Readiness

Dr. EN Sovann
Director, Dept of Digital Transformation,
Digital Government Committee

Phnom Penh, Cambodia



The slide has a white background with a blue header bar. The word "Outline" is in a large, blue serif font. On the right, there is a circular logo with Khmer text and "P.T.C". A vertical blue line with four dots on the left side connects the four bullet points. Each bullet point consists of a bold title followed by a descriptive sentence.

Outline

- Thematic Mapping**
Link ASEAN Vision 2045 → Cambodia Vision 2050 → Digital and AI policy.
- Cambodia's AI Landscape**
Snapshot of the AI landscape, digital connectivity, digital government, and readiness gaps shaping our policy choices.
- National AI Strategy Direction**
Vision, goals, and approach: light-touch, principle-based, ethical, inclusive, aligned with regional norms.
- Cambodia as a Responsible AI partner and Policy Lab**
Position Cambodia as a trusted environment to pilot, scale, and govern AI to access the regional market.

Thematic mapping



Theme	ASEAN Vision 2045	Cambodia Vision 2050	Cambodia Digital and AI policy
Innovation	Dynamic and innovation for productivity-driven growth	Diversified, tech-driven economy.	digital adoption and transformation across all social actors for growth
Human Capital	Skilled, mobile, inclusive workforce	Knowledge-based, learning society	STEM & digital skills, AI literacy in public sector & education
Governance and Ethics	Good Governance, rule of law, and digital trust.	Modern, accountable institutions	AI ethics, data protection, transparent digital government, and digital trust
Sustainability	Green, climate-resilient ASEAN	A Sustainable & Inclusive Society (Green Growth)	AI for environment, energy efficiency, disaster risk management.
Regional integration	Deeper connectivity & cooperation.	Active regional actor	Regional, and international corporation

3

Cambodia's AI Landscape



Core Readiness Dimensions & Strengths

Infrastructure Foundation

95%

Near-Universal access to **Electricity** (2023)

60.7%

Population using the **Internet** (Strong Digital Base, 2023)

***Area for Improvement: Need to enhance Internet speed and expand data center capacity.**

Scientific & R&D

24.6%

AI Publications **focused on Ethics** (Demonstrates high policy awareness)

New Programs

Launch of post-graduate AI/Data Science programs **integrating ethics**.

***Area for Improvement: R&D Expenditure (0.09% GDP) requires strategic increase.**

Governance & Policy

Active

Engagement in **ASEAN AI Governance** discussions.

Drafted/Pending

Foundational legislation for **Personal Data Protection** and **Cybersecurity**.

***Area for Improvement: Finalizing laws and improving Global Cybersecurity Index Ranking (~132nd).**

Social & Cultural Inclusion

Progressing

****Gender Gap Narrowing**** in Internet Usage.

In Use

Local AI Initiatives: **TranslateKH & Sarika** (showcasing domestic innovation).

Positive Trend

AI being adopted in key sectors: **Health, National AI Strategy places Ethics at the forefront**.

High Priority

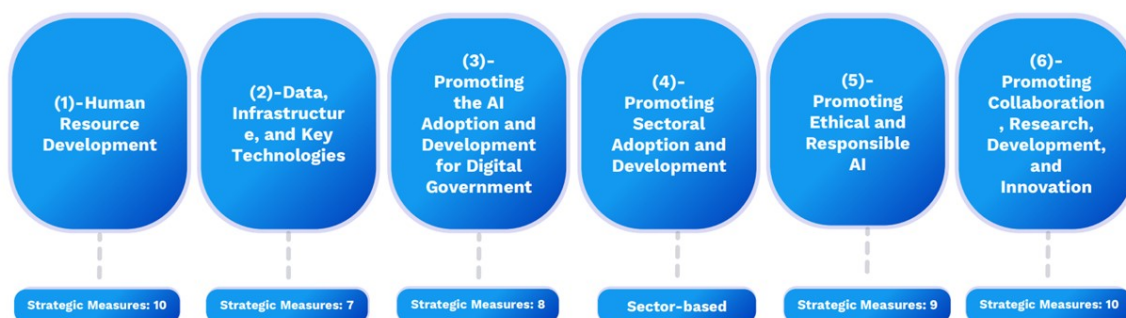
AI being adopted in key sectors: **Health, National AI Strategy places Ethics at the forefront**.

These data show Cambodia is at a critical juncture: strong foundations, clear ambition, but still work to do - especially in governance, capacity, infrastructure.

4



Evidence-based approach



Using AI to create value-added and boost productivity as a new catalyst of growth, institutional reform and improve quality of life.

5

Cambodia as a testbed for ASEAN

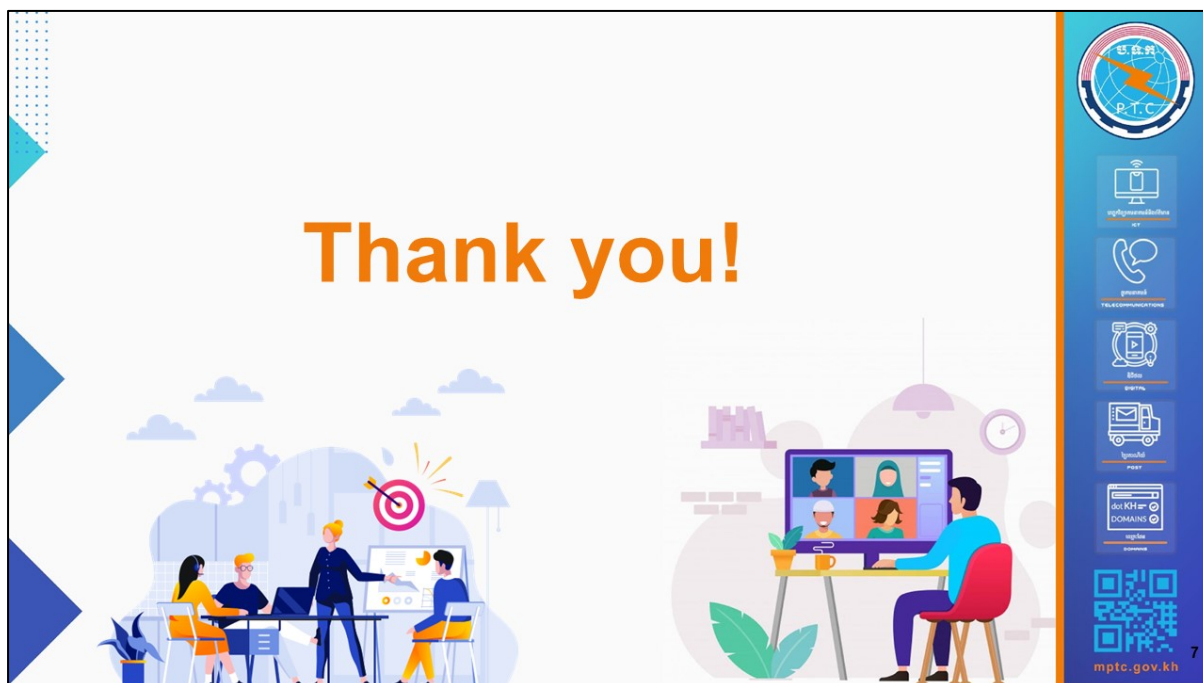


Cambodia's AI policy is :

- **not an isolated effort** — it is the digital engine of our 2050 vision and our contribution to ASEAN Vision 2045.”
- an evident, and principle-based policy focus on inclusive, ethical, responsible and trustworthy AI
- focusing on sectoral adoption such as agriculture, education, agriculture etc.

Cambodia stands ready to turn AI from promise to purpose-driven innovation, from readiness to action, from piloting to scale regionally.

6



PHNOM PENH SMART AND ECO-FRIENDLY SMART MOBILITY

Mr. Nuou Samnavuth
Director, Waste Management and Environment Division
Capital City of Phnom Penh
CAMBODIA

Phnom Penh Smart and Eco-Friendly Smart Mobility



NUOU SAMNAVUTH
Director of Waste Management and Environment Division
Phnom Penh Capital Administration

2025 KAPCE International Public Policy Symposium: Advancing Together:
Korea-ASEAN Strategic Alliance Toward ASEAN Vision 2045
13 November 2025



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



I- BACKGROUND

- The ASEAN Smart City Network (ASCN) has established during the 32nd ASEAN Summit in Singapore in 2018 and Phnom Penh has become a member of the ASCN.
- In light of the opportunities and challenges threaten by the fast urbanization and digitalization, the fundamental goal of the ASCN is to promote the lives of ASEAN Citizens by utilizing technology as an enabler.
- Until then, the PPCA has actively participate in other smart city initiatives as following:
 - Smart City Framework between ASEAN and United State
 - Smart City Framework between ASEAN and China
 - Smart City Framework between ASEAN and Australia
 - Smart City Framework between ASEAN and Korea
 - Smart City Framework between ASEAN and Japan
 - Smart City Framework between PPCA and AIMF (International Association of Francophone Mayors)
- Under the Framework between PPCA and AIMF, the Phnom Penh Smart and Sustainable City Strategic Roadmap was developed in line with the Land Use Master Plan of Phnom Penh City 2035.



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



II- Phnom Penh Smart and Sustainable City Strategic Roadmap

Cambodia Digital Economy and Society Policy Framework 2021-35

"I strongly believe Cambodia shall strive to achieve the **digital transformation** to turn Cambodia's economy and society to a higher level of development."

~ Samdach Akka Moha Sena Padei Techo **HUN Sen**

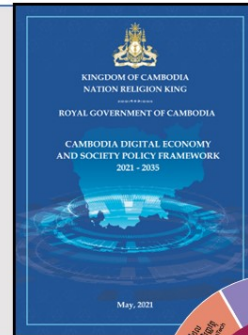
May 10, 2021

ASEAN Smart Cities Framework



Integrated Master Planning and Development

Dynamic and Adaptive Urban Governance



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



PP Smart & Sustainable City Strategic Roadmap 2022-2035

VISION

Smart Phnom Penh, a Capital City using information & technology to better respond sustainably to the needs of communities and businesses.

Objective by 2035



FIVE MAIN FOCUS AREAS



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



SMART CITY PROJECT 1: Build 4 people project

Eco-Town Projects



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



SMART CITY PROJECT 2: COMPLETE STREETS FOR ALL USERS

1 | Progress of the Project

- Boston and Phnom Penh cities collaborate to identify the issues in order to settle and re-design the sidewalks by selecting the segment for 2 kilometers of Phnom Penh's Monivong Boulevard from the segment of the Charles de Gaulle train station to the French Embassy, and Norodom Boulevard as pilot projects.

2 | Partnership and Supports Required

- As of now, the city is seeking for partners and funding sources to extend this current pilot project.



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



SMART CITY PROJECT 3: PHNOM PENH SMART CITY HUB (PPSCH)

1 | Progress of the Project

- The Phnom Penh Smart City Hub (PPSCH) was inaugurated on 27 October 2025 and it bases in the renovated Wat Phnom Library building. This hub stems from Phnom Penh's smart city strategic roadmap to showcase the implementation of the smart city in Phnom Penh from 2022 to 2035.
- Furthermore, it creates a forum for local government, people, private sector, academy and civil society to discuss and share ideas for a smarter and more sustainable city.

2 | Partnership and Supports Required

- The PPSCH requires partnership with any private sectors in order to learn the best experiences and support in technical, resource, and/or financial aspects.



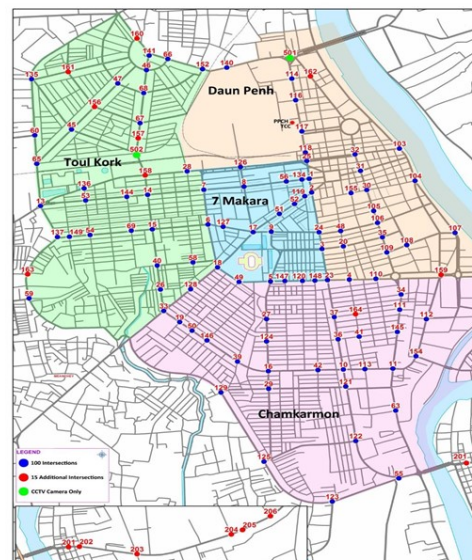
Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



PROJECT BACKGROUND & OVERVIEW

TCC was established in 2016.
Under grant aid from the people of Japan as
a token of friendship and cooperation
between Japan and Kingdom of Cambodia.

Items	Qty
TCC Equipment	1
Local Controller	118
Vehicle Detector	194
CCTV Camera	26

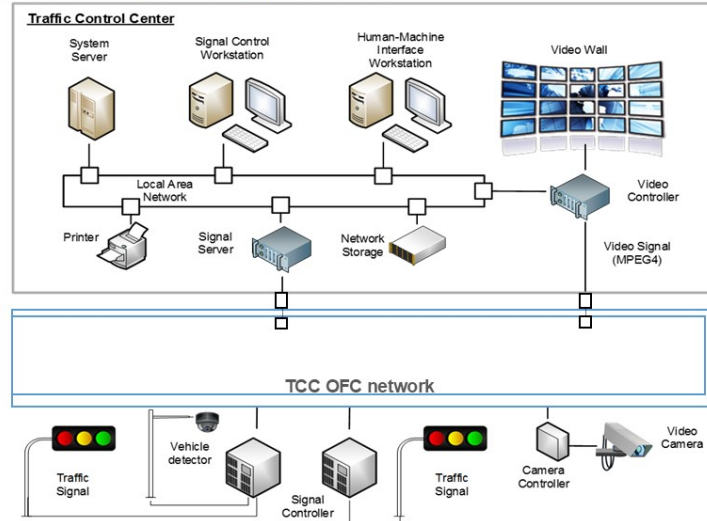


Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



PROJECT BACKGROUND & OVERVIEW

Basic Structure of Traffic Control System



SMART CITY PROJECT 4: SKY BRIDGES AND TECO INTERNATIONAL AIRPORT





1. Overview

➤ The City Bus Authority (CBA) was established in 2014 to provide public bus transportation services in Phnom Penh.

❖ Objective

- Reduce traffic congestion, traffic accident and the environmental pollution.
- Reduce daily expenses of citizens in term of transportation.

❖ Total number of buses is 446.



2. Bus Facility



Currently, there are 224 bus shelters and 849 bus stops. CBA is working to improve these facilities by upgrading the bus shelters to be larger, more convenient, and more comfortable for passengers.



Bus route maps and information for passengers inside the buses, helping them navigate the routes more easily.

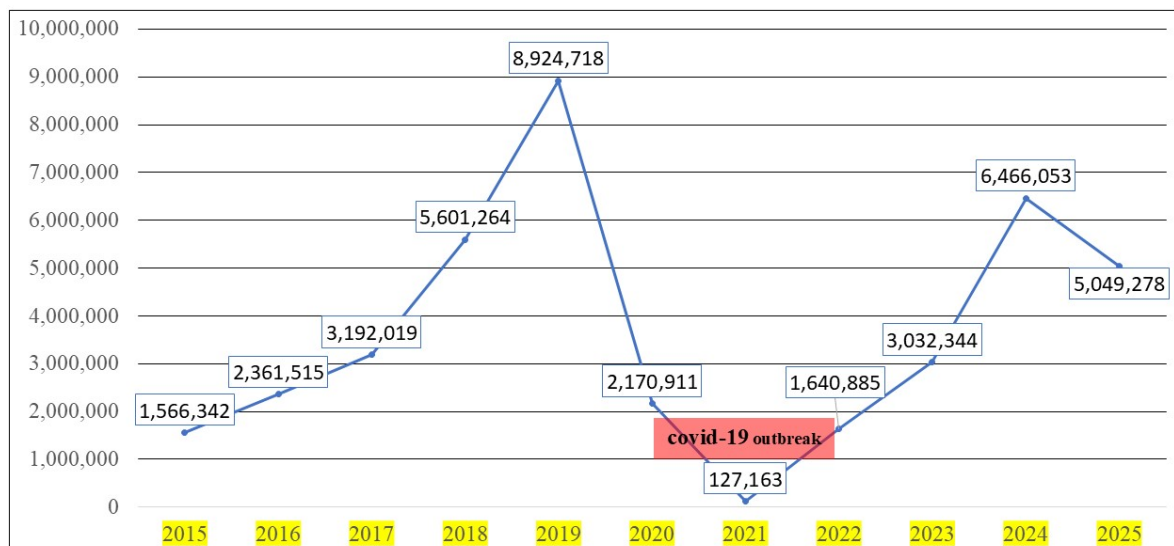


Phnom Penh Capital Administration
Smart & Sustainable City Secretariat

13



3. Number of Passengers 2015-2025 (23, October)



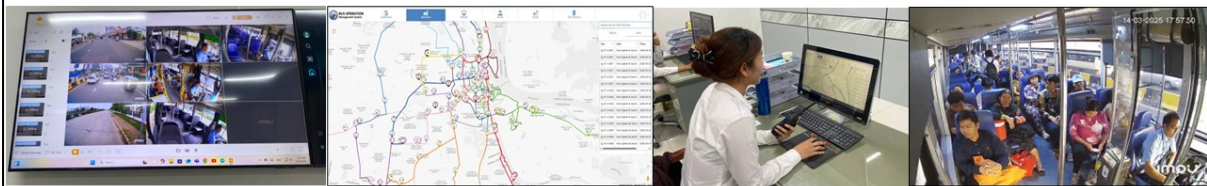
Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



4. City Bus Control Room



City Bus Control Room manages the daily operations of city buses in Phnom Penh. It is equipped with the **Bus Operation Management System (BOMS)** and **CCTV cameras** installed both inside the buses and at the front.



Bus Operation Management System (BOMS) was supported by JICA under 'The Project for Improvement of Public Bus Operation in Phnom Penh'. CCTV cameras are installed both inside the buses and at the front to monitor passenger security, provide evidence in case of accidents, and handle passenger complaints.



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



5. City Bus mobile application

City Bus mobile application

- ❖ City Bus App is an application which provides information of Phnom Penh City Bus such as real time bus location, all available routes, search a specific route, and bus stops.
- ❖ Show your current location, that you can find your nearby bus stop in Phnom Penh.
- ❖ There are 2 languages available: Khmer, English.



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat

Payment Method

The fare for bus services is KHR1,500 (US\$0.36) for each trip, irrespective of distance.

There is 2 method for payment:

- Cash
- QR-Code with ACLEDA Bank



Future development plan

Enhance the mobile application by upgrading the e-ticketing and e-payment systems to provide a more convenient and user-friendly experience for passengers.

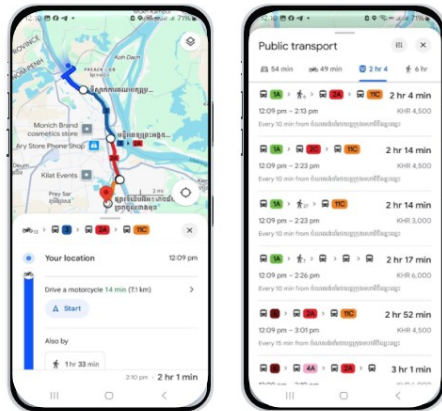


6. Google Map



Our bus route information is now integrated into Google Maps.

- Bus User can just click to google map in order to see the bus information (Bus Location, bus stop)



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



CBA has already installed digital screens at the Airport Bus Shelter for the Airport Express Line, and we plan to install digital screens at bus shelters and inside for Airport Express line.

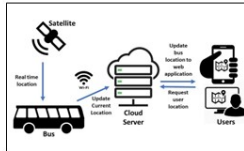
CBA is planning to install digital screens inside buses to display upcoming bus stops and provide accessibility information for people with disabilities.

Additionally, we plan to extend the installation of digital screens to all bus routes to enhance passenger information and convenience.



(Pilot Project with The Asia Foundation: Disability Inclusion Guidelines for Public Buses)

Future development plan



CBA is currently working on system improvements to provide real-time data for passengers. This data will be integrated into Google Maps and the City Bus mobile app, allowing users to track bus locations, check estimated arrival times, and plan their journeys more efficiently.



7. Challenges and Solutions

Challenges

- A major issue of public transport buses in Phnom Penh is that they must share lanes with private vehicles. Without dedicated bus lanes, peak-hour traffic causes frequent delays, leading to unpredictable arrival times and longer travel durations.



Solutions

To address this issue, Phnom Penh should consider implementing dedicated bus lanes on key corridors with high passenger demand. Prioritizing buses in traffic can significantly improve travel time reliability, reduce delays, and enhance service attractiveness.

In addition, traffic signal priority for buses at intersections and physical separation (e.g., painted lanes or curb side barriers) can further ensure smoother bus movement.



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



Improvement of Municipal solid waste collection and transportation services



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



Provision of education and dissemination of municipal solid waste management



800 SUPER GAEA (CAMBODIA)
CO.,LTD



MIZUDA SANITATION
(CAMBODIA) CO.,LTD

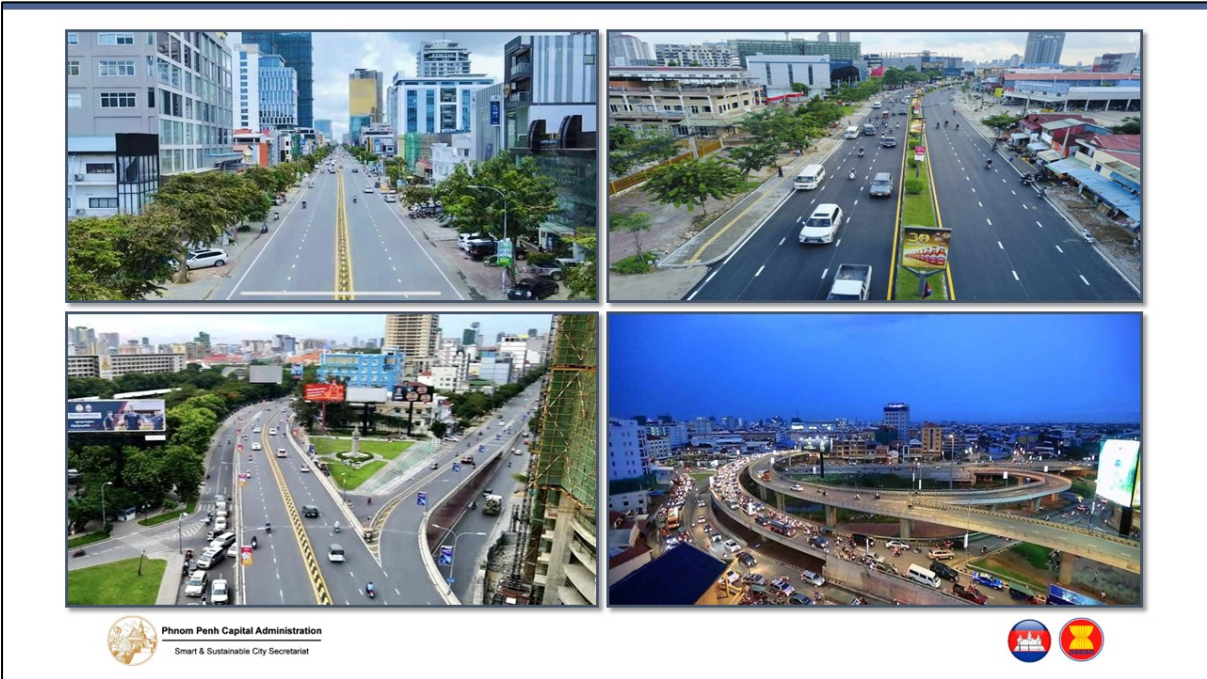


CINTRI (CAMBODIA)
/EVERBRIGHT (CHINA)



Phnom Penh Capital Administration
Smart & Sustainable City Secretariat





Fecal Sludge Treatment Project

FECAL SLUDGE MANAGEMENT STRATEGY 2035
FOR PHNOM PENH CAPITAL

FECAL SLUDGE MANAGEMENT STRATEGY 2035
FOR PHNOM PENH CAPITAL

SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY

6 CLEAN WATER AND SANITATION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

13 CLIMATE ACTION

Phnom Penh Capital Administration
Smart & Sustainable City Secretariat

1. Fecal Sludge Treatment Plant design, construction and operation

- PPCA provided 3 hectares of land for construction the FSTP.
- FSTP was inaugurated on 19th May 2023.

2. FSM Value Chain Improvement

- Communications
- Licensing
- *FSM Regulation*

3. Capacity building

- FSM management practices
- FSTP operation

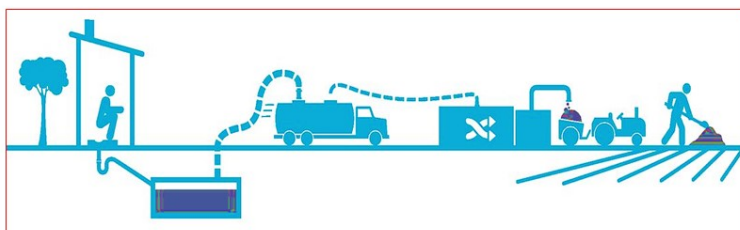


Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



Resource Recovery is developed & promoted

- Fecal sludge treatment can produce a variety of by-products according to the treatment applied
- An estimated 13, 908 tons/year of FS hummus could be needed to fulfill future demand.
- FS Humus price could sell in a price ranging from 7 \$ to 15\$ /50kg (when positive effects are demonstrated and product is well known and supported by farmers).



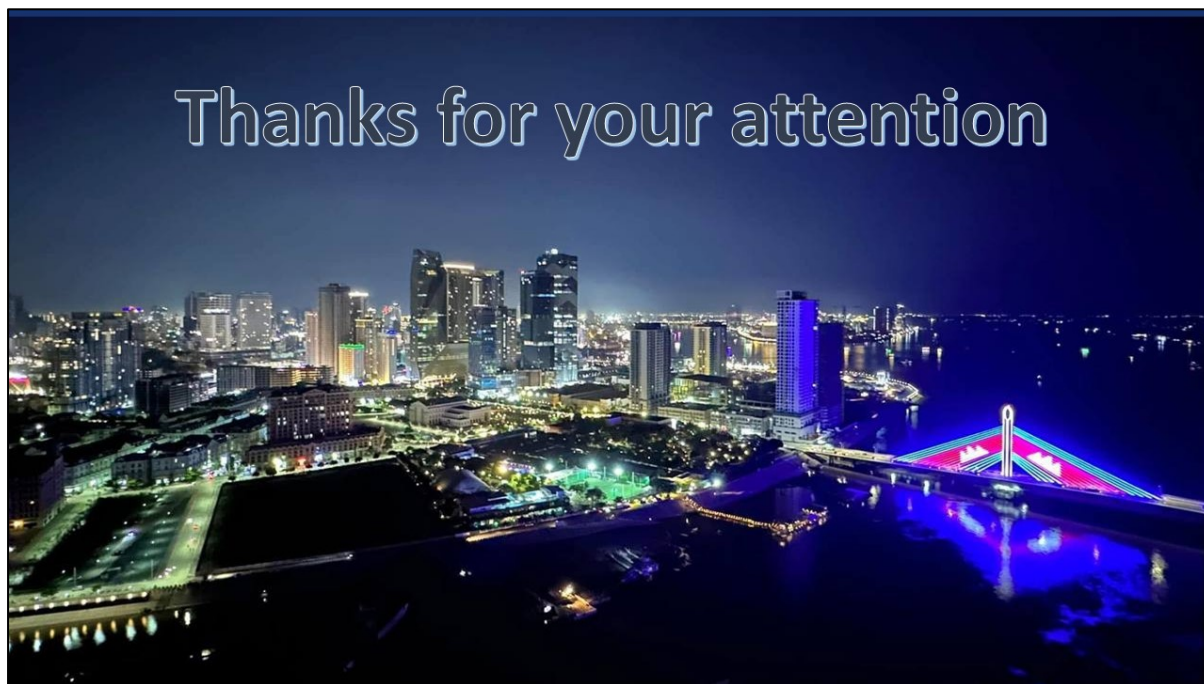
Phnom Penh Capital Administration
Smart & Sustainable City Secretariat



III- Conclusion

Today with the speedy evolution of the world challenges are huge; yet the opportunities are also bigger. A smart city is a catalyst that city can leverage to maximize its potential as well as to play a significant role in national development with the active participation of regional and global actors through strong partnerships and collaborations. Each city will be strengthened through smart digital support and can continue to ensure sustainable development, improve the quality of life of its people, support the national development process and engage nationally in the fight against climate change. Therefore, the Smart and Sustainable City Strategic Roadmap is playing a part in developing the economic potential of Phnom Penh in this new era through the support of digital technology and innovation that can ensure an inclusive sustainable development.

Thanks for your attention



STRENGTHENING STATE CAPACITY FOR SMART INNOVATION: POLICY DEVELOPMENT AND KOREA-ASEAN COOPERATION

Dr. Saowaruj Rattanakhamfu
Research Director, Innovation Policy for Sustainable Development
Thailand Development Research Institute
THAILAND

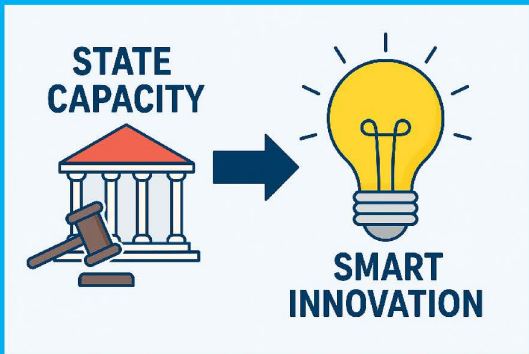


2025 KACPE International Public Policy Symposium

Strengthening State Capacity for Smart Innovation: Policy Development and Korea-ASEAN Cooperation

Saowaruj Rattanakhamfu
Thailand Development Research Institute (TDRi)

13 November 2025



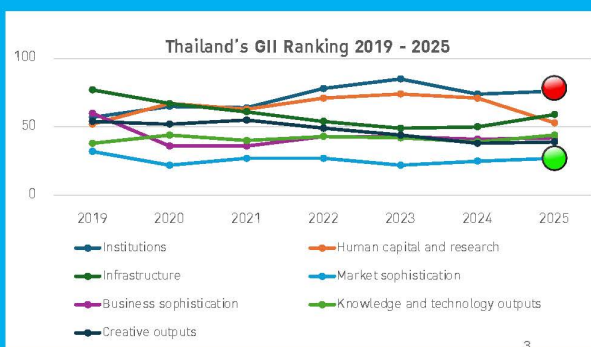
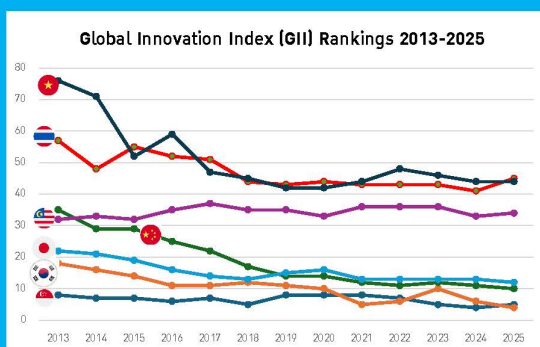
The Innovation Imperative in ASEAN

- Smart innovation is essential for inclusive growth and competitiveness.
- State capacity — effectively implement policies, achieve goals, and provide public goods — determines success.

Innovation is not only about technology but also about building capable states that can link technology, policy, and institutions.

Thailand's Innovative Capability: Stagnant but with Untapped Potential

- In Asia, Singapore, South Korea, China and Japan lead in innovation performance.
- Thailand has remained around rank 43-44 in the Global Innovation Index over the past 5 years, showing limited progress.
- Thailand's strength lies in its market condition, while institution, human capital, and research remain key weaknesses.



Source: WIPO Global Innovation Index

Thailand's Smart Innovation Landscape: National AI Strategy (AI Action Plan 2022-2027)

5 Strategies

15 Plans for AI Development

1 Ethics and AI Regulations

- Develop AI laws, regulations, standards, and national policies
- Promote awareness and understanding of AI ethics.

2 Infrastructure for AI

- Establish specific specialization network.
- Develop big data integration and analytics centers.
- Create centralized AI cloud platforms.
- Build computing infrastructure for large-scale AI processing and basic calculations.

3 AI Workforce

- Build high-level skills and knowledge.
- Provide scholarships to develop talent in private sectors.
- Develop research collaboration.

4 AI Research & Innovation

- Promote development of AI technologies and innovations in key targeted areas.
- Develop core technologies and research that align with national needs.

5 Business Promotion & AI Adoption

- Promote AI use in the public sector.
- Promote AI adoption in targeted industrial sectors.
- Facilitate AI commercialization and usage.
- Develop testbeds and sandboxes to support business innovation and AI startups.

Source: NSTDA

AI-powered Solutions Enhance Efficiency and Service Quality in Healthcare System



Enhancing Medical Diagnostics with AI-Powered Chest X-ray Screening



- Inspectra CXR by Thai startup Perceptra assists doctors in screening lung infections, prioritizing urgent cases, and optimizing medical resource allocation.
- Trained on 1.5 million chest X-ray images, Inspectra CXR detects 8 common abnormalities with over 94% accuracy, reducing the need for specialist intervention and cutting radiologists' workload by 70%.
- The system is deployed in 100+ hospitals nationwide, assisting over 1,000 doctors, and was used to detect severe COVID-19 cases in 100,000+ patients for timely treatment allocation.

Source: Perceptra

However, AI Adoption is Limited Among Thai Organizations

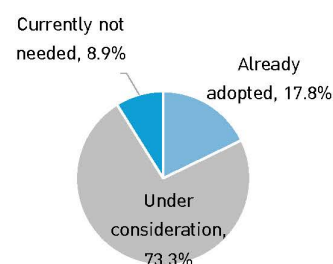
- Only 18% of Thai organizations have adopted AI which is primarily used for internal management (70%), enhancing production and service efficiency (60%), and adding value to products or services (57%).
- Limited AI adoption shows a gap between strategy and implementation.
- **Key challenges:** lack of awareness, unclear application strategies, low perceived necessity, and inadequate institutional preparedness.

Top 3 Reasons Why AI Is Not Yet Adopted

- 01 Still in the data exploration phase**
Because it is still unclear how to apply AI effectively (50.4%)
- 02 No current necessity**
There is no need to use AI at this time (19.3%)
- 03 Organizational readiness is lacking**
In various aspects such as infrastructure, human resources, and budget (18.5%)

*Note: Respondents could select more than one reason.

ETDA AI Readiness Measurement (2024)



Note: 580 public and private sector organizations
Source: ETDA (2024)

Green and Low Carbon Transition Policies

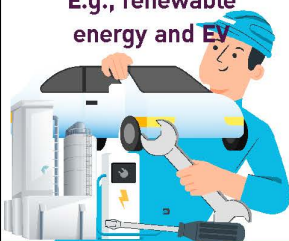
- Thailand is advancing green innovation through:
 - EV promotion (BEV growth +695% in 2023).
 - Voluntary carbon trading (T-VER).
 - Thailand Taxonomy (BOT-SEC) to guide green finance.
 - Draft Climate Change Act (2029).
- However, fragmented governance and skill shortages hinder effective policy delivery.



Thailand is Short of Green Workers

Training unable to keep pace in some rapidly growing sectors

E.g., renewable energy and EV



Shortage of skills in STEM affecting ability to adopt new technologies



Insufficient emphasis on soft skills in the education system



Work environment in some professions unattractive to skilled labour



The shortage of Green Workers makes it difficult for Thailand to drive the transition to a low-carbon economy

Key lesson: Smart innovation must integrate human capital, regulatory reform, and market incentives.

Korea–ASEAN Cooperation Opportunities



- Building Regional Smart Innovation Networks
- Opportunities for joint initiatives:
 - AI R&D collaboration and joint testbeds (e.g., sandboxes for smart mobility).
 - Green supply-chain partnerships (EVs and batteries).
 - Use RCEP and ASEAN–Korea frameworks to harmonize green standards and promote joint R&D.
 - Capacity-building programs for data governance and policy design, as well as training programs on AI ethics, sustainability reporting, and digital skills.
- Korea–ASEAN Smart Innovation Fund could co-finance pilot projects in smart cities and green energy.

9

Smart Innovation Imperative: Looking Forward



- The emergence of AI and clean technology is becoming one of the defining forces of the next innovation era.
- To adapt to this new smart innovation imperative, we must recognize innovation as both an economic driver and a strategic necessity for national resilience.
- Future success depends not only on technological capabilities but also on the governance quality of national systems and international cooperation — turning smart innovation into a shared pathway for inclusive and sustainable development.

10



11

SESSION 3

Sustainable Smart Innovation Industries: Advancing Industrial and Economic Development

Mr. Dong Yun Kang

Carbon Neutral (Mobility) Program Director, Mobility Dept., Transport Div.
Korea Agency for Infrastructure Technology Advancement
REPUBLIC OF KOREA

Mr. Muhamad Muhtazam bin Noor Din

Manager, Sustainable Cities, Climate Action Division
Malaysian Green Technology and Climate Change Corporation
MALAYSIA

Ms. Nguyen Thi Hoang Nguyen

Vice Director, Center for Information, Strategic Analysis Forecast and Public Services
Institute of State Organizational and Labour Sciences, Ministry of Home Affairs
VIETNAM

Mr. Taing Bunhong

Director, Dept of Policy and Legal Affairs, General Secretariat of the Digital
Government Committee, Ministry of Post and Telecommunications
CAMBODIA

Dr. Thida Kyu

Director General, Union Minister's Office
Ministry of Investment and Foreign Economic Relation
MYANMAR

MOBILITY TECHNOLOGY R&D IN KOREA

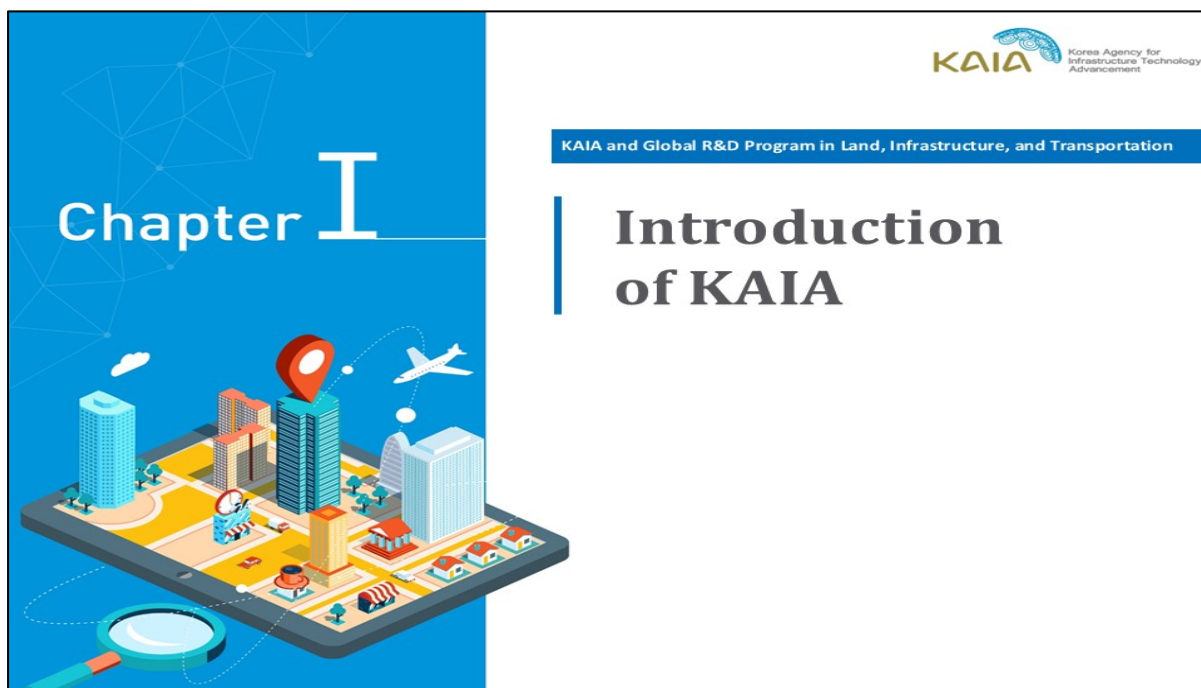
Mr. Dong Yun Kang
Carbon Neutral (Mobility) Program Director, Mobility Dept., Transport Div.
Korea Agency for Infrastructure Technology Advancement
REPUBLIC OF KOREA



CONTENTS

- I . Introduction of KAIA
- II . Comprehensive Plan for Land Transport R&D
- III. R&D Project in Mobility
- IV. Global R&D Program





1. Background

Mission

Purpose of establishment

History

History of Innovation

Assignments

Main Businesses

Contribute to creating future growth engines and improving people's quality of life by innovating and fostering science technology in the fields of land, Infrastructure, and transportation

Dec 2002 Korea Institute of Construction and Transportation technology Evaluation and Planning was established

Apr 2007 Designated as a quasi-government organization

Apr 2013 Renamed to the Korea Agency for Infrastructure Technology Advancement (KAIA)

Jun 2016 Legal basis for the agency was enforced

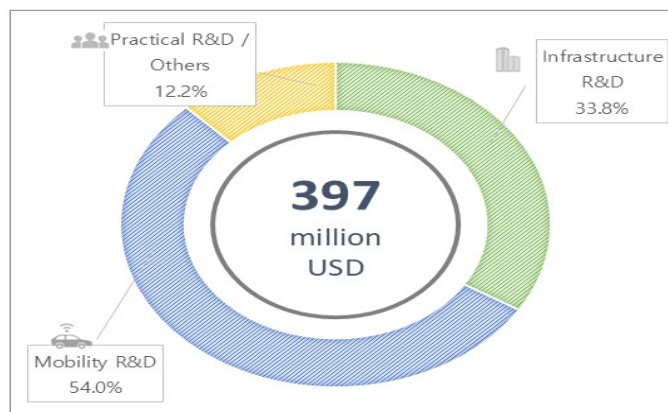
* Article 16 of the Land, Infrastructure, and Transport Science and Technology Development Act

- Demand survey, planning, technical expectancy, evaluation, and management for R&D projects in Land, Infrastructure and Transport
- Certificate new technologies in construction, transportation, and logistics(including transportation card certification)
- Technology value evaluation and technology transaction
- Human resource development and technical finance support by fund raising

2. KAIA's R&D _ R&D Budget

✓ **Legal Basis** : The Land, Infrastructure, and Transport Science and Technology Development

✓ **R&D Budget** : \$ 397 mil. in 2025 (land, infrastructure, urban, housing, and transportation sector)



Infrastructure R&D 135 mil USD

- Construction Technology / Smart Construction
- Plant / Hydrogen Pilot City
- Urban Architecture / Residential Environment
- Land Space Information
- Smart City etc.

Mobility R&D 214 mil USD

- Transportation Logistics
- Autonomous Vehicle
- Railway Technology
- Aviation Safety Technology
- Unmanned Aerial Vehicle

Practical R&D / Others 48 mil USD

- **Global Collaboration R&D**
- R&D Technology Commercialization Support
- Regional Specialization
- Research Planning
- Climate Change etc.

3. R&D Achievements _ Infrastructure

► Superlong-Span Bridge



- Domestic production of construction equipment for suspension bridge cables
- Applied to the Yi Sun-sin Bridge in Yeosu, Korea(2011), the Third Bosphorus Bridge(2016) and design of the world's longest suspension bridge in Turkey, the Canakkale bridge(2018)



► Skyscraper (High-rise building)



- Developed technology for high-rise building design and construction
- Applied to Kingdom tower (Saudi Arabia, 2017), Lotte World tower (Seoul, 2016), L-city tower (Busan, 2019), etc.

► LNG Plant



- Developed technology for building the world's largest LNG storage tank (270 million liters)
- KOGAS applied the final design to build three plants at its Samcheok receiving terminal (2017)

► Pilot Hydrogen City Project



- Creating a city which using hydrogen fuel as main power source for heating, cooling, electricity, and transportation, and etc.
- Building pilot cities in Ansan, Ulsan, Jeonju, Wanju, and Samcheok since 2019

3. R&D Achievements _ Urban & Housing

► Smart and Safety Security Service



- Developed Smart and Safety Security Service using precise positioning solutions and 3D object detecting technique based stereo CCTV
- Constructed an intelligent crime prevention zone based on spatial information in the Indeogwon District of Anyang (2016)

► Modular Building (Prefabricated)



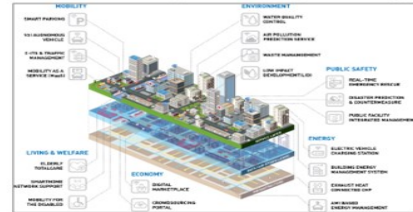
- Developed a prefabricated housing technology with high economic feasibility and residential performance
- Built test sites in Gayang-dong, Seoul and Dujong-dong, Cheonan (2018)

► Zero-Energy Housing



- Secured design and construction technology for zero-energy housing
- Constructed a multifamily housing in the Nowon District of Seoul and was certified by the International Passive House Association in Germany (2017)

► National Strategic Smart City R&D Program and COVID-19 Smart Management System (SMS)



- Launched for developing standardized Open Data Hub Architecture as a data-centric smart city
- Working on demonstration city at Daegu and Siheung since 2018
- COVID-19 SMS is enabled the automation of the epidemiological investigation process using huge amount of data from Smart City Data Hub Platform of NSSC



7

3. R&D Achievements _ Transportation

► Catenary-free Low-Floor Tram



- Developed technology for the commercial use of catenary-free low-floor trams
- Exported to the cities of Izmir (2014) and Antalya (2015) in Turkey

► High-Speed Electric Multiple Unit



- Developed a commercialized technology for high-speed EMU, with a maximum speed of 421.4 km/hr (the fourth of its kind in the world)
- Received the Prime Minister's Award (the National Grand Prize in Technology) and was contracted to supply 130 models for commercial use

► Urban Transit Maglev Train



- Commercialized the world's second urban transit maglev train
- Maximum speed of 110 km/hr; opened the Incheon International Airport Line (2016)

► Autonomous Vehicle Testing City



- Constructed K-city, a virtual city where autonomous vehicles will be tested (2018)

► Smart Tolling System



- Commercialized toll payment technology using a wireless communication and image recognition system
- Applied to tollgates in West Busan, South Incheon, West Yeongnam, South Suncheon, and North Daegu

► Two-Seater Light Aircraft



- Local production of two-seater light aircraft (KLA-100)
- Successful first flight (2017)

► Automatic Immigration Clearance System

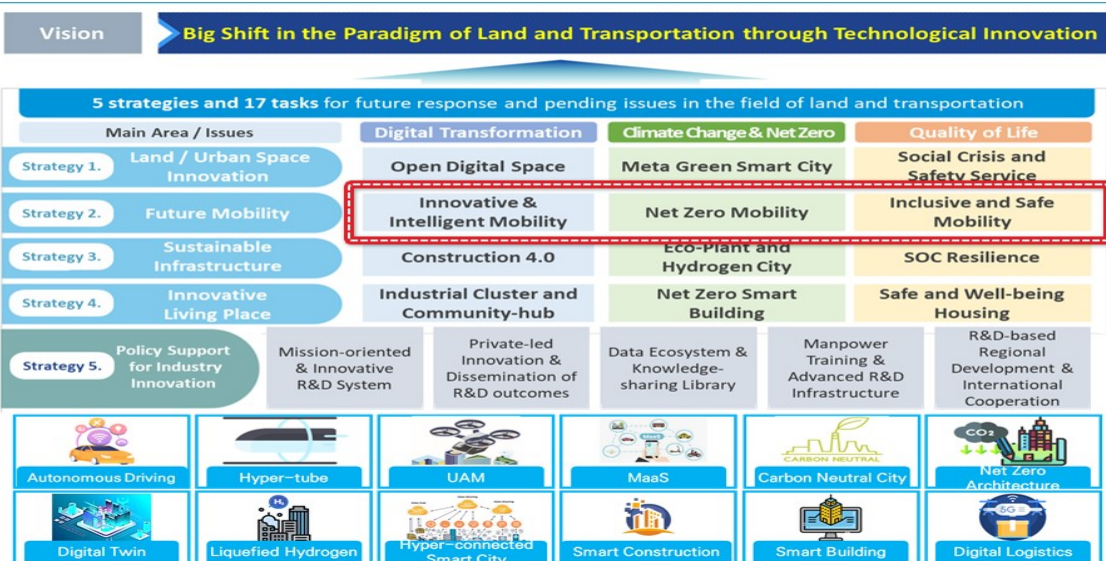


- Developed the world's first automatic immigration clearance system
- 52 machines in operation at the Incheon International Airport

8



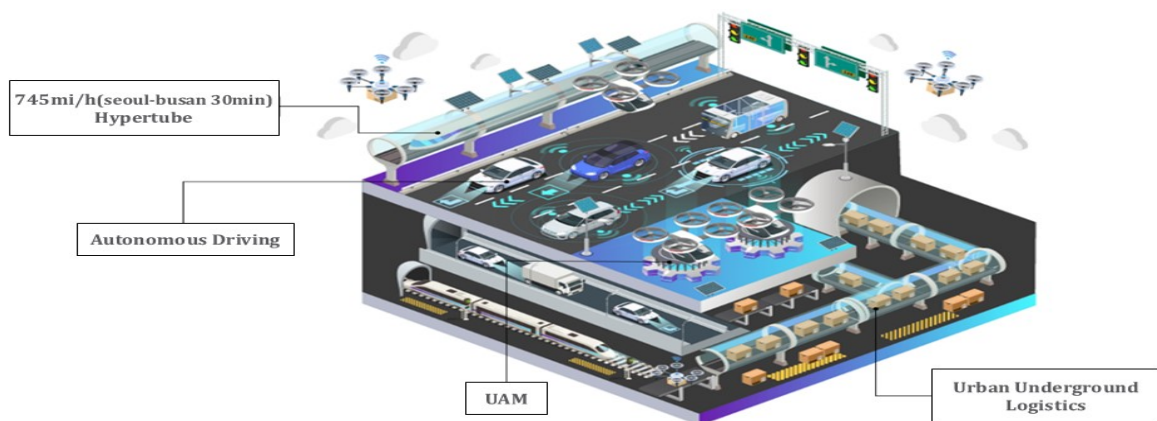
1. Vision Strategic



10

2. Future Mobility _ Innovative & Intelligent Mobility

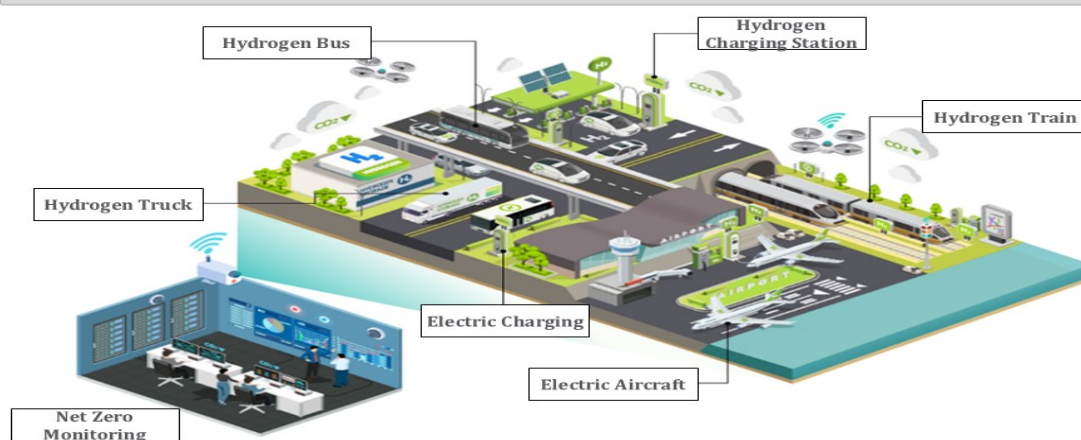
Fostering future new industries and securing a leading position in the global market by establishing a convergent mobility ecosystem through the acquisition of key technologies that lead the future mobility market



11

2. Future Mobility _ Net zero Mobility

Achieving carbon neutrality in the transportation sector through the decarbonization of road, rail, and air mobility, as well as integrated transportation and logistics systems, while securing a leading position in the eco-friendly mobility market



12

2. Future Mobility _ Inclusive & Safe Mobility

Building an integrated and convergent mobility system and providing user-centered, customized mobility services to ensure inclusive transportation convenience and safe mobility



13

3. The 12 Flagship R&D Project



3. The 12 Flagship R&D Project

✓ Mobility Innovation



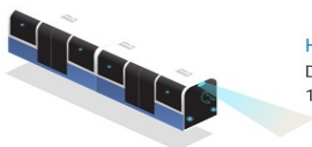
Autonomous Driving

Development of advanced technologies for commercialization and infrastructure of autonomous cooperative driving mobility.



Urban Air Mobility

Development of safety operation technologies and traffic management systems for urban air mobility (K-UAM).



Hyper-Tube(Hyperloop)

Development of unmanned operations and high-speed rail (over 1,000 km/h) for safe and eco-friendly passenger and freight transport.

3. The 12 Flagship R&D Project

✓ Mobility Innovation



On-Demand Mobility

Development of customized integration and information services (MaaS, Mobility as a Service) to enhance user convenience in transportation.



Digital Logistics

Development of integration technologies with future mobility based on data (autonomous delivery robots, trucks, UAM, urban freight trains, etc.).

3. The 12 Flagship R&D Project

✓ Promoting the use of renewable energy in the urban and construction sectors



Carbon Neutral Cities

Developing and verifying technologies for the creation, operation, and management of carbon neutral cities



Net Zero Infrastructure

Securing technologies to realize energy-plus houses and net zero buildings and their operation to accelerate the transition to a carbon neutral construction industry



Liquid Hydrogen Infrastructure

Developing technologies for hydrogen energy production, storage, and transportation to ensure the supply of hydrogen energy in large volumes for densely populated areas including cities

3. The 12 Flagship R&D Project

✓ Digital Transformation of the Construction Industry



Geospatial Digital Twin

Developing key technologies to monitor a wide range of data in real time by reflecting real-world land shapes



Hyperconnected Smart Cities

Verifying the validity of Korea's next-generation, sustainable smart city model by developing the cyber physical system and achieving hyperconnectivity and hyperintelligence



Smart Construction

Securing key technologies through the digitalization of the entire life cycle of buildings and SOC facilities to accelerate the adoption of ICT-based business models by the construction industry



Smart Building

Developing and verifying key technologies for realizing smart buildings where state-of-the-art smart services such as robots, automated aircraft, autonomous vehicles, and remote care are available



1. Autonomous Driving Technology _ Vision

✓ Goal of Autonomous Driving R&D Project



Achieving a safer and more convenient life for Citizens through Promoting Autonomous Driving Industry

Setting a basis for commercialization of Level 4+ Autonomous Vehicle in 2027

Project Autonomous Driving Technology Development Innovation R&D Project

Period 2021 ~ 2027 (For 7 years)

Budget About \$790 million (Government grants are about \$600 million)

Objectives

- Being 'Big Three' country in Autonomous Driving Technology fields by Packaged R&D Platform for Investment and Evaluation(R&D PIE model*)
- Creating a New marketplace and Improving Social Acceptance of Autonomous Driving Technology through Autonomous Driving Services Demonstration in the Living lab
- Securing a basis of New Industry by Building the Autonomous Driving Ecosystem

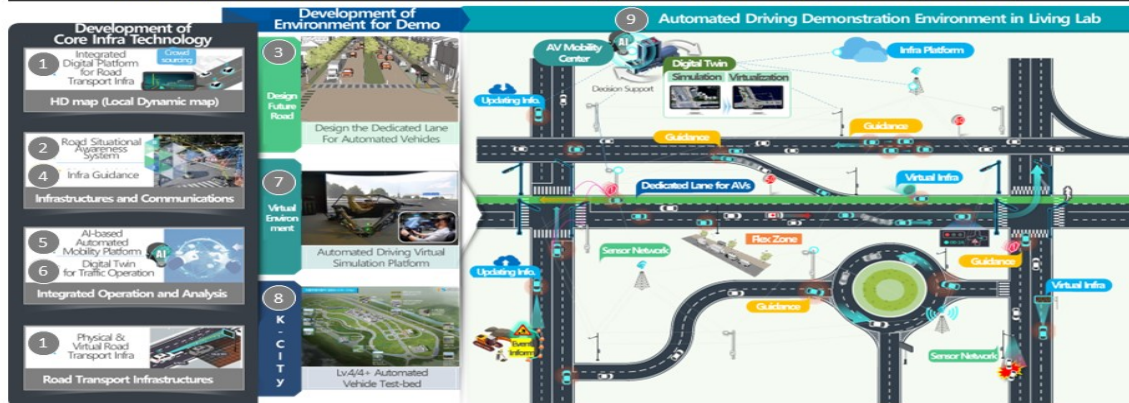
* R&D PIE Model : A New innovation investment model which leverages big data analytics and machine learning in order to assess disruptive changes in the technology landscape, and to identify overlaps and potential opportunities across the Korean ministries

20

1. Autonomous Driving Technology _ Strategic Fields

✓ Road-Traffic Integrated New Technology

Developing Integrated Road-Transport Infrastructure Technology for Supporting Autonomous Driving and Improving Driving Safety

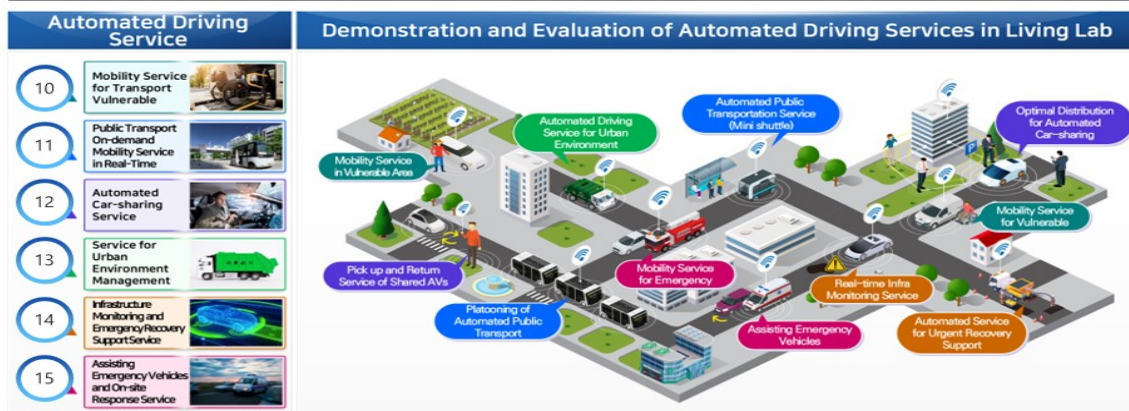


21

1. Autonomous Driving Technology _ Strategic Fields

✓ Autonomous Driving Service

Developing, Providing and Demonstrating 6 Core Autonomous Driving Public Service Which is tangible to Citizens

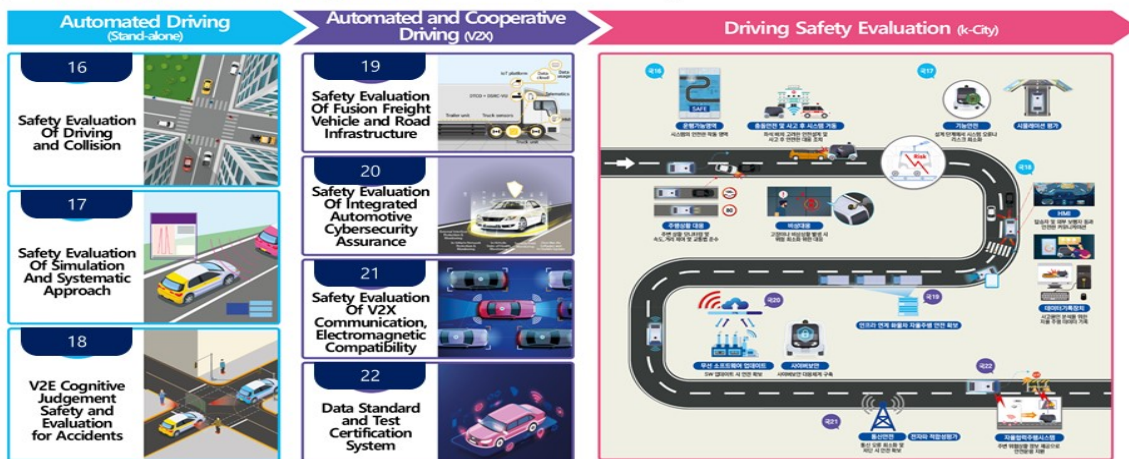


22

1. Autonomous Driving Technology _ Strategic Fields

✓ Autonomous Driving Ecosystem

Developing **Safety Evaluation Method and Standard System**,
Revising **Law and Regulation** for Implementing Lv.4/4+ Autonomous Vehicles

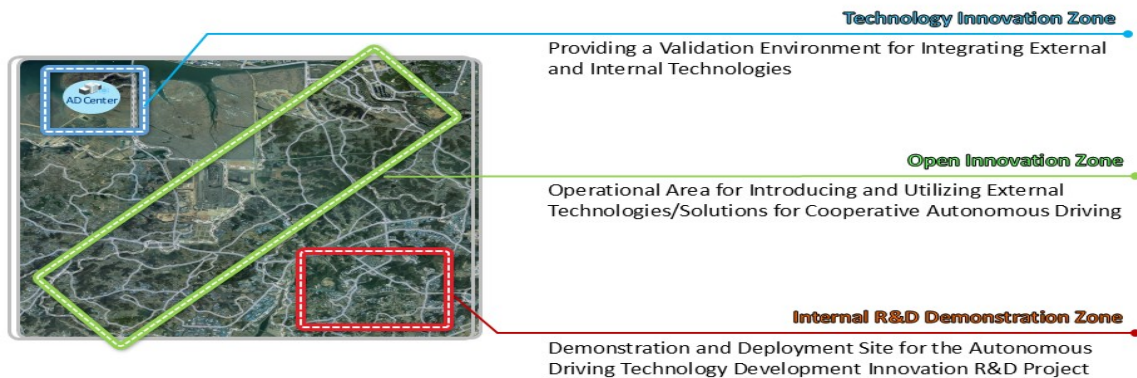


23

1. Autonomous Driving Technology _ Living Lab

✓ Living lab for Autonomous Driving Ecosystem

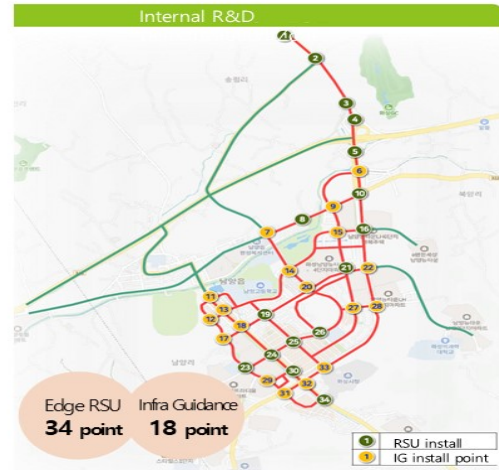
Collaboration and Sharing of Internal and External Technologies, Testing, and Demonstration Support for Autonomous Driving Ecosystem Development



24

1. Autonomous Driving Technology _ Living Lab

✓ Living lab for Autonomous Driving Ecosystem



Internal R&D Demonstration Zone

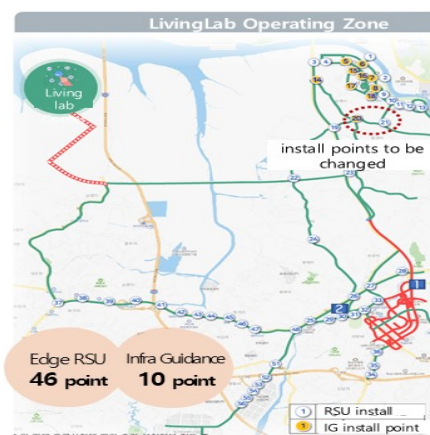
Demonstration and Deployment Site for the Autonomous Driving Technology Development Innovation R&D Project

25

1. Autonomous Driving Technology _ Living Lab

✓ Living lab for Autonomous Driving Ecosystem

Living Lab Operating Zone



Operational Area for Introducing and Utilizing External Technologies/Solutions for Cooperative Autonomous Driving

26

2. DRT Mobility Service

Metropolitan-DRT Mobility Service

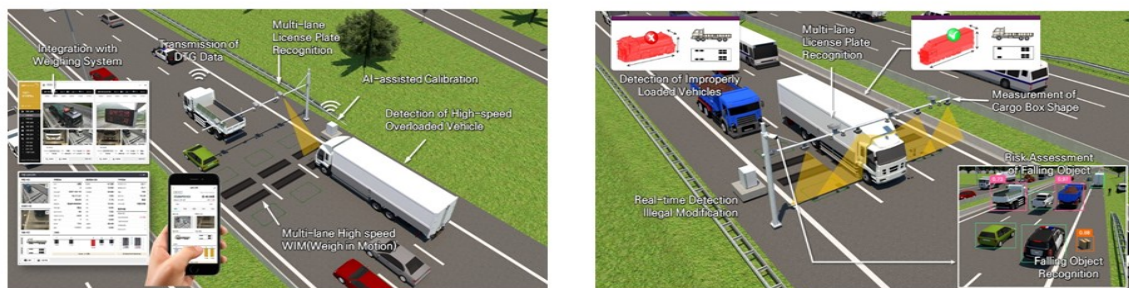
Development of the Practical Application Technology for
Demand Responsive Mobility Service in Metropolitan Areas
 ※ 2022~2025(4Y), 11.8M\$ USD, Korea Transport Institute(KOTI)



3. Commercial Vehicle Safety

AI Commercial Vehicle Safety Technology

Development of **Commercial Vehicle Transportation Safety Enhancement Technology with AI Data**
 ※ 2022~2026(5Y), 7.1M\$ USD, UDNS Co. Ltd



4. Net Zero

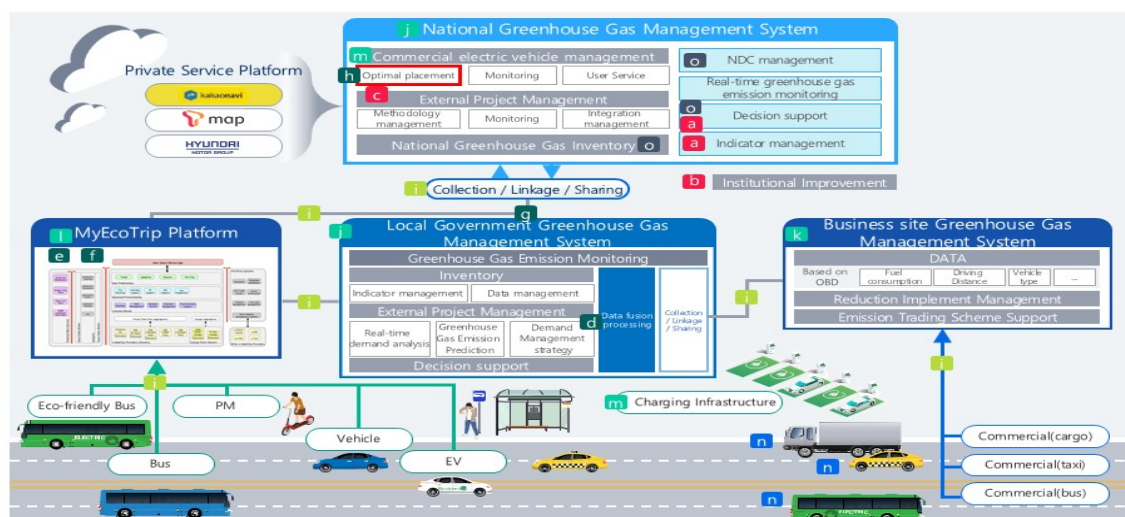
Carbon Neutrality Implementation(Transportation Sector)

Development of **Advanced Technologies for Carbon Neutral Transportation Sector Reduction Strategies**

※ 2023~2027(4Y), 23M\$ USD, ITS Korea



4. Net Zero



4. Net Zero

✓ Eco-Friendly Vehicle

Development of **Korean Green NCAP Evaluation Technology**

※ 2023~2026(3Y), 20M\$ USD, Korea Transportation Safety Authority(TS)



Technology for Rating and Evaluation Environmental Friendliness

Automotive Greenhouse Gas LCA Rating Technology

Technology for Rating and Grading the Environmental Friendliness of Automotive Indoor Air Quality

Korean Green NCAP Institutionalization and Practical Application Technology

Chapter IV



Global R&D Program

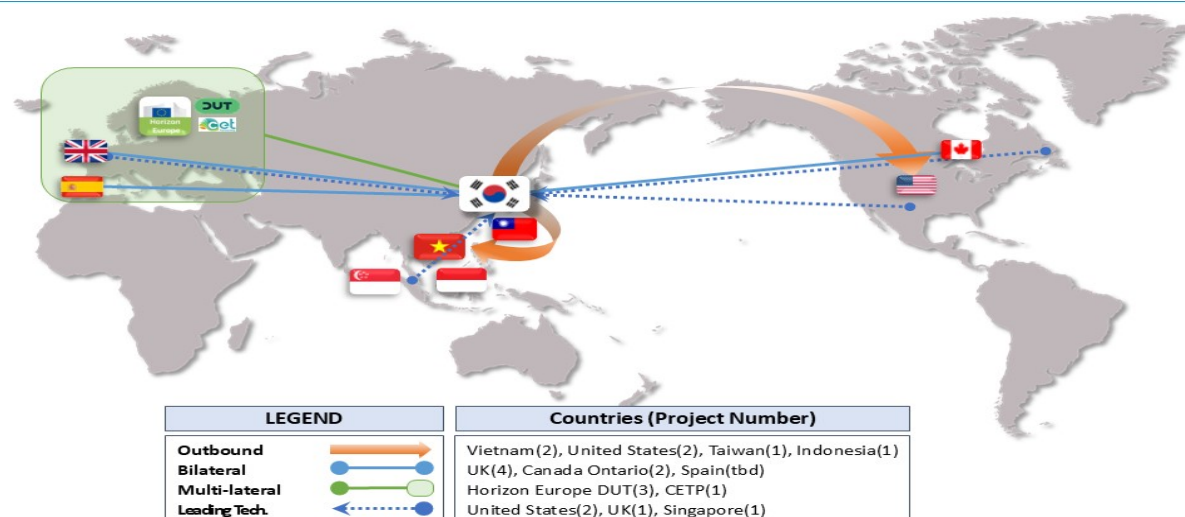
1. Partners of KAIA



2. Global R&D Overview

Vision	Early acquisition of a world-leading status in spatial and mobility technologies through strategic international R&D collaboration		
Goal	- Establish a 'high-quality international joint research' system' with top global research institutions - Create an 'international collaboration hub' for sustained future competitiveness - Set up a system for exploring global leading technologies collaboratively		
Program	I. Bilateral Joint R&D	① Korea-UK Joint Research Programme ② Korea-Canada Ontario Research Programme ③ Korea-Spain Joint Research Programme	
	II. Multilateral Joint R&D	⑤ EU Multi-Research Platform (Horizon Europe DUT and CETP) ⑥ Asia/Oceania Multi-Research Platform (Planning)	
	III. Global Leading Technology Joint R&D	⑦ Free competition based on a bottom-up approach to acquire advanced technology with global leading research institutions	
	IV. Outbound Joint R&D	⑧ Free competition based on a bottom-up approach including technology localization, demonstration and commercialization	
	V. Cluster Joint R&D	⑨ Technological collaboration and cross-validation R&D among domestic and international clusters	

3. Global R&D Status



4. Outbound Joint R&D

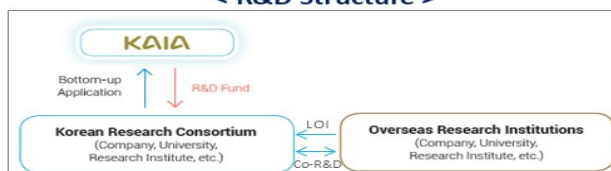
Support for **technology improvement, demonstration, and commercialization** with foreign countries to promote Korean technology abroad and international joint R&D project

Duration 2023~2029 (7 years) **Budget** \$19 mil. in total (max. \$1.3 mil. per project)
Schedule Project selection and kick-off - June 2023 and April 2026

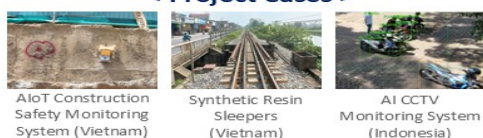
< Schedule >



< R&D Structure >



< Project Cases >



< Project Concept by Stage >



5. Bilateral Joint R&D_ Korea-UK Joint R&D Case

Bilateral global joint R&D with global leading funding agencies and research institutions

Duration 2024 ~ 2028 (5 years)

Budget \$ 9.6 mil. in total

Candidate Country UK (confirmed, '24~), Canada (confirmed, '25~), Spain (confirmed, '26~)

✓ KAIA-Innovate UK Joint R&D Project



Duration July 2024 ~ March 2027 (23 months)

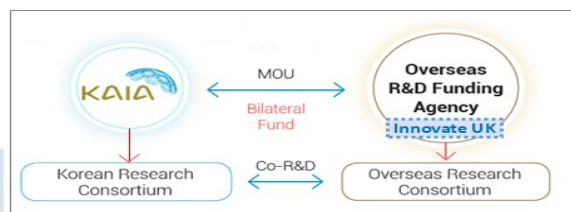
Budget \$4.5 mil by Korea (£ 3 mil by UK)

Research Field Data-driven Innovative Urban Solutions (Mobility, Disaster Management, Net-Zero Energy and other innovative solutions)

< Schedule >



< R&D Structure >



Thank You
(global@kaia.re.kr)

THE ASEAN ENERGY MANAGEMENT SCHEME (AEMAS):ITS CHALLENGES AND SUCCESS

Mr. Muhamad Muhtazam bin Noor Din
Manager, Sustainable Cities, Climate Action Division
Malaysian Green Technology and Climate Change Corporation
MALAYSIA

**KACPE INTERNATIONAL PUBLIC POLICY
SYMPOSIUM 2025**

The ASEAN Energy Management Scheme
(AEMAS):
Its Challenges and Success

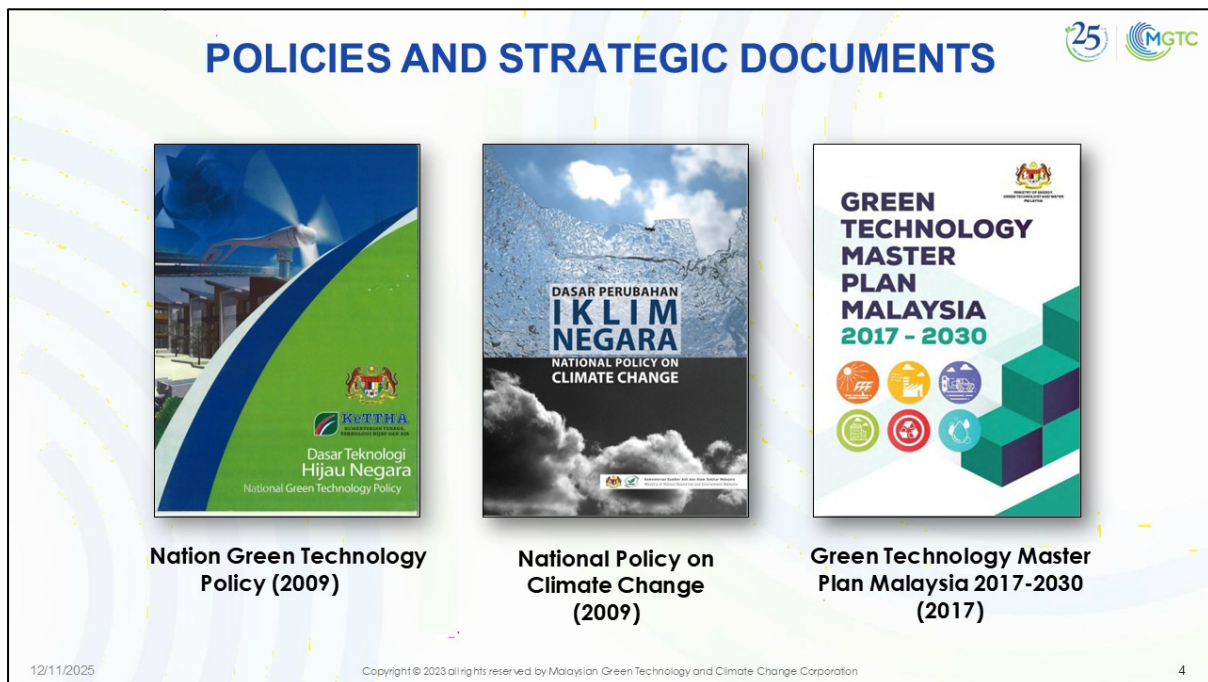
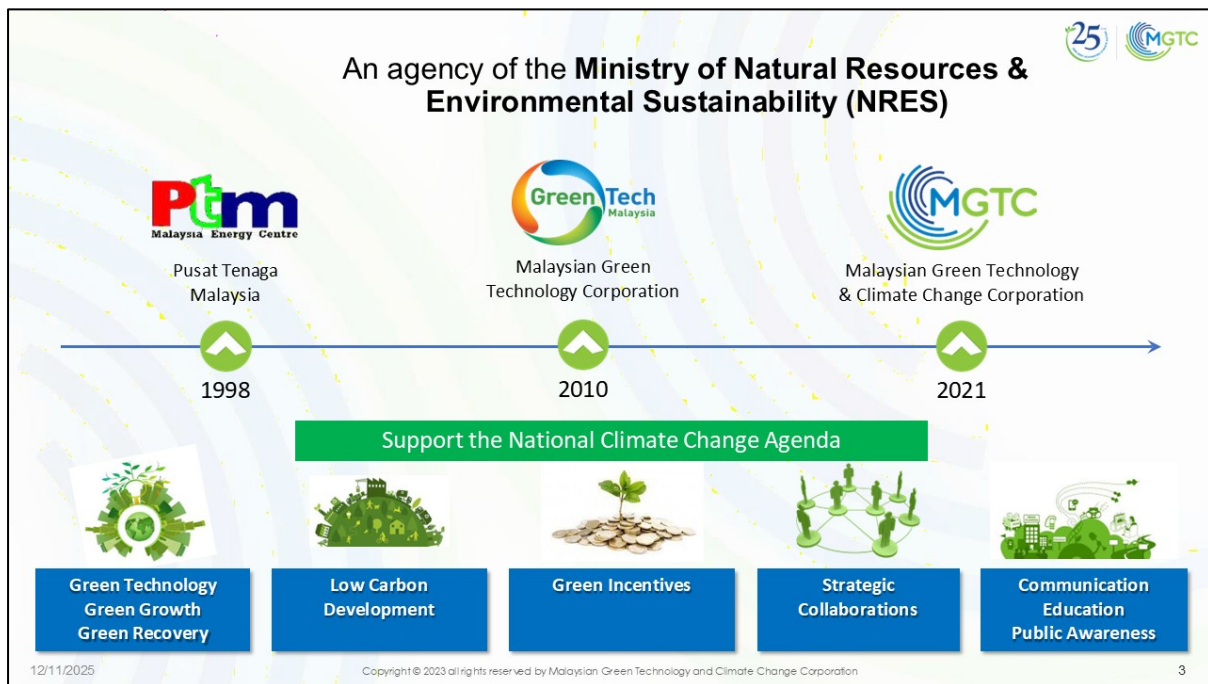
13 November 2025
Phnom Penh, Cambodia

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

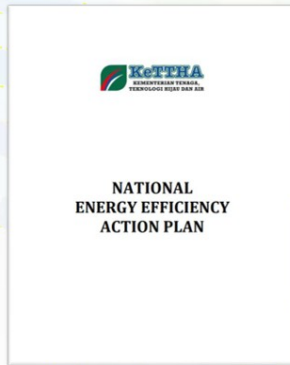
Contents

- 1.Introduction of Malaysian Green Technology & Climate Change Corporation (MGTC)
- 2.Policies & Strategic Documents related in Malaysia
- 3.ASEAN Energy Management Scheme (AEMAS)

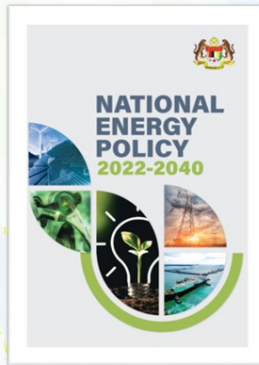
Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation



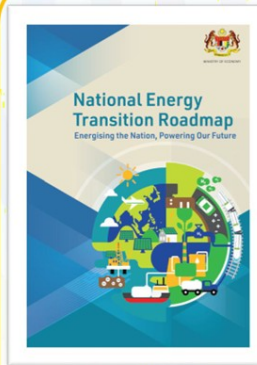
POLICIES AND STRATEGIC DOCUMENTS



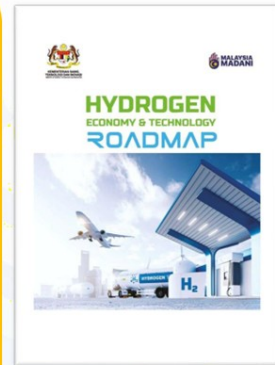
National Energy Efficiency
Action Plan (2016)



National Energy Policy
(2022)



National Energy Transition
Roadmap
(2023)



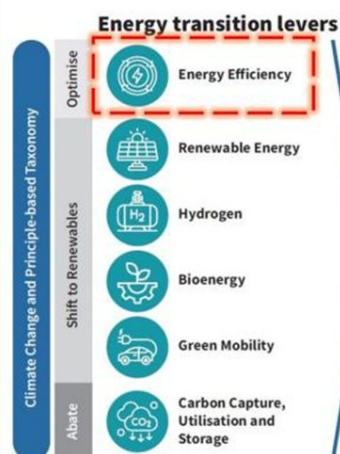
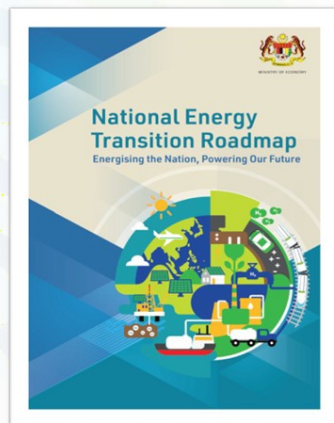
Hydrogen Economy &
Technology Roadmap
(2023)

12/11/2025

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

5

Energy Efficiency, the Essential Avoidance Route, serves as a cost-effective pathway, paving the way for a more affordable and seamless journey towards achieving net-zero emissions.



Prioritisation criteria

- Emission reduction potential**
Advancing green growth and enhancing sustainability to become a low-carbon nation while addressing energy trilemma.
- Economic opportunities**
Propelling strategic and high impact industries, especially for SMEs, strengthening investments and create job opportunities.
- Cost effectiveness**
Promoting investments, especially in nascent technologies to yield long-term benefits.
- Social inclusiveness**
Strengthening the security, wellbeing and inclusivity through clean energy sources that would benefit communities without compromising future generations.

12/11/2025

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

6

NATIONAL ENERGY TRANSITION ROADMAP (NETR)

EEC Activity Under NETR

CODE	INITIATIVES
EE1	Improve EE awareness
	- Promote awareness for energy-efficient appliances and equipment through public awareness programmes
	- Redesign the 5-star labelling standards to emphasise monetary savings in addition to the technical energy savings
EE2	Improve existing Minimum Energy Performance Standards (MEPS) and 5-star rating bands
	- Increase the number of MEPS-covered equipment
	- Establish an accelerated MEPS progression timeline for key critical appliances aligned with ASEAN Plan of Action for Energy Cooperation (APAEC) standards
EE3	Enforce mandatory audits for large commercial and industrial buildings
	- Implement mandatory investment-grade audits focusing on high-energy-consuming commercial and industrial sectors
	- Establish reporting protocol as well as a strict monitoring mechanism
EE4	Establish green building codes for energy-intensive residential and commercial buildings
	- Establish a mandatory national standard that outlines EE parameters for both new residential and commercial buildings as well as retrofit for existing building to meet a minimum Building Energy Intensity (BEI) level
	- Mandate disclosure of building energy performance for commercial buildings
EE5	Establish an ESCO platform
	- Establish a public ESCO platform to coordinate public building retrofits with private ESCOs
	- Streamline funding and create a single financial mechanism in the form of a revolving fund through ESCO platform
EE6	Launch a major EE retrofit initiative amongst government buildings
	- Identify energy inefficient public buildings (e.g., offices with BEI >200 = ~60-70% of existing building)
	- Develop medium to long-term EE government building retrofit program and implementation

SECRET

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

Suruhanjaya Tenaga
Energy Commission

At the domestic front, the government has enacted the Energy Efficiency and Conservation Act (EECA), fortifying the legal framework for energy efficiency and conservation practices to ensure comprehensive engagement at multiple levels

Dewan Rakyat passes Energy Efficiency and Conservation Bill 2023, to regulate energy use and conservation

By Cristina Sallehuddin, Nor Ain Mohamed Radhi - October 11, 2023 @ 1:42pm



The commission also has the authority to recommend to the government any policy, laws, action and measures relating to energy efficiency and conservation; and to promote, develop or implement policies and initiatives.

Meanwhile, the bill also emphasises comprehensive oversight under the provisions of Energy User Obligations, specifically targeting large energy consumers in the industrial and commercial sectors.

Energy users exceeding the threshold value of 21,600 gigajoules (GJ) per year are also required to implement Energy Saving Measures, which include the mandatory appointment of Registered Energy Managers to develop energy management systems and conduct energy audits, according to the bill.

Note: 21,600 GJ over twelve consecutive months is the energy consumption threshold; equivalent to about RM 1.0 million for natural gas & RM 2.4 million for electricity.



12/11/2025

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

8

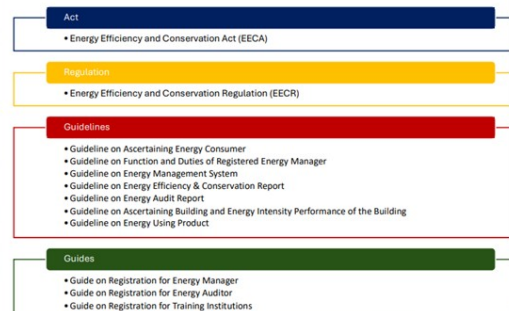
The government has enacted the Energy Efficiency and Conservation Act (EECA), fortifying the legal framework for energy efficiency and conservation practices to ensure comprehensive engagement at multiple levels



LEGISLATION STRUCTURE



LEGISLATION STRUCTURE



12/11/2025

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

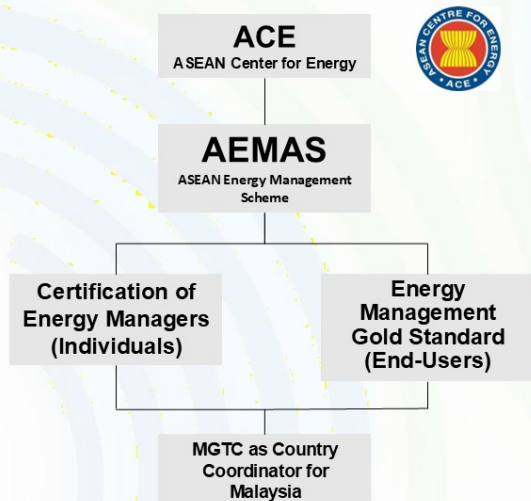
9



The ASEAN Energy Management Scheme (AEMAS): Its Challenges and Success



Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation



The **ASEAN Energy Management Scheme (AEMAS)** is a **regional ASEAN initiative** developed & supported by the highest energy authorities and agencies of ASEAN, including **10 ASEAN Ministers of Energy**.



MGTC was appointed as the **AEMAS** country coordinator since 2011.

12/11/2025

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

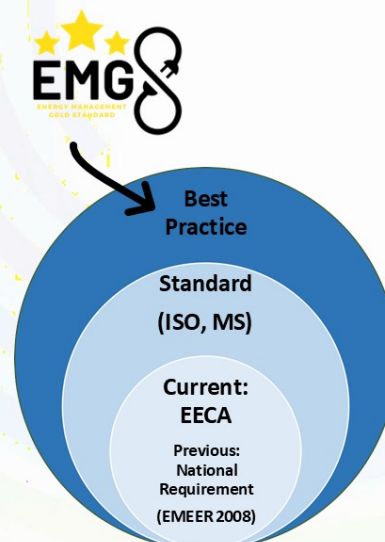
11



Certified By



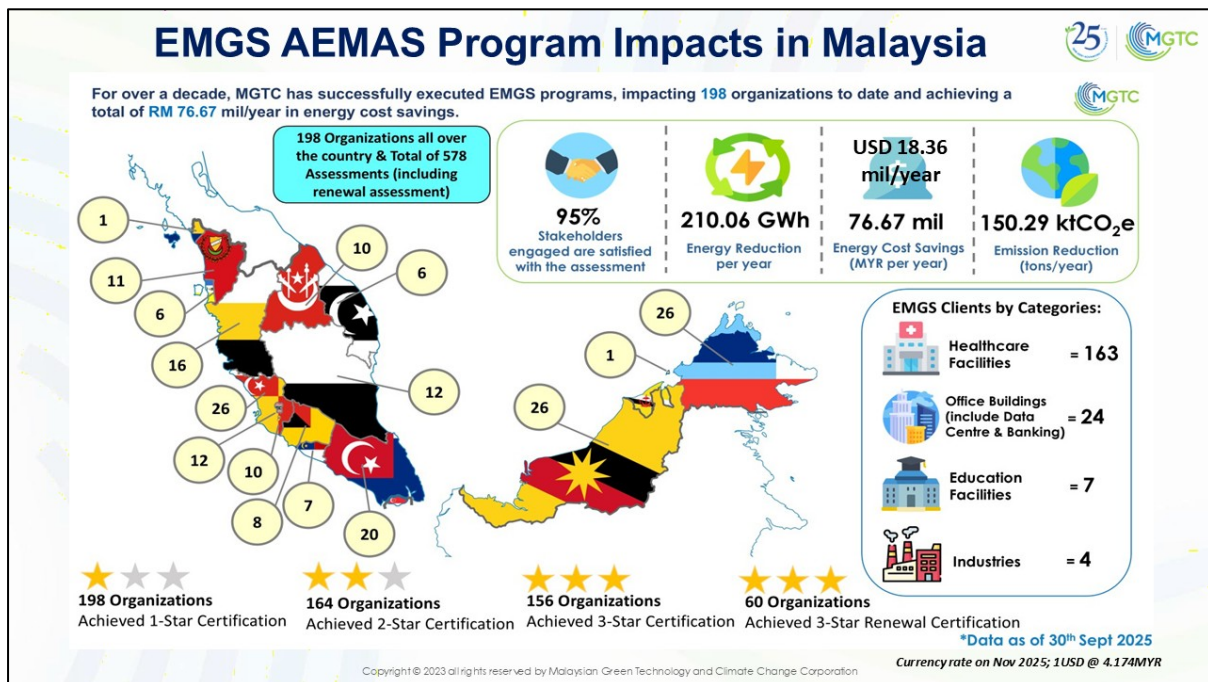
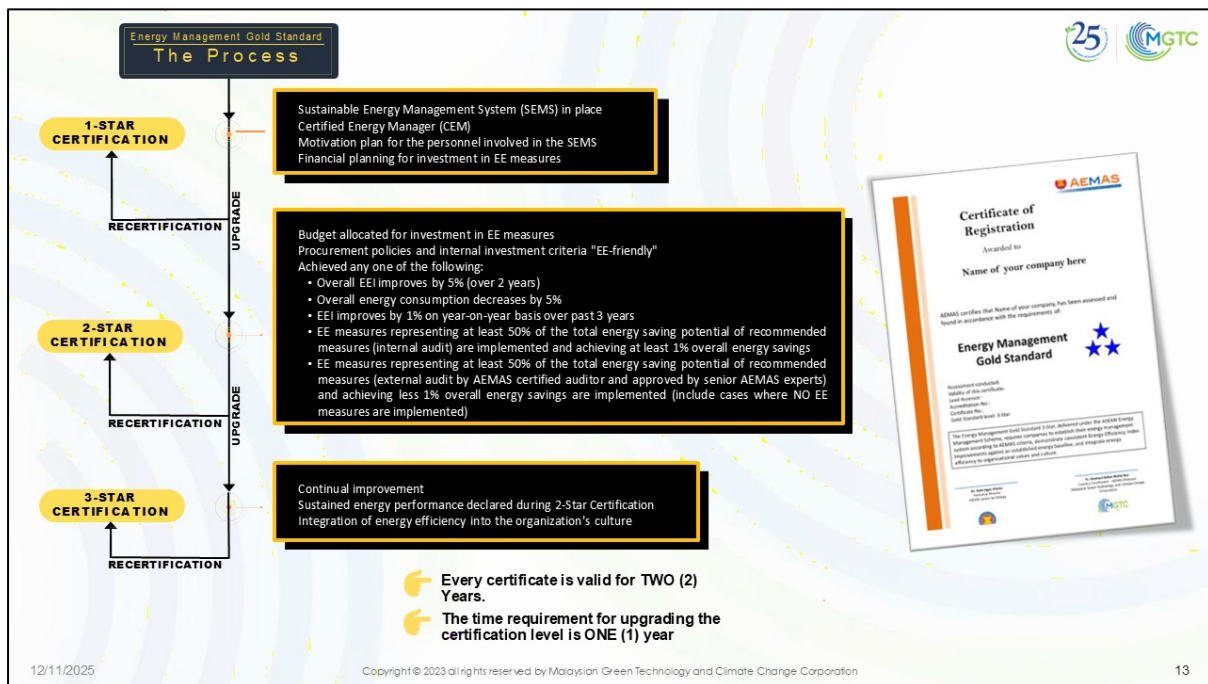
Supported by

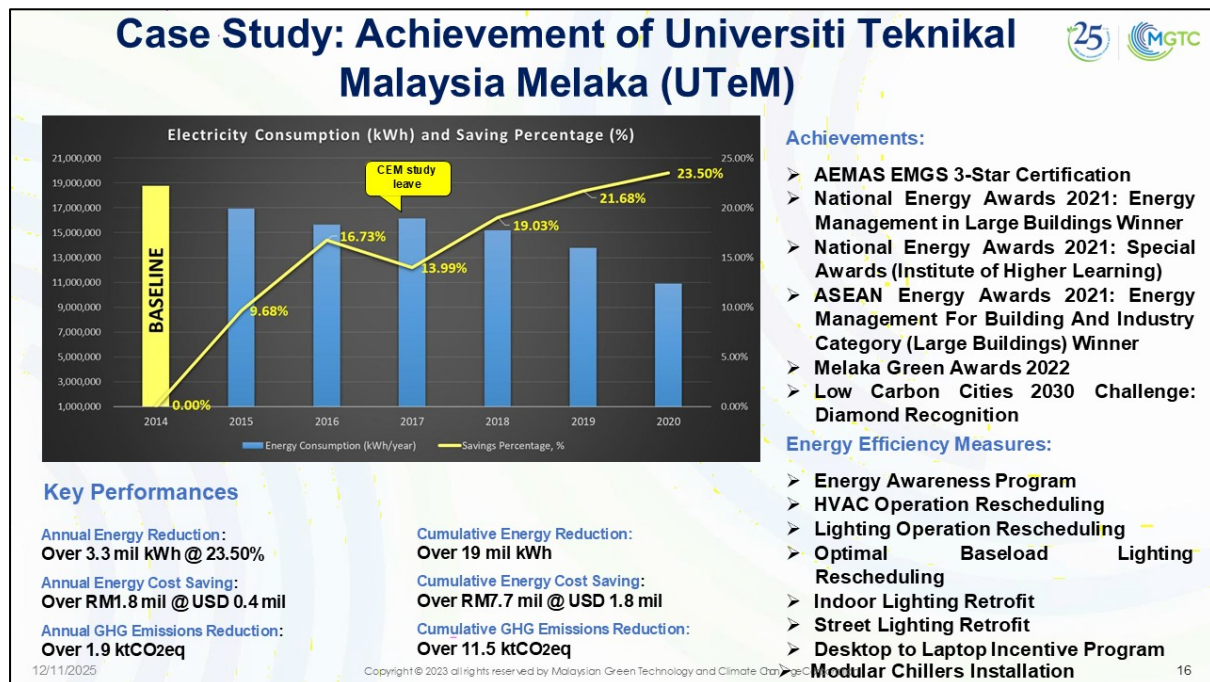
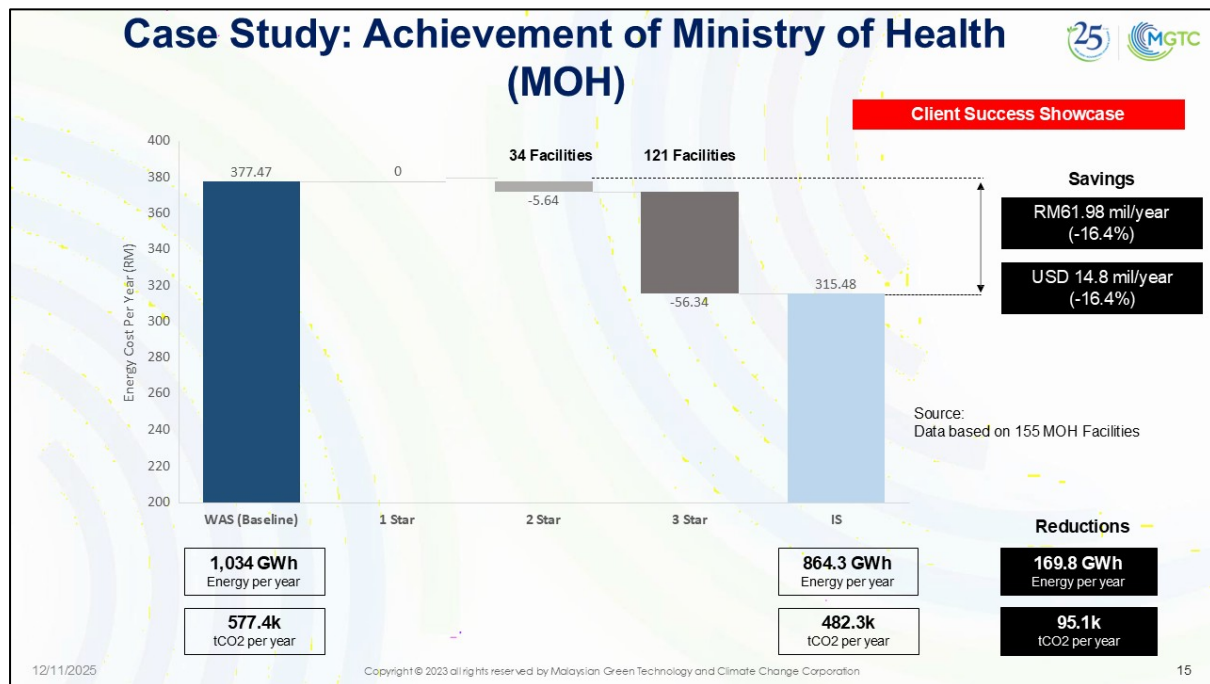


12/11/2025

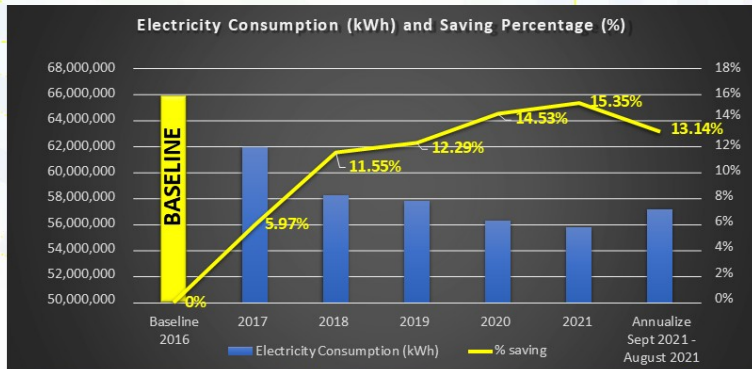
Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

12





Case Study: Achievement of Hospital Kuala Lumpur (HKL)



Achievements

- AEMAS EMGS 3-Star Certification
- National Energy Awards 2022: Energy Management in Large Buildings Merit Awards

Energy Efficiency Measures

- Energy Awareness Program
- HVAC Operation Rescheduling
- AHU Timer Installation
- Digital Power Meter Installation
- Indoor Lighting Retrofit
- Indoor Lighting Motion Sensor Installation
- Street Lighting Retrofit
- Air Handling Unit System Retrofit
- Chiller System Retrofit

Key Performances

Annual Energy Reduction:
Over 8.5 mil kWh @ 12.99%

Annual Energy Cost Saving:
Over RM2.9 mil @ USD 0.7 mil

Annual GHG Emissions Reduction:
Over 5 ktCO₂eq

Cumulative Energy Reduction:
Over 45.6 mil kWh

Cumulative Energy Cost Saving:
Over RM19.3 mil @ USD 4.6 mil

Cumulative GHG Emissions Reduction:
Over 26.7 ktCO₂eq

12/11/2025

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

17

Success of EMGS Clients in National and Regional Energy Competitions



WINNERS OF nea AWARDS 2024

CATEGORY	WINNER	RUNNER-UP	MERIT
Energy Management in Large Building	Universiti Teknikal Malaysia Melaka (UTeM)	Hospital Melaka	Hospital Segamat
	Hospital Hulu Terengganu	Hospital Gerik, Perak	
	Myrcan Steel CRC Sdn Bhd - Compressed Air Systems Upgrade		
Energy Management in Small & Medium Building	PETRON Malaysia Refining & Marketing Berhad - Biodiesel Production Plant		
Energy Management in Large Industry	Indah Water Konsortium Sdn Bhd - Taman Mawar, Puchong		
Energy Management in Small & Medium Industry	SMART Modular Technologies		

MALAYSIAN WINNERS OF ASEAN ENERGY AWARDS 2024

Category	WINNER	2 nd RUNNER-UP
Large Buildings	Universiti Teknikal Malaysia Melaka (UTeM)	Hospital Melaka
Small and Medium Buildings	Hospital Hulu Terengganu	
Small and Medium Industries	SMART Modular Technologies	Indah Water Konsortium Sdn Bhd - Taman Mawar, Puchong

12/11/2025

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

EMGS-certified organizations

18







MUHD MUHTAZAM BIN NOOR DIN
 MANAGER
 SUSTAINABLE CITIES
 CLIMATE ACTION DIVISION

+603 8921 0870
 +6017 480 7796
 muhtazam@mgtc.gov.my



[ADD TO CONTACT](#)

 www.mgtc.gov.my
 [mgtc.my](https://www.facebook.com/mgtc.my)
 [mgtc_my](https://twitter.com/mgtc_my)
 [mgtcmy](https://www.linkedin.com/company/mgtcmy)
 [mgtc.my](https://www.instagram.com/mgtc.my)
 [mgtc live](https://www.youtube.com/mgctlive)

12/11/2025

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

19





TERIMA KASIH

MALAYSIAN GREEN TECHNOLOGY AND CLIMATE CHANGE CORPORATION [99801006110 (462237-T)]

No.2, Jalan 9/10, Persiaran Usahawan, Seksyen 9, 43650 Bandar Baru Bangi, Selangor Darul Ehsan, Malaysia.

+603-8921 0800 +6019-308 8175
 info@mgtc.gov.my www.mgtc.gov.my

 [mgtc.my](https://www.facebook.com/mgtc.my)
 [mgtc_my](https://twitter.com/mgtc_my)
 [mgtc live](https://www.youtube.com/mgctlive)

Copyright © 2023 all rights reserved by Malaysian Green Technology and Climate Change Corporation

GREEN JOB IN VIET NAM CIRCULAR ECONOMY

Ms. Nguyen Thi Hoang Nguyen
Vice Director, Center for Information, Strategic Analysis Forecast and Public Services
Institute of State Organizational and Labour Sciences, Ministry of Home Affairs
VIETNAM

Green job in Viet Nam circular economy



Institute of State Organizational and Labor Science (Ministry of Home Affairs)
Presenter: ThS. Nguyễn Thị Hoàng Nguyễn

Content

01 Overview of circular economy legal framework

02 Green job on circular economy

03 Recommendations



Part 1: OVERVIEW OF POLICY ON CIRCULAR ECONOMY



1.1 Major Policies on Green Jobs and the Circular Economy



1. National Strategy on Circular Economy for the period 2021–2030, with a vision to 2050 (Decision No. 1658/ QĐ -TTg2021)



2. National Action Plan on Green Growth for the period 2021–2030, with a vision to 2050 (Decision No. 882/ QĐ -TTg2022)



3 Law on Environmental Protection (Law No. 72/2020/QH14 dated November 17, 2020)



1. Overview on policy related to circular economy

1.1 Legal documents and policies issued before 2020

- The legal framework began with the Environmental Protection Law in 1993. This was the first important legal document establishing the basis for organizing and implementing environmental protection activities.
- The Water Resources Law was enacted in 1998, five years later, with provisions on the prevention and control of environmental pollution, environmental incidents, and protection of water quality.
- Since 1998, the Government issued Directive No. 36/CT-TW, which mentioned the “application of clean technology, low waste, and low consumption of raw materials and energy.” However, it was not until 2004 that more specific and relevant policies were introduced to facilitate the development of the circular economy.
- In 2016, the Prime Minister issued the National Action Program on Sustainable Production and Consumption (Decision No. 76/QĐ-TTg) to support enterprises in transitioning their production and business models towards the circular economy.
- In 2017, the scheme for the development of Vietnam’s environmental industry up to 2025 was approved. The regulation of enterprises’ “responsibility” to adopt and build their business models according to the circular economy model was stipulated in Circular No. 34/2017/TT-BTNMT issued by the Ministry of Natural Resources and Environment concerning waste collection and treatment.



1. Overview on policy related to circular economy

1.2. Key Documents and Policies Issued Since 2020

- In alignment with our vision for sustainable development, the **10-year Socio-Economic Development Strategy for 2021–2030** outlines a clear directive to *promote the development of the circular economy model*, with the goal of enhancing the integrated and efficient use of production outputs.
- The Government's **Resolution No. 136/NQ-CP dated September 25, 2020, on Sustainable Development** emphasizes the importance of advancing initiatives, programs, and projects that support sustainable business practices—particularly those centered on the circular economy and integrity-driven entrepreneurship.
- The **Amended Law on Environmental Protection of 2020** marks a significant legislative milestone, as it is the first legal document to *explicitly define and regulate the circular economy model*. This law establishes a legal foundation for integrating circular economy principles into our national development strategy.
- **Decision No. 889/QĐ-TTg dated June 24, 2020**, which approves the **National Action Program on Sustainable Production and Consumption for the 2021–2030 period**, sets forth a comprehensive objective: to promote the sustainable and efficient management, exploitation, and utilization of resources, fuels, and raw materials. It encourages the development of environmentally friendly, renewable, reusable, and recyclable materials and products.





1. Overview on policy related to circular economy

1.3 Building on the Legal and Strategic Foundation

Pursuant to **Law No. 72/2020/QH14 dated November 17, 2020, on Environmental Protection**, the concept of the **circular economy** is **officially defined as an economic model in which design, production, consumption, and service activities are organized with the aim of minimizing resource and material extraction, extending product life cycles, reducing waste generation, and mitigating negative environmental impacts.**

- This definition underscores a crucial nuance: the circular economy is **not an independent or fully-fledged economic system**, but rather *a model within the broader economic framework*. It offers a targeted approach to sustainability, focused on optimizing resource use and minimizing environmental degradation.
- In line with this legal recognition, the **Circular Economy Development Scheme in Vietnam**, approved under **Decision No. 687/QĐ-TTg dated June 22, 2022**, sets forth an ambitious goal: *"To develop the circular economy as a driver of innovation and improved labor productivity, thereby contributing to green growth and the restructuring of the national economy"*
- To effectively realize this vision, the scheme designates the Ministry of Home Affairs (formerly the Ministry of Labor, Invalids and Social Affairs) with a strategic responsibility. The Ministry is tasked to: *"Proactively study labor and skill demands in circular economy sectors, develop vocational education programs, and organize training initiatives to build a human resource base capable of meeting the needs of circular economy development in the near future."*



1. Overview on policy related to circular economy

1.4 Policy Assessment on Circular Economy Development in Vietnam

❖ Advantages

- ✓ Developing and implementing policies on circular economy (CE) is a strategic pathway for Vietnam to fulfill its international commitments on environmental protection and climate change response.
- ✓ These policies help enterprises mitigate risks related to overproduction crises and resource scarcity; Improve technological innovation, reduction of production costs, and expansion of supply chains.
- ✓ Moreover, the circular economy creates **new markets, new employment opportunities**, and contributes to **improving** community well-being, and the natural environment.
- ✓ These solutions act as critical enablers, accelerating the transition toward a circular economy in Vietnam. They have a **direct impact** by generating job opportunities for workers, and through contributions to **local economic development**, they also **indirectly create employment** in sectors with potential for circular economy application.



❖ Limitations

- Current policies remain relatively fragmented and lack systemic integration. Specifically, circular economy practices are still limited to a few stages, with a primary focus on waste management and recycling.
- Furthermore, many CE-related provisions **remain at the policy level** and have not yet been translated into **detailed action plans** that could effectively support businesses in applying circular economy models in practice.



1. Overview on policy related to circular economy

* 1.4 Policy Assessment on Circular Economy Development in Vietnam

- The Party and the Government have introduced a range of guidelines and policies aimed at transforming the growth model toward sustainability, enhancing recycling and reuse of waste. In doing so, they have laid out clear roadmaps, mechanisms, policies, and legal frameworks to establish and operate the circular economy model.
- This demonstrates the Government's strong commitment to promoting circular economy development in Vietnam, while contributing to the realization of the Prime Minister's pledge at COP26—to achieve **net-zero emissions by 2050**.
- Circular economy thinking has also been mainstreamed into national programs and initiatives, including green public spending plans, extended producer responsibility (EPR), the development of the environmental and environmental services.
-> reforming the current solid waste management system, gradually forming a recycling industry, and laying the essential groundwork for building a **circular economy in Vietnam**.
- In practice, these policies have supported and encouraged cleaner production models not only among large manufacturing corporations but are also gradually reaching small and medium-sized enterprises (SMEs).



PART 2: GREEN JOB IN CIRCULAR ECONOMY

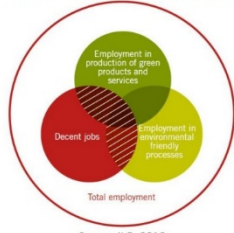


2.1. Point of view & Concept on Green job

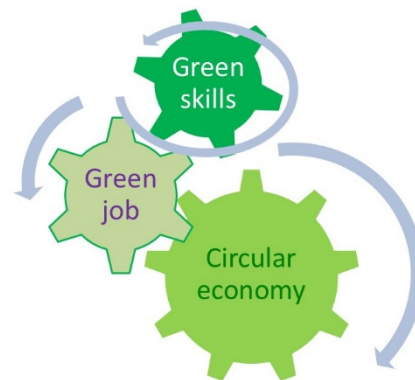
- Green jobs are decent jobs that contribute to preserve or restore the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging green sectors such as renewable energy and energy efficiency. (ILO 2016).
- Green jobs help:**
 - Improve energy and raw materials efficiency
 - Limit greenhouse gas emissions
 - Minimize waste and pollution
 - Protect and restore ecosystems
 - Support adaptation to the effects of climate change

& Green job are decent job

Figure 1. ILO taxonomy for green jobs



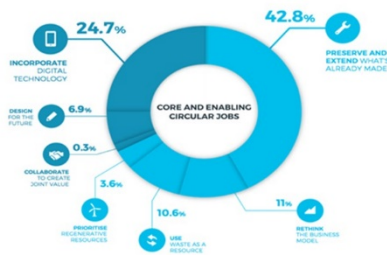
Source: ILO, 2016.



2.1. Point of view & Concept on Green job in CE

➤ Typical Green Economic Sectors

- Agriculture** (Organic)
- Green Industry:** Renewable Energy; Green Manufacturing and Processing
- Services:** Ecotourism; Environmental Services
- Other Sectors:** Transportation, Construction, Logistics...



- Circular jobs** are understood as any full-time or part-time employment that is directly related to the activities/elements of the circular economy (CE) or indirectly supports those activities.
- (i) Direct and Core Circular Jobs** include four types of work:
 - Jobs in the renewable energy sector
 - Equipment operation technicians
 - Recycling jobs
 - Process managers for rental services
- (ii) Directly Supporting Circular Jobs** (still considered direct circular jobs):
 - Directors, managers of associations, organizations, and company members
 - Designers (architects)
 - Data analysts
- For **indirect circular jobs** (understood as jobs that support direct circular jobs), examples include:
 - Logistics staff
 - Lecturers, trainers, and vocational instructors who provide knowledge and skills contributing to the circular economy



2.2 CE model in agriculture – Case study of TH true MILK

- In 2009, the TH Group launched a high-tech dairy farming and milk processing project worth USD 1.2 billion in Nghe An Province.
- One of the most effective circular systems that TH has developed is its livestock waste treatment system. By-products are transformed into raw materials for the organic fertilizer production plant.
- The waste treatment process also generates biogas, which is converted into electricity and fed back to power the company's factories.
- Electricity generated from biogas and solar panels installed on the roofs of TH's factories and farms currently provides about 10–20% of the total energy demand of the Group.
- Renewable solar energy from the farm rooftops also helps reduce carbon emissions by 5,000 tons of CO₂ per year. In 2023
- The average emissions at the TH true MILK fresh milk plant dropped significantly to just 0.103 kg CO₂ per unit of product—an outstandingly low level compared to other dairy factories in Vietnam and Southeast Asia.
- At TH, state-of-the-art waste treatment technologies have helped reduce methane emissions by at least 70%.



2.2 Green jobs in agriculture – Case study of TH true MILK

- 1. Director / Farm Manager**
Leads sustainable farm operations, ensuring efficient resource use and alignment with green practices.
- 2. Automated Milking Machine Operator**
Operates and maintains automated milking systems to ensure hygiene, animal welfare, and reduce labor intensity.
- 3. Livestock Monitoring Technician**
Tracks animal health indicators using digital tools to optimize care and reduce environmental stress.
- 4. Sustainable Grass Cultivation Technician**
Grows cattle feed using eco-friendly methods, enhancing soil health and reducing chemical use.
- 5. Manure and Organic Waste Technician**
Handles waste collection and composting or biogas production, minimizing emissions.
- 6. Water Efficiency Technician**
Manages water systems, promotes reuse, and reduces waste in irrigation and cleaning processes.
- 7. Wastewater Treatment Technician**
Operates treatment systems to ensure water is safely discharged or reused.
- 8. Renewable Energy Technician**
Maintains biogas or solar systems, supplying clean energy for farm operations.



2.2 Green job in renewable energy sectors (1)

- Ninh Thuan has been the renewable energy center in Vietnam, with a total capacity of 3,749.94 MW.
- Over 90% of this capacity comes from renewable sources
- By 2030, the province aims to reach a cumulative capacity of about 11,800 MW

1. Renewable energy projects have created 4,150 jobs, making up 1.8% of labor demand in economic sectors.

2. Average Working Time:

- 45.04 hours/week on average.
- Wind power enterprises: 45.2 hours/week.
- Solar power enterprises: 44.88 hours/week.
- Typically work about 44 hours/week, include Sat. mornings.

3. Actual monthly income: around 750- 1000 USD/month



2.2 Green job in renewable energy sectors (1)

Wind Energy Sector

1.Executive Director / Wind Farm Manager

Responsible for managing overall wind farm operations, ensuring safe, efficient performance, and meeting production targets.

2.Wind Turbine Design and Development Engineer

Designs, optimizes performance, and oversees installation of wind turbines.

3.Wind Turbine Operation and Maintenance Technician

Monitors, maintains, and repairs equipment to ensure effective and safe operation.

4.Environmental Specialist

Assesses and monitors environmental impacts of wind projects, ensuring compliance with environmental regulations.

5.Wind Project operator/technician

Plans, supervises progress, and coordinates stakeholders during wind farm construction and operation.

6.Data Analyst and Performance Monitoring Specialist

Uses digital technology to collect and analyze operational data to optimize energy output.

Solar Energy Sector

1.Executive Director / Solar Plant Manager

Oversees overall solar plant operations, ensuring safe, efficient functioning and achievement of production goals.

2.Solar System Design Engineer

Designs photovoltaic (PV) systems tailored to actual conditions and user requirements.

3.Solar Panel Installation and Maintenance Technician

Installs, inspects, and maintains solar panels and related equipment.

4.Safety and Environmental Supervisor

Ensures installation and operation comply with labor safety and environmental protection standards.

5.Energy Management and System Performance Specialist

Monitors, adjusts, and improves the performance of solar energy systems.

2.2 Green job in renewable energy sectors(2)

- **Working environment and conditions**

- 80% of employees evaluate WE is good /comfortable; the rest consider it is acceptable.
- Temperature & Air Quality: Not significantly affected by external weather
- Noise: experience some noise, but soundproof doors minimize its impact.

- **Heavy & Dangerous Tasks:**

- Workers must climb and carry repair equipment, creating heavy and dangerous work conditions.

- **Occupational Risks:** include electricity leakage and high-voltage hazards in case workers are not followed the safety regulations.

- Workers in substations or wind turbines face potential injuries from heavy equipment and must work in tight spaces or unfavorable weather conditions.



2.4 Green jobs in Circular tourism model

- ✓ Tourism integrated with agricultural activities, utilizing local specialties such as fruits, flowers, and seafood. Waste is reused, recycled, and managed in a circular manner within tourism operations.
- ✓ The use of recycled materials, organic products, and environmentally friendly designs helps minimize plastic waste and chemical usage.
- ✓ Responsible consumption by tourists is encouraged to promote community values and raise environmental awareness.
- ✓ Economic efficiency is closely linked with sustainable development: circular tourism adds value to the agricultural production chain, demonstrating the feasibility and attractiveness of the circular tourism model.

- New job positions are emerging within the circular economy model, such as eco-tourism guides, eco-tour management, and environmentally friendly housekeeping managers, among others.
- These new roles require workers to continuously update their knowledge skills, and the application of CE principles in their daily tasks.
- Employees also need to participate in additional training courses covering technology, foreign languages, digital skills, and sustainable management to meet the demands of the circular tourism model.



2.4 Green jobs in Circular tourism model

1. **Green Travel Director/ Eco tourism Manager**
Develops sustainable tourism strategies, manages eco-friendly travel operations, and leads the business toward circular economy goals.
2. **Eco-Agro Tourism Designer**
Creates eco-tourism and agro-tourism packages that integrate farming experiences and promote sustainability education.
3. **Eco-Agro Tour Guide**
Leads tours on organic farms, educating visitors about sustainable agriculture and environmental protection.
4. **Sustainable Food Processing Staff**
Processes local organic products on-site, minimizing waste and packaging.
5. **Waste & Recycling Operator**
Manages waste sorting and recycling at accommodations to ensure environmental standards.
6. **Sustainable Tourism Coordinator**
Organizes and oversees eco-friendly tourism activities, ensuring resource efficiency and cultural preservation.



2.5 Summary of Green Jobs in Typical Circular Economy Models (1)

Regarding Labor Organization and Management

For enterprises applying the circular economy model, labor organization and management play a central role in ensuring effective and sustainable operations.

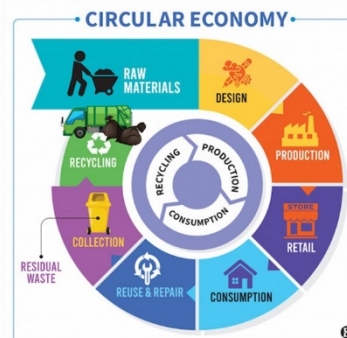
Common “Green” Jobs in the Circular Economy

1) Senior Leadership and Management Directors:

Require leadership and management capabilities with a multi-dimensional perspective on issues, along with a strong awareness of social and environmental responsibility. They guide investment decisions, change or adjust production and business methods, and apply science and technology in activities following circular and sustainable models.

2) Production Planning and Design:

Require the ability to develop detailed plans and expertise in lifecycle analysis to optimize production processes, extend product lifecycles, minimize waste, and improve resource efficiency.





2.5 Summary of Green Jobs in Typical Circular Economy Models (2)

Regarding Labor Organization and Management

3. Production Organization:

Direct job positions include engineers, technicians, and technical workers responsible for operating, maintaining, and repairing machinery and equipment. Workers need technical qualifications and regularly update their skills to meet job requirements.

4. Distribution and Consumption:

This department is responsible for ensuring products are efficiently delivered to consumers, while also managing product recalls for recycling after use.

5. Wastewater and Waste Treatment:

Positions require the capability to implement advanced technological solutions to treat and recycle waste before disposal.

6. Recovery and Recycling:

This department focuses on collecting used products and packaging for recycling into raw materials for production.



PART 3: RECOMMENDATION ON DEVELOPMENT GREEN JOB IN VIET NAM





3.2. Opportunities and Challenges for Labor and Employment in the Context of Circular Economy Development in Vietnam

➤ Opportunities

- 1. The implementation of policies and development programs related to the circular economy in Vietnam has played an important role in encouraging innovation, enhancing workforce efficiency, and supporting environmentally sustainable economic growth.
- 2. The private sector in Vietnam is evolving in a dynamic manner, showing strong adaptability. Its ability to operate independently, respond quickly to changes, and pursue opportunities effectively positions it as a key driver in the advancement of circular economy practices.
- 3. The future of the circular economy is closely tied to progress in science, technology, and the ongoing digital transformation associated with the Fourth Industrial Revolution, offering new tools and solutions to support its development.
- 4. As a country that is adopting this model later than others, Vietnam has the advantage of being able to study international experiences, reduce the time needed for trial and error, and apply proven models that suit its specific conditions and development goals.



➤ Challenges

- 1. The level of awareness and understanding of the circular economy among the general public and even many businesses remains limited, creating significant barriers to the effective implementation of related policies and solutions.
- 2. The overall quality of the labor force in Vietnam is still relatively low, with a shortage of skilled workers and professionals with appropriate technical expertise in certain specialized sectors of the circular economy.
- 3. There is a lack of strong coordination between research and training institutions and the entities responsible for practical application, leading to gaps in knowledge transfer and real-world implementation.
- 4. Investment capital is limited, and access to innovation, particularly in science and technology, remains a challenge for many enterprises aiming to adopt circular economy models.



3.3 Recommendations to promote CE and Green job

(1) Solutions for creating new jobs, improving labor productivity and income

- **For government agencies and organizations:**
 - Develop mechanisms to promote cooperation, knowledge sharing, and technical transfer among businesses
 - Implement tax reduction policies or special tax incentives for businesses or startups operating in the circular economy sector
- **For Businesses**
 - Regularly conduct research to improve and optimize production processes
 - Provide training courses and encourage businesses to create opportunities for employees to engage in continuous learning, supporting their career development
 - Invest in machinery and equipment that comply with safety and environmental standards; invest in and upgrade technology; enhance automation to minimize job positions or tasks that require workers to be directly exposed to hazardous or dangerous elements
 - Establish continuous monitoring systems to track the quality of the working environment, especially in job positions with potential exposure to hazardous waste





3.3 Recommendations to promote CE and Green job

2) Policy Solutions to Support Labor Transition from Traditional Sectors to Green Economy and Circular Economy (CE)

To facilitate the workforce transition from conventional industries to green and circular economic sectors, the following support mechanisms should be prioritized:

- **Provide financial assistance** such as training subsidies and short-term low-interest loans to ease the economic burden on informal workers as they participate in vocational retraining programs.
- **Offer business consulting and legal guidance** for individuals interested in starting businesses in the green economy or CE sectors, thereby fostering innovation and entrepreneurship.
- **Conduct awareness campaigns and support local implementation** of policies that promote participation in social insurance schemes and collective labor agreements. At the same time, introduce incentives for enterprises to recruit and train workers transitioning from the informal to the formal economy.



3) Promoting Gender Equality in Employment Opportunities, Skills Development, and Career Advancement

- Ensure equal access for women to quality jobs in green and circular economy sectors by **improving working conditions** and **expanding technical education and training opportunities** tailored to female workers.
- Launch professional training programs and encourage businesses to **prioritize hiring women**, especially in high-potential, sustainable sectors.
- Create equitable employment opportunities not only in terms of job access but also in income and career growth, thereby **enhancing the social status and empowerment of women** within the circular economy workforce.



3.3 Recommendations to promote CE and Green job

4) Solutions for Retraining and Upskilling Workers to Meet the Demands of the Circular Economy Model

- Provide support for vocational education and training (VET) institutions to offer free training programs for workers in forestry, organic agriculture, recycling, and waste treatment.
- Promote training partnership models with businesses, encouraging companies to take an active role in the training process.
- Regularly conduct labor market assessments to understand the specific job requirements and skill needs in circular economy sectors, thereby enabling the design of relevant and responsive training programs.



5) Encouraging Investment in Research and Development:

- Promote the development of green technologies and innovation in environmentally friendly sectors.
- Support research and innovation projects related to green technology, environmental protection, and climate change mitigation — thereby creating job opportunities in technology and innovation-driven industries.



6) Connecting Labor Supply and Demand

- Organize job fairs, sector-specific exhibitions, and workshops on circular economy careers to connect workers with potential employers.
- Develop an online network/platform to link businesses, recruitment organizations, and workers interested in circular economy sectors.



THANK FOR YOUR KIND ATTENTIONS!



A DIGITAL PATH TOWARDS A SMART, SUSTAINABLE, AND INNOVATIVE FUTURE: A HUMBLE PROPOSAL FROM CAMBODIA

Mr. Taing Bunhong
Director, Dept of Policy and Legal Affairs
General Secretariat of the Digital Government Committee
Ministry of Post and Telecommunications
CAMBODIA

The slide features a light blue background with a vertical blue bar on the right containing various digital communication icons (Wi-Fi, mobile phone, email, etc.) and the P.T.C. logo. The main text is in English and Khmer. It includes the title, speaker's name (TAING Bunhong), date (13 November 2025), and event details (KACPE International Public Policy Symposium, Phnom Penh, Cambodia). An illustration of a person at a desk with a video call on the screen is on the right.

ក្រសួងប្រៃសណីយ៍ និងទូរគមនាគមន៍
Ministry of Post and Telecommunications of Cambodia

A Digital Path towards a **Smart, Sustainable, and Innovative Future:**
A Humble Proposal from Cambodia

TAING Bunhong
13 November 2025
KACPE International Public Policy Symposium
Phnom Penh, Cambodia

mptc.gov.kh

Overview

1. Policy & Institutional Backgrounds
2. Cambodia's Approaches to Digital Sector Development
3. Thoughts on Linkage towards Sustainable, Smart, and Innovative Future

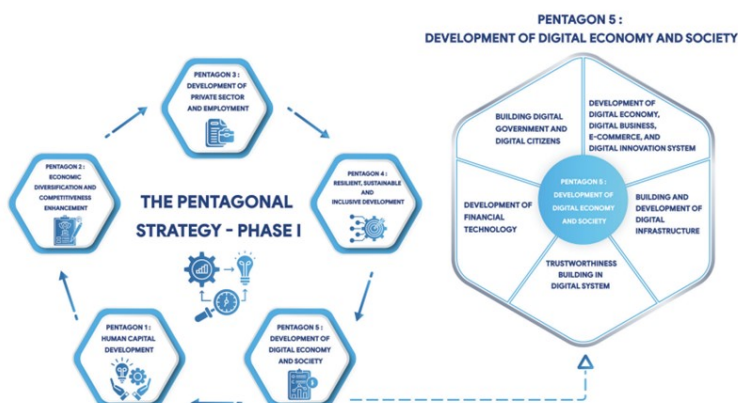
1. Policy and Institutional Backgrounds

Commitment from the Top



Five Key Priorities of Pentagonal Strategy Phase I:

People, Road, Water, Electricity, Technology

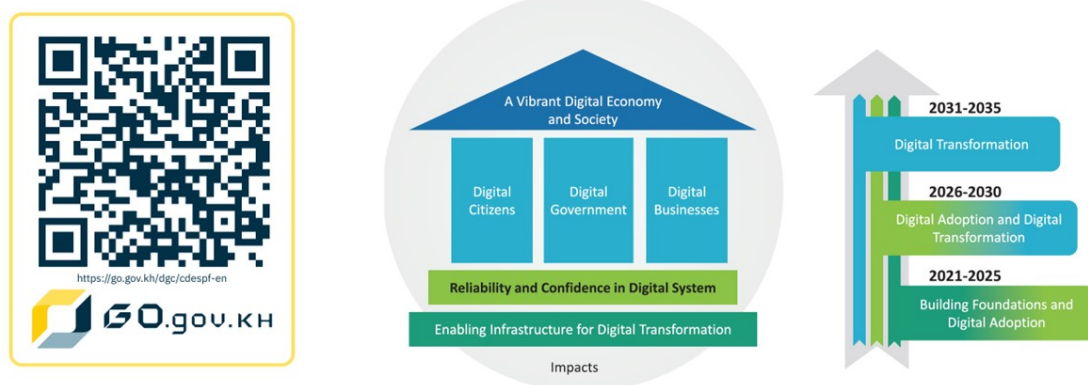


1. Policy and Institutional Backgrounds

Cambodia Digital Economy and Society Policy Framework 2021-2035

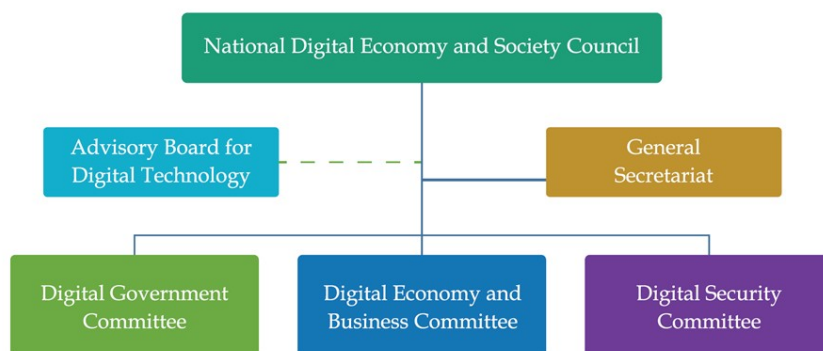


Figure 4: Principles and Framework for Building Cambodia's Digital Economy and Society



1. Policy and Institutional Backgrounds

Cambodia Digital Economy and Society Policy Framework 2021-2035



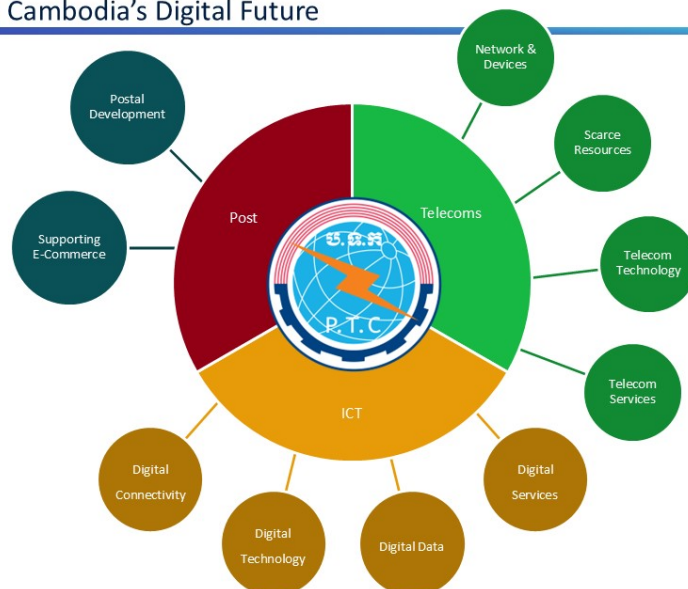
1. Policy and Institutional Backgrounds

Cambodia Digital Government Policy 2022-2035



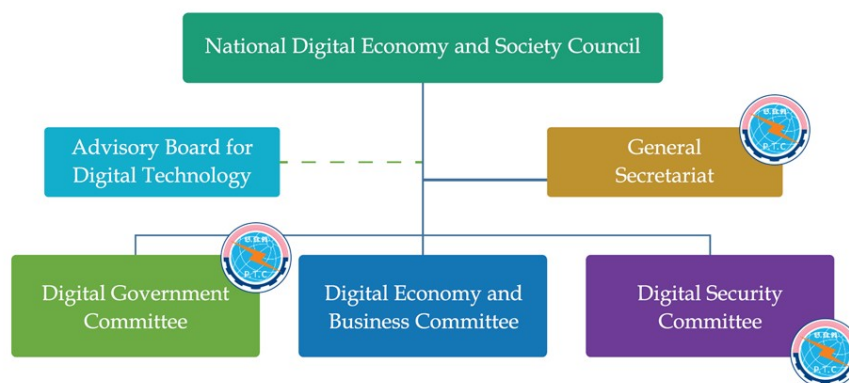
1. Policy and Institutional Backgrounds

MPTC: Leading Cambodia's Digital Future



1. Policy and Institutional Backgrounds

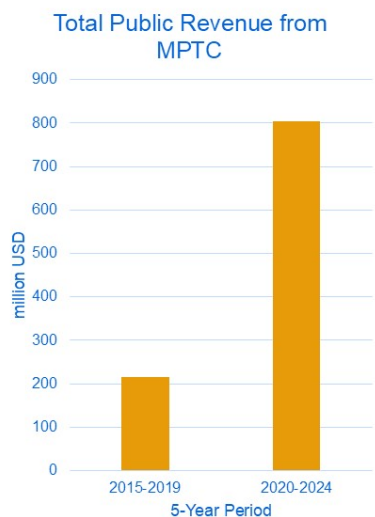
MPTC: Leading Cambodia's Digital Future



2. Cambodia's Approach to Digital Sector Development:



1 - Reform from Within – Lead by Example

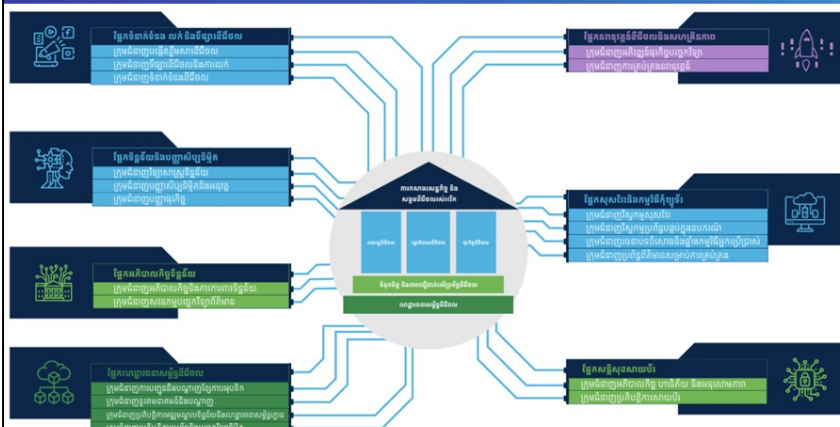


- Digitalizing workflows
- Digital Skill Essentials for MPTC officers
- Equipping digital devices and productivity tools
- Scholarships and specialized training programs
- Strengthen work ethics

1. Cambodia's Approach to Digital Sector Development:



2 - Invest in People & Infrastructure



Cambodia Digital Skills Development Roadmap 2024-2035

- Grade A, B & C students
- Digital technology majors
- 100% scholarship + support
- 500 places/yr.



- Zero-interest study loan
- Favorable repayment structure
- Mentorship + career support



- 5 functions in one location
- Adjacent to rural community centers
- Bring access close to people
- 18 sites to date
- To expand to 500+ sites



2023
ឆ្នាំនៃការចេញដំណើរ
THE LAUNCHING YEAR

- អំណាចការព្រឹត្តិការណ៍សំបុត្រទិន្នន័យជំពូកទី ៤ កម្ពុជា
Tier IV National Data Center Groundbreaking
- សំបុត្រទិន្នន័យ ចំនួន ៧ ផលិតផលរដ្ឋបាល
បានបោះពុម្ពផ្សាយជាផ្លូវការ
100,000+ High School Graduates
- 1st DGP Beneficiaries
- VERiFY GOV.KH បានក្លាយជាប្រព័ន្ធបញ្ជាក់សញ្ញា
ឯករាជ្យជាតិសម្រាប់ប្រជាជន
VERiFY GOV.KH Became the National Verification Platform

2024
ក្រំច្រកមើលសមិទ្ធផលកន្លងមក...
TAKING STOCKS OF
ACHIEVEMENT TO DATE...

- បញ្ចប់ការសាងសង់សំបុត្រទិន្នន័យជំពូកទី ៤ កម្ពុជា
Inclusive from the Smart Port Community Technology Center Groundbreaking
- បញ្ចប់ការសាងសង់សំបុត្រទិន្នន័យជំពូកទី ៤ កម្ពុជា
ប្រព័ន្ធបញ្ជាក់សញ្ញា
Solutions for All: 7 Digital Government Products' Completion
- អនុវត្តប្រភេទនិងកិច្ចប្រកួតប្រជែង
បរិក្ខេបឌីជីថល (២០២៣-២០២៤)
Digital Transformation Mobs
& Agreements Signed (2023-2024)
- 17,000+ មន្ត្រីរដ្ឋបាលទទួលបានការបណ្តុះបណ្តាល
លើកម្រិតឌីជីថល (២០១៩-២០២៣)
Civil Servants Received Digital Training
(2019-2023)
- 2,100+ អានុប្បទានដល់សិស្សនិងមន្ត្រីរដ្ឋបាល
(២០២០-២០២៤)
Total Scholarships Provided to Students and
Public Officers (2020-2024)
- 3,000+ ស្ថានីយប្រែប្រួលរលកថ្មី (២០២០-២០២៣)
New Base Transceiver Stations (2020-2023)
- បានរងនូវការកាន់កាប់នៅក្នុងប្រព័ន្ធ
ASEAN DIGITAL AWARDS 2024

2. Cambodia's Approach to Digital Sector Development:

3 - Technology-Driven Digital Government



ផ្ទាំង DG SuperApp
ផ្តល់សេវាសារធារណៈរួមក្នុងផ្ទាំងតែមួយ

Digital Government Products (DGPs) –

ផ្ទាំងឱកាសកម្មវិធី

រដ្ឋាភិបាលឌីជីថល

Sector- and institution-agnostic digital building blocks (PaaS and SaaS) for transformative digitalization.

2. Cambodia's Approach to Digital Sector Development:

3 - Technology-Driven Digital Government

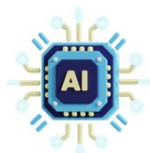


2. Cambodia's Approach to Digital Sector Development:

3 - Technology-Driven Digital Government



Blockchain



AI



Hybrid Cloud



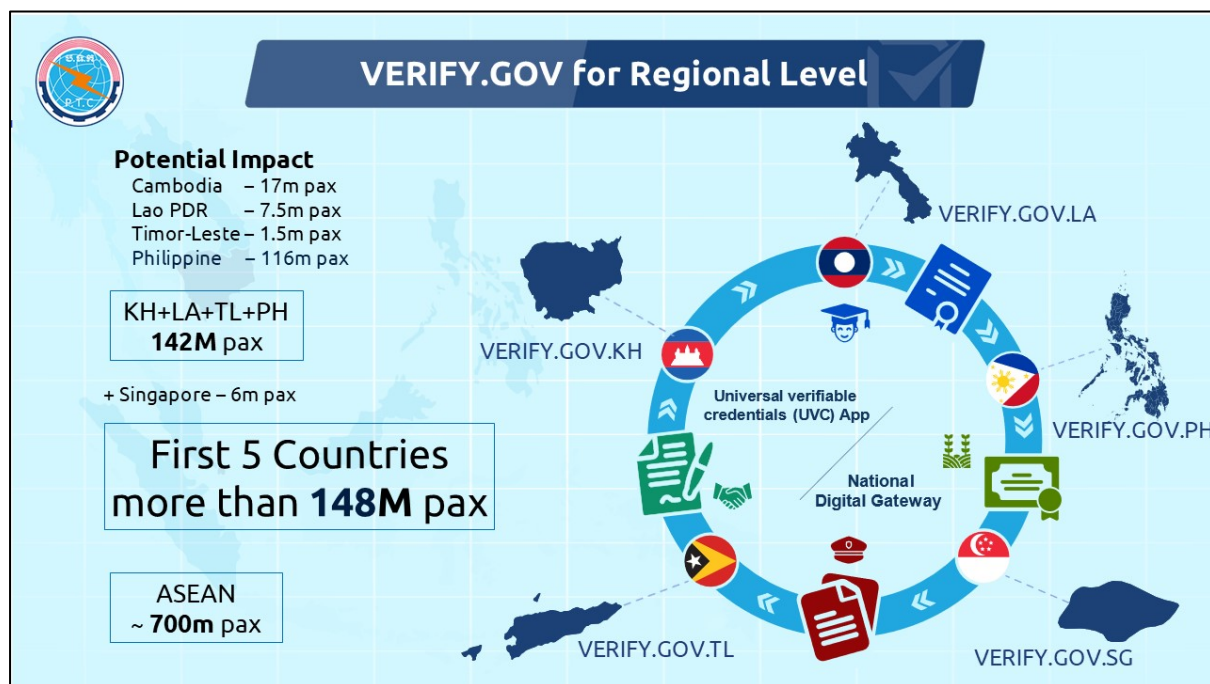
QR code

OpenCerts

Digital Certificate (OA)

Secure, Flexible, Robust, Open

ព្រលន្ទៀងព្រលន្ទៀងសារបស្សន្ទៀងព្រលន្ទៀង
VERIFY.GOV.KH



2. Cambodia's Approach to Digital Sector Development:

3 – Invest in Research, Development, & Innovation



Annual Scholarship Programs in AI, since 2018

"The First Ph.D Graduation"

Mr. Ly Rottana successfully completed his PhD in the field of Artificial Intelligence at the University of Grenoble Alpes, France in November 2023. He received a scholarship award through a collaborative project between CADT and the French Embassy in Cambodia."

– CADT, 10th Anniversary Photo Collection



វិស័យបញ្ចប់ថ្នាក់បណ្ឌិតដំបូង
The First Ph.D Graduation



CADT

Khmer Braille Machine Translation



Lack of access to educational materials for the visually impaired students leads to low academic result

The National Institute for Special Education (NISE) works with:



1,000+

Visually and hearing
impaired students



4

Special education
high schools



20

Inclusive schools

Only around 10-20 students able to continue to university per year.



Khmer Braille



Recognition and Awards



“Best Accessibility Award”

AI for Good Conference of ITU
Shanghai, July 2024.



“Best Digital Research and Innovation”

Cambodia Digital Award
Phnom Penh, December 2024.



“Digital Inclusivity”

ASEAN Digital Award
Thailand, January 2025.

2. Cambodia’s Approach to Digital Sector Development:

3 – Invest in Research, Development, & Innovation



Connecting **ASEAN**
Researchers for
Digital Research
November 13th – 14th, 2025

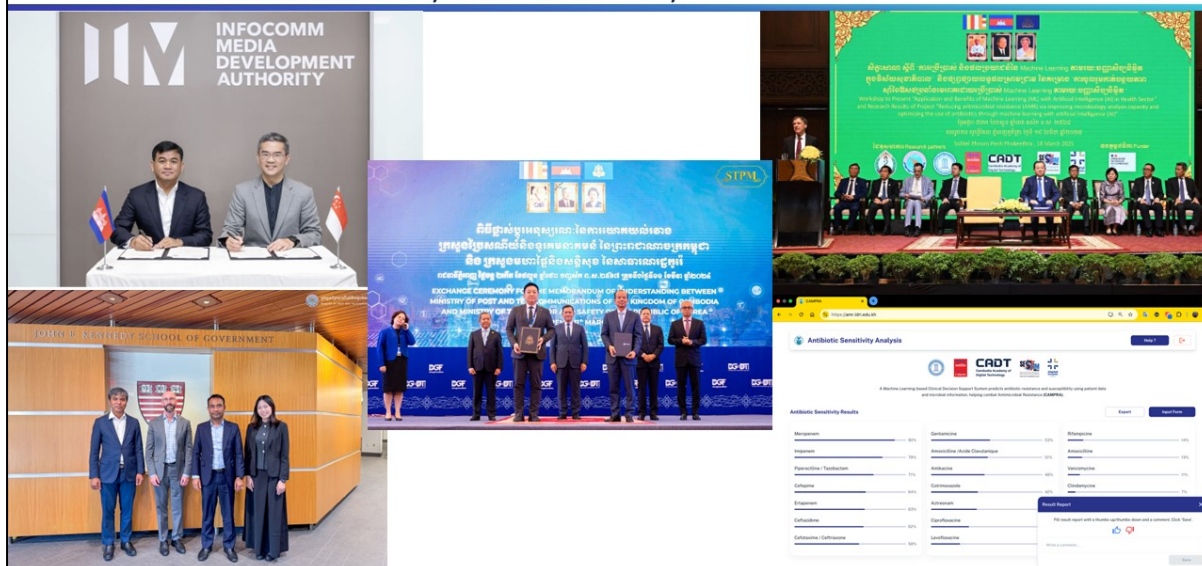


Annual Conference on AI and emerging
technologies
2017-Present



2. Cambodia's Approach to Digital Sector Development:

4 – Collaborate Domestically and Internationally



2. Cambodia's Approach to Digital Sector Development:

4 – Collaborate Domestically and Internationally



Cambodia Digital Park

- 8 Functions:
 - National data center
 - Bonded warehouse
 - Exhibition center and showrooms
 - Conference hall
 - Training centers
 - University cluster
 - Digital technology company cluster
 - Community-building
- Open and incentivized
- >100 ha in Phnom Penh
- Approved by the Royal Government
- Open and incentivized
- >100 ha in Phnom Penh

3. Thoughts on Linkage towards a Smart, Sustainable, and Innovative Future

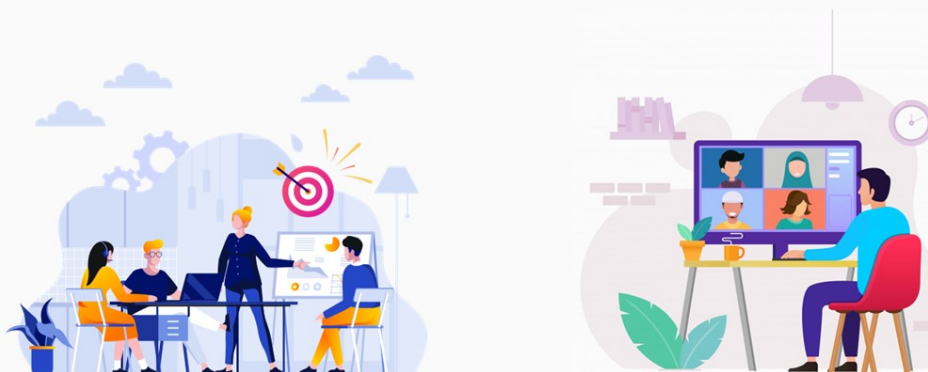


Source: Foundation of Children's Hospitals Kantha Bopha
(<https://www.beat-richner.ch/en/Stiftung>)

Value Creation $\xrightarrow{\text{Digital Technology}}$ Better Lives for Our Peoples

Go Digital, Go Together!

Thank you!



mptc.gov.kh



mptc.gov.kh



mptc.gov.kh



mptc.gov.kh



mptc.gov.kh



mptc.gov.kh



mptc.gov.kh

INDUSTRIAL DEVELOPMENT IN MYANMAR AND COOPERATION WITH KOREA: *POLICY ANALYSIS AND RECOMMENDATIONS FOR FUTURE COOPERATION*

MINISTRY OF INVESTMENT AND FOREIGN ECONOMIC RELATIONS

Dr. Thida Kyu
Director General, Union Minister's Office
Ministry of Investment and Foreign Economic Relation
MYANMAR

Executive Summary

This report provides a comprehensive analysis of the major issues affecting industrial development in Myanmar as of October 2025 and offers concrete, actionable recommendations for cooperation with the Republic of Korea and ASEAN partners. It covers historical background, current constraints in smart innovation (smart cities, mobility including electric vehicles), artificial intelligence and robotics, green energy development and digital transformation, and examines Myanmar's geopolitical positioning with SCO, BRICS, GMS, EAEU and BIMSTEC. The report also evaluates the potential impacts of the upcoming 2025 general election and outlines policy measures for Myanmar, Korea and ASEAN to advance sustainable industrialization.

Key findings

Myanmar's industrial base remains underdeveloped due to chronic infrastructure gaps, unreliable power supply, weak logistics and a shortage of skilled labor, compounded by political uncertainty. Smart innovation and digital transformation are constrained by low fixed-broadband penetration, frequent network disruptions and limited R&D capacity. However, high mobile penetration and a young population

create a strong foundation for rapid digital growth if stability and policy support return. Green energy potential is significant (hydro and solar), but financing, transmission capacity and project governance are limiting factors. Korea's comparative strengths (smart-city systems, EV and battery technologies, AI/robotics and renewable energy solutions) align well with Myanmar's development needs. Existing cooperation channels such as KMIC, KOICA, KOTRA and ASEAN–Korea frameworks provide immediate platforms to scale up engagement.

Recommendations Prioritize: (1) restoring investor confidence through legal assurances and selective policy incentives; (2) launching Korea–Myanmar pilot projects in KMIC for EV assembly, solar + storage microgrids and smart manufacturing; (3) establishing joint vocational and AI training centers; (4) pursuing trilateral ASEAN–Korea–Myanmar initiatives for standards and SME integration; and (5) designing flexible cooperation modules that can operate under different political scenarios.

The document that follows contains detailed sectoral analysis, tables and metrics, and an implementation roadmap for 2026–2035 aimed at accelerating Myanmar's industrial modernization in partnership with Korea and ASEAN.

1. Introduction

Myanmar occupies a critical strategic position in Asia, bordering China, India and Thailand. With abundant natural resources and a growing labor force, Myanmar has the potential to transform its economy through industrialization, value-added manufacturing and digital services. However, the industrialization process has periodic challenges. This report analyzes core bottlenecks and provides a practical cooperation agenda for Korea, ASEAN partners and Myanmar policymakers.

Methodology

The analysis draws on DICA/MIC 2025 investment approvals, ASEAN-Korea cooperation documents, published government notifications on EVs and renewable energy, and international analyses by the World Bank, IMF and regional think tanks. The report synthesizes qualitative and quantitative data from these sources and proposes implementation steps for the 2026–2035 period.

2. Historical Background of Industrial Development in Myanmar

(a) 1948–1962: Post-Independence Mixed Economy and Planned Development

In this post-independence era, Myanmar pursued a mixed-economy strategy with a focus on import-substitution, particularly through the ambitious “Pyidawtha plan”. Structurally, the Agricultural sector dominated both GDP share (often over 40%) and employment (majority of the labor force), with the Industry and Services sectors playing a small but growing role. This period saw a slight structural shift as state investment created new manufacturing capacity. However, industrialization failed to take root due to key constraints: the premature and inefficient nationalization of existing businesses, which resulted in a loss of critical managerial and technical expertise; macroeconomic instability stemming from internal conflict and ambitious spending; and a reliance on volatile rice export earnings that proved insufficient to finance the large-scale, capital-intensive state projects. The policy lacked a strategic focus on building a sustainable private-sector manufacturing base.

(b) 1962–1988: The Burmese Way to Socialism and Isolation

Under the “Burmese Way to Socialism,” the economy was centrally planned and isolated. Policy emphasized total state control and self-sufficiency through import-substitution. The official Industry share of GDP was increased by allocating a large portion of public investment, but this increase was not reflective of economic viability, as most State-Owned Enterprises (SOEs) were deeply inefficient. The Agricultural sector remained the largest employer (upwards of 65%), and the Services sector stagnated.

Industrialization failed profoundly because the policy eliminated market mechanisms, private entrepreneurship, and foreign investment. The SOEs were plagued by obsolete technology, poor management, a chronic shortage of imported raw materials and spare parts (due to a collapse in foreign exchange earnings), and a lack of financial discipline, resulting in the country's degradation to LDC status by 1987.

(c) 1989–2010: Cautious Liberalization and Stunted Growth

This period officially marked the shift toward a market-oriented economy with the introduction of the Foreign Investment Law. The structural change was initially hesitant, with Agriculture's share of GDP gradually declining (though it remained the dominant employer), while the Industry shares experienced preliminary growth, particularly in the export-oriented garment (Cut-Make-Pack) sector and resource extraction. The Services sector also saw an expansion. Industrialization was stunted and distorted because market reforms were only partial and inconsistent; the state maintained vast control, especially through military-linked conglomerates, which undermined fair competition and transparency. A major factor in the failure was the critical lack of physical infrastructure (e.g., reliable power supply and transport) and an unstable institutional environment, characterized by an unclear regulatory framework and multiple exchange rate systems.

(d) 2011–2020: Reform, Opening, and Initial Structural Transformation

The civilian-backed government launched comprehensive economic and political reforms, leading to a significant liberalization and an influx of Foreign Direct Investment (FDI). This decade saw the most visible structural change: the Agriculture share of GDP continued to decline, while the Industry and Services shares both grew significantly (with the Industry sector absorbing a slowly increasing share of employment). The industrial policy focused on diversification, Special Economic Zones (SEZs), and integration into global value chains. However, this period of industrial growth ultimately failed to achieve deep, sustainable transformation because of critical skill gaps in the labor force, a persistent lack of reliable energy infrastructure, and a weak and overburdened institutional capacity to administer new laws

effectively (such as the Myanmar Investment Law). These factors prevented the country from attracting the high-value, sophisticated industries needed for sustained, broad-based industrialization.

(e) Current Industrialization Policy of Myanmar

Myanmar's current industrialization policy is primarily driven by a goal of national self-sufficiency and import substitution, especially in the wake of recent political and economic instability. The core strategy pivots on leveraging the country's natural resources through a strong focus on agro-industrialization and the simultaneous development of strategic, high-tech sectors. This involves accelerating manufacturing businesses rooted in agriculture and livestock to create value-added products, ensure domestic food security, and boost exports to enhance the socio-economic conditions of the majority rural population. Alongside this, the policy mandates the development of critical infrastructure, particularly in the energy sector, while promoting the growth of Micro, Small, and Medium Enterprises (MSMEs) to generate jobs and diversify the industrial base.

Complementing the foundation of agro-industry, Myanmar's industrial policy outlines a push into modern, knowledge-based sectors, with a notable emphasis on the Digital Economy, Electric Vehicles (EV) manufacturing, and the creation of Smart Cities. The government is actively working to establish a digital infrastructure, including a data ID card and e-government systems, which are foundational to supporting a modern, service-based economy. Furthermore, the promotion of EV assembly and related businesses, often through committees and targeted incentives for local production of spare parts (SKD systems), signals a commitment to green technology and industrial upgrading. Overall, the policy aims to transition Myanmar from a largely agrarian economy to a modern industrial country by increasing the industrial sector's contribution to GDP, while facing persistent challenges related to political instability, infrastructural deficits (especially power), and foreign currency controls that hinder the operating environment for businesses. Regarding the investment activities in Myanmar, data from DICA are as follow:

- (a) By the end of September 2025, Myanmar Investment Commission had permitted the total of 2433 investment projects in 12 business sectors from 53 countries/regions which value US\$ 93918.319 million.
- (b) Singapore leads the list of most invested countries/ regions in Myanmar with 28.42% of total investment and China and Thailand follow the list with 23.51% and 12.48% of total investment accordingly.
- (c) The power sector leads the list of most invested sectors out of 12 business sectors with 28.28% of total investment. This was followed by Oil and Gas sector with 24.65% and Manufacturing sector with 14.60% accordingly.

Since the Myanmar Investment Commission will prioritize the following investment activities, we would like to invite investment in those sectors;

- (a) Fertilizer manufacturing,
- (b) Cement manufacturing,
- (c) Iron and steel manufacturing,
- (d) Agriculture and livestock farming and its related industries,
- (e) Value-added foodstuffs manufacturing,
- (f) Electric vehicle manufacturing,
- (g) Pharmaceutical and medical device manufacturing,
- (h) Public transportation services,
- (i) Production of edible oilseeds, contract farming for edible oil crops, production of various types of edible oil.

The investors investing in Myanmar will attain the following supports in accordance with Myanmar Investment Law (2016). All the investment activities included in the promoted sectors may attain income tax exemption. Myanmar Investment Commission has designated the less developed regions of Myanmar

as Zone: (1), the moderate developed regions as Zone (2) and the adequate developed regions as Zone (3) with the approval of Union Government and issue a notification to grant income tax exemptions to investment activities.

Promoted Sector (MIC Notification)	Investment Area	Zone 1 (Least Developed)	Zone 3 (Adequately Developed)
Smart Mobility (EV)	EV Manufacturing, Charging Services, Battery Production	7 Years Income Tax Exemption	3 Years Income Tax Exemption
Green Energy	Renewable Energy (Solar, Wind, Thermal) Production	7 Years Income Tax Exemption	3 Years Income Tax Exemption
Digital Transformation	Telecommunications, IT Services, Data Centers, Fiber Optics	7 Years Income Tax Exemption	3 Years Income Tax Exemption
Traditional Manufacturing	Cement, Iron/Steel, Pharmaceuticals, Value-Added Foodstuffs	7 Years Income Tax Exemption	3 Years Income Tax Exemption

3. Current Industrial Development Issues

3.1 Smart Innovation and Smart Cities

Smart innovation in Myanmar remains at a pilot stage. Key cities such as Yangon, Mandalay and Nay Pyi Taw have undertaken small-scale transportation and GIS projects, but systemic deficiencies limit scalability.

The main constraints are: (a) **Energy reliability:** Frequent power outages increase operational costs and damage ICT equipment. (b) **Broadband infrastructure:** Low fixed broadband penetration and limited fiber backbone capacity. (c) **Governance fragmentation:** Multiple municipal entities with overlapping responsibilities hinder integrated planning. (d) **Financing constraints:** Limited availability of long-term, low-cost finance for urban infrastructure.

Opportunities and recommendations:

- (a) Pilot a Korea–Myanmar smart-city lab in Yangon with modular components: traffic management, smart street lighting, waste collection sensors and a citizen service portal.
- (b) Deploy shared fiber backbone financed through a PPP with Korean technology providers and local telcos.
- (c) Invest in municipal capacity building via KOICA technical assistance and exchange programs with Korean local governments.

3.2 Smart Mobility and Electric Vehicles (EVs)

The development of the Electric Vehicle sector is a central strategic priority, intended to modernize the nation's transport system and build new industrial capacity.

The Myanmar Investment Commission officially designated EV and related activities as a Promoted Sector via Notification No. (1/2023). This designation covers critical areas, including manufacturing, installation, and maintenance services for various electric vehicles, renewable energy power generation and distribution for EV use, charging services, and the manufacture of batteries.

In addition to the general income tax exemptions linked to investment zones (3 to 7 years), EV investors can attain exemptions or reliefs from customs duty or other internal taxes on imported machinery, equipment, spare parts, and construction materials required during the preparatory or construction period. Furthermore, EV manufacturing has been included in the list of priority investment sectors by the MIC, alongside foundational industries like Fertilizer, Cement, and Iron and Steel manufacturing.

Myanmar has signaled policy support for EVs. MIC designated EV manufacturing, charging services and battery production as promoted activities in 2023. As of September 2025, MIC approvals include 13 SKD

EV projects and 10 electric motorcycle projects. However, the market is embryonic. According to survey, difficulties include: (a) Limited consumer purchasing power and a small commercial fleet market. (b) Sparse public charging infrastructure and grid instability. (c) Dependence on imported batteries and lack of local assembly lines.

As of September 2025, the MIC has issued official approvals for 13 businesses engaged in the production of electric vehicles under the Semi Knocked Down (SKD) system, and 10 businesses manufacturing electric two- and three-wheeled motorcycles, also under the SKD system.

However, the implementation status reveals a critical pattern: 12 of the 13 approved EV production businesses are fully Myanmar-owned investments. While this demonstrates success in channeling domestic capital toward EV assembly, the strategy is currently failing to attract the substantial foreign technological investment needed for a high-value transition. The development roadmap anticipates production under the Completely Knocked Down (CKD) system which requires significant localized component manufacturing will only be granted gradually after the 2026-2030 period. The current structure is succeeding in domestic assembly promotion but requires Korean expertise to shift the focus from low-value assembly (SKD) to high-value component manufacturing (CKD) through anchor investments like KMIC.

Recommended actions:

- (a) Create an EV pilot corridor in Yangon–Thilawa with Korean technical assistance: public buses, taxis and shared e-mobility.
- (b) Use KMIC to host SKD/CKD assembly lines with technology transfer agreements and local supplier development.

- (c) Pair EV roll-out with decentralized renewable energy (solar + battery storage) to reduce grid strain and ensure reliability.

Table (1): Investment Status in Electric Vehicle and Motorcycle Manufacturing Projects (SKD System)

Investor Type	Projects	Investment (USD million)	Mode of Operation
Domestic	12	27.3	SKD
Foreign	1	6.0	SKD
Motorcycles (domestic)	7	4.8	SKD
Motorcycles (foreign)	3	6.0	SKD

3.3 Artificial Intelligence (AI) and Robotics

AI and robotics in Myanmar are limited to small pilots in fintech, logistics and e-commerce. Manufacturing automation is negligible outside of a few large plants. Key gaps include:

- (a) Human capital shortages in data science and engineering.
- (b) Lack of local R&D labs and limited university–industry linkage.
- (c) Insufficient data governance and standards for training reliable AI models.

Engagement with 4IR technologies, including AI and Robotics, is proceeding primarily through multilateral policy coordination. Myanmar’s Ministry of Transport and Communication actively participates in the **Declaration on the Establishment of an ASEAN AI Safety Network (AI SAFE)**, which is a Priority Economic Deliverable (PED) under the 2025 ASEAN chairmanship. This ensures the nation’s policy evolution remains aligned with the broader ASEAN Guide on AI Governance and Ethics.

Proposed measures:

- (a) Establish Korea–Myanmar Center for AI and Robotics (jointly funded by KOICA, Korean universities and private firms).
- (b) Launch scholarship and exchange programs with Korean technical universities focused on AI for agriculture, health and manufacturing.
- (c) Promote pilot automation projects in KMIC factories to demonstrate productivity gains while safeguarding employment through upskilling programs.

3.4 Green Energy Development

Myanmar has abundant renewable resources, but the energy sector is under stress. Frequent outages and transmission bottlenecks reduce industrial competitiveness. Renewable approvals (solar, hydro) have increased, but implementation is uneven. Obstacles occur in supply chain disruptions, financing gaps, and local technical capacity shortages.

Green Energy production, including power generation, transmission, and distribution utilizing solar, wind, and thermal energy, is a designated Promoted Sector, granting exemptions and reliefs to investors. This policy has yielded significant investment success. The MIC has permitted 22 foreign solar and hydro projects totaling USD 14,721.359 million, alongside 21 local solar and hydro projects.

The key technical and regulatory challenge lies in grid stability and integration. Regulatory rules stipulate that large projects (above 30 MW) connecting to the national grid must submit proposals through the Ministry of Electric Power to the MIC. Attracting nearly \$15 billion in foreign renewable energy investment is highly positive, but the regulatory control point for large projects emphasizes the complexity of Power Purchase Agreements (PPAs) and technical grid absorption capacity. The primary technical issue is ensuring grid resilience and stability to absorb this influx of intermittent power, especially large-scale

solar. ROK's proposed expertise through the ASEAN-ROK Electrical Safety Cooperation Network, focusing on best practices for electrical safety management in New and Renewable Energy facilities, is directly applicable to mitigate technical and operational risks.

Priority actions:

- (a) Focus on distributed renewable energy (mini-grids, solar + storage) for industrial parks and peri-urban areas.
- (b) Develop transparent PPA mechanisms and standardized procurement to attract credible Korean and ASEAN investors.
- (c) Build institutional capacity for grid integration and environmental safeguards.

Table (2): MIC Promoted Sectors for 4IR & Green Energy Investment Incentives

Promoted Sector (MIC Notification)	Investment Area	Zone 1 (Least Developed)	Zone 3 (Adequately Developed)	FDI/Status Highlight
Smart Mobility (EV)	EV Manufacturing, Charging Services, Battery Production	7 Years Income Tax Exemption	3 Years Income Tax Exemption	23 EV/e-motorcycle businesses approved (SKD) as of Sep 2025 (mostly domestic)
Green Energy	Renewable Energy (Solar, Wind, Thermal) Production	7 Years Income Tax Exemption	3 Years Income Tax Exemption	USD 14.7 Billion in foreign solar/hydro projects permitted
Digital Transformation	Telecommunications, IT Services, Data Centers, Fiber Optics	7 Years Income Tax Exemption	3 Years Income Tax Exemption	Endorsements for Mobile Money, E-Ticketing, E-Visa services approved
Traditional Manufacturing	Cement, Iron/Steel, Pharmaceuticals, Value-Added Foodstuffs	7 Years Income Tax Exemption	3 Years Income Tax Exemption	Priority Investment Sectors (fertilizer, cement, iron/steel manufacturing)

3.5 Digital Transformation

Digital transformation is both promising and constrained. Mobile-first usage is high, creating opportunities for fintech, e-commerce and remote services. However, regulatory uncertainty, internet shutdowns and low fixed-broadband limit higher-value digital activities.

The MIC has recognized Telecommunication Services, installation of network infrastructure, fiber optic cable facilities, data centers, and network provider services as promoted sectors. To support this field, 47 projects (13 domestic and 34 foreign projects valued at USD 6.768 billion) have received permits.

Furthermore, specific digital services crucial for a modern economy have been approved including mobile money services, online e-visa services, and endorsement for an Electronic Ticketing service with E-payment. These endorsements enable greater efficiency in public services and commerce. Crucially, the Republic of Korea previously provided foundational assistance for the National ICT Development Master Plan Formulation, providing a strategic roadmap for current transformation efforts.

Digital Transformation is being pursued both domestically through significant investment in telecommunications infrastructure and regionally, via participation in the ASEAN Digital Economy Framework Agreement (DEFA). The focal agency for DEFA negotiations in Myanmar is the Department of Information Technology and Cyber Security (ITCSD). Negotiations for DEFA, one of the Priority Economic Deliverables (PEDs) for 2025 in ASEAN, have substantively completed about 70 percent of all provisions.

Furthermore, Myanmar is involved in supporting its digital ecosystem through multilateral initiatives, participating in the ASEAN Startup Year (2025) and utilizing the ASEAN Technology Startup Ignite platform, which is designed to promote innovation and attract foreign investment.

The urgent necessity is the conclusion of the remaining DEFA negotiations. With 70% completed, the remaining 30% is crucial for establishing the necessary legal certainty regarding data governance, intellectual property, and e-commerce standards. Failure to finalize internal regulatory mechanisms aligned with DEFA standards could isolate local businesses from critical regional digital trade opportunities, such as the Inclusive Instant Payment Connectivity initiative, thereby stalling the growth of the currently nascent digital services sector.

3.6. Approval Status of Digital Service Businesses by the Myanmar Investment Commission

As of September 2025, a total of four digital service businesses including mobile money services, online e-visa services and retail businesses has been granted permission and endorsement approval under Myanmar citizen investment, with a total investment amount of MMK 41,261.180 million. Furthermore, under foreign investment, an endorsement was approved for an Electronic Ticketing service with E-payment, with a total investment amount of USD 6 million.

The Korea–Myanmar Industrial Complex (KMIC) is an industrial zone being developed through a collaborative partnership between Myanmar and Korea as a joint investment. The industrial complex is expected to serve as a foundational platform for Myanmar’s industrial digital transformation, technology transfer, and manufacturing-sector development. KMIC Development Company Limited, which will undertake the Development and Operation of the Industrial Complex (Phase-1), was permitted by the Myanmar Investment Commission in 2019. The types of businesses that will enter the Industrial Complex

are Food and Beverage Processing, Construction Materials, Textile and Garment, Logistics, and Part-Assembling (Machinery and Automotive, etc.). The project is currently underway with an extended construction period.

The Myanmar Investment Commission has granted permits for 13 projects amount to Kyat 748758.830 million with domestic investment and 34 projects amount to USD 6768.162 million with foreign investment in the following categories to support the field of Digital Transformation, Telecommunications Services, installation of network infrastructure, fiber optic cable facilities, data centers, licensed operators, and network provider services:

Table (3): Progress in Myanmar's Strategic Industrial Sectors (as of September 2025)

Sector	Policy Framework	Key Investment/ Implementation Status	Critical Developmental Status/Issue
Electric Vehicles (EV)	Promoted/Priority (Noti.)	13 EV car SKD and 10 EV 2/3-wheeler SKD businesses approved	Roadmap favors SKD (2026-2030); localization of CKD components is lagging.
Green Energy (RE)	Promoted (Solar, Wind, Thermal)	22 Foreign (USD 14.7B) and 21 Local hydro/solar projects permitted	Grid integration risk for MW projects; requires technical support for PPAs/stability.
Digital Services/ICT	Promoted	USD 6.7B FDI in telecommunication infrastructure; 4 local service approvals	High infrastructure deployment, low digital service adoption rate (service layer deficit).
Industrial Zone (KMIC)	Joint Venture (DICA-ROK)	Development and Operation Company permitted in 2019	Extended construction period implying foundational implementation delays.

Critical interventions:

- (1) Expand fiber backbone and incentivize data center investment with tax breaks and land allocation in KMIC.
- (2) Promote e-government services for business registration, customs and licensing to reduce transaction costs.

- (3) Launch a 'Digital SMEs' program with Korea to provide cloud services, cybersecurity training and market access.

4. Korea–Myanmar Industrial Cooperation

Myanmar- Korea Bilateral Cooperation

- (a) The Government of Korea is providing Official Development Assistance (ODA) to Myanmar for infrastructure development sectors such as agriculture, health, education, human resources development, upgrading of road and bridges and electricity.
- (b) Regarding the Korea's ODA, Korea Exim bank provides Economic Development Cooperation Fund (EDCF Loan) under the EDCF Framework Agreement of USD 500 million signed on 24 July 2014, and under the EDCF Framework Agreement of USD 1 billion signed on 3 September 2019.
- (c) ODA grant was provided by Korea International Cooperation Agency (KOICA) and relevant ministries of Korea, and the Government of Korea also provided technical assistance such as KOICA World Friends Korea Program, KOICA Seminars, Knowledge Sharing Program (KSP) and Economic Innovation Partnership Program (EIPP).
- (d) However, the Republic of Korea suspended new ODA loan and grant assistance to Myanmar since February, 2021 and has continued the cooperation in humanitarian assistance through United Nations (UN) and INGOs organization.

Cooperation in Industrial Development Sector

- (a) For industrial development sector, the Republic of Korea provided grant assistance for several projects such as Industrial Training School (Thagara) Project, Motor Vehicle Technology Training School (Magway) Project, Establishment of a Training School and Consolidated Land for Agricultural Mechanization Transition Project, National ICT Development Master Plan Formulation Project, Establishing the Myanmar Development Institute (MDI) Project and Establishment of the TVET Teacher Training Institute in Myanmar Project.

- (b) Furthermore, by providing assistance for National ICT Development Master Plan Formulation in Myanmar, the Republic of Korea facilitated the development of digital economy and social sectors of Myanmar.

Korea is a significant partner for Myanmar in industrial development. Key instruments include KMIC, KOICA, KOTRA and Korea's Knowledge Sharing Programs (KSP). Korea's corporate sector (Hyundai, LG, Samsung, POSCO) brings technology and capital to Myanmar. Strategic cooperation areas include EVs, renewable systems, smart-city platforms and vocational training.

Recommendations for scaling cooperation are as follow:

- (a) Use KMIC as a demonstration hub for advanced manufacturing, sustainable factories and green logistics.
- (b) Structure KOICA grants to include technology transfer clauses and local content requirements.
- (c) Promote Korean investment insurance mechanisms (e.g., K-Sure) with safeguards to de-risk early-stage projects in Myanmar.

Table (4): Key Development Projects in Myanmar with Assistance from the Republic of Korea

Project	Implementing Agency	Focus Area	Status
KMIC Industrial Park	LH Corp & DICA	Manufacturing cluster	Phase I under construction
ICT Master Plan	KOICA & MPT	Digital infrastructure	Completed
TVET Teacher Training Institute	KOICA	Skills development	Ongoing
SME Support (TASK)	MOTIE Korea	Machinery & food processing	Completed

5. Cooperation with ASEAN and Regional Integration

Myanmar is actively embedded in ASEAN's most ambitious economic and digital initiatives:

- (a) **Digital Economy:** Myanmar is engaged in the acceleration and transformation stages of the Bandar Seri Begawan Roadmap (BSBR). The focal agency for the critically important ASEAN Digital Economy Framework Agreement (DEFA) which aims for a comprehensive framework for digital economic cooperation is the Department of Information Technology and Cyber Security (ITCSD). With 70% of the DEFA negotiation substantively completed, Myanmar is positioned to benefit from future regional digital trade and data flow protocols.
- (b) **AI and Governance:** The Ministry of Transport and Communication is participating in the establishment of the ASEAN AI Safety Network (AI SAFE), demonstrating a forward-looking commitment to the ethical governance of Artificial Intelligence technologies in line with regional policy guidance.
- (c) **Smart Mobility Standards:** Myanmar participates in ASEAN policy discussions regarding the EV ecosystem, notably the Development of Policy Recommendation and Guidelines to support the ASEAN EV Implementation Roadmap, including the regional EV Battery Passport system.

Myanmar's industrial integration depends on ASEAN frameworks. ASEAN–Korea mechanisms (AKFTA, AKSCN, STARTUPS Partnership) can facilitate standards harmonization and SME linkages. Regional corridors (GMS, Dawei, and BIMSTEC initiatives) can improve connectivity.

Policy moves are as follow:

- (a) Engage proactively in AKSCN for smart manufacturing and green construction standards.
- (b) Use ASEAN platforms to match Myanmar SMEs with Korean value chains.
- (c) Pursue trilateral projects (Myanmar–Thailand–Korea) in logistics and cross-border energy.

6. Geopolitical Dimensions of Industrial Policy

Myanmar's multi-vector diplomacy brings both opportunities and risks. Relations with SCO, BRICS, EAEU and China provide alternative financing sources, while ASEAN remains central for trade. For Korea, Myanmar's Eurasian outreach implies competing influences but also new markets.

Implementation note: Korean firms should conduct careful political risk assessments, utilize multilateral insurance, and focus on projects with clear developmental impact (renewables, education, supply-chain integration) that are less sensitive to political fluctuations.

7. Future Prospects and the Upcoming Election

Elections will materially improve the investment climate. A credible reform outcome could restore donor confidence and unlock projects. Stakeholders should design modular cooperation agreements that can proceed on the technical level under different political settings. Priority is given to non-partisan areas: energy reliability, vocational training, public health, and digital infrastructure.

8. Policy Recommendations

For Myanmar Government:

- (1) Re-establish an independent Investment Promotion Office with clear dispute-resolution mechanisms.
- (2) Fast-track grid stabilization projects and prioritize renewable mini-grids for industrial parks.
- (3) Implement targeted vocational training for EV, electronics and ICT sectors with Korean assistance.

For improving cooperation with Republic of Korea (Government & Private Sector):

- (1) Expand KMIC to include an innovation cluster for AI, robotics and EV components.

- (2) Provide blended finance (EDCF + private) for solar+storage projects linked to industrial zones.
- (3) Launch a Korea–Myanmar AI scholarship and technical exchange program.

For enhancing cooperation with ASEAN and Multilateral Partners:

- (1) Offer technical assistance on regulatory harmonization and standards for smart manufacturing.
- (2) Support Myanmar's integration into regional value chains through SME clustering and logistics hubs.

9. Conclusion

Myanmar faces a difficult but navigable path to industrial modernization. Strategic cooperation with Korea focused on energy, mobility, digital transformation and skills can form the backbone of a sustainable industrial strategy. Success depends on improving the investment climate, restoring reliable infrastructure and prioritizing people-centered technology transfer.

References

- (1) Directorate of Investment and Company Administration (DICA) - Myanmar Investment Commission reports, 2023–2025.
- (2) ASEAN Secretariat - ASEAN-Korea Cooperation Reports, 2023–2025.
- (3) KOICA & KOTRA project descriptions (public releases).
- (4) World Bank - Myanmar Economic Monitor (2023–2025).
- (5) IMF - Myanmar staff reports and regional economic outlook (2024).



Industrial Development in Myanmar and Cooperation with Korea

Thida Kyu

Ministry of Investment and Foreign Economic Relations

November 2025

Introduction

- ❖ Myanmar occupies a critical strategic position in Asia, bordering China, India and Thailand.
- ❖ With abundant natural resources and a growing labor force, Myanmar has the potential to transform its economy through industrialization, value-added manufacturing and digital services.
- ❖ This report analyzes core bottlenecks and provides a practical cooperation agenda for Korea, ASEAN partners and Myanmar policymakers.

2

Historical Background

- ❖ 1948–1962: Post-Independence Mixed Economy and Planned Development
 - Myanmar implemented a ***mixed-economy strategy*** focused on ***import-substitution***
 - The ambitious "***Pyidawtha Plan***" drove early state investment in new manufacturing capacity.
 - The ***Agricultural sector dominated*** (over 40% of GDP and majority employment); Industry and Services were small but growing.
- ❖ ***key constraints of industrialization failed***
 - Lack of Expertise
 - Macroeconomic Instability(internal conflicts)
 - Lack of Strategy

3

Historical Background

- ❖ **1962–1988: The Burmese Way to Socialism and Isolation**
 - Implementation of the "***Burmese Way to Socialism***," emphasizing total ***state control*** and self-sufficiency through central planning.
 - A large portion of public investment was allocated to the Industry sector, artificially increasing its GDP share, but this did ***not reflect economic viability***.
 - The ***Agricultural sector remained the largest employer*** (upwards of 65%), while the Services sector stagnated.
- ❖ ***Profound Failure of Industrialization***
 - State-Owned Enterprises (SOEs) were deeply inefficient, suffering from:
 - 1) *Obsolete Technology and poor management.*
 - 2) *shortages of imported raw materials and spare parts (due to a collapse in foreign exchange earnings).*
 - 3) *Lack of financial discipline.*

4

Historical Background

❖ 1989–2010: Cautious Liberalization and Stunted Growth

- Officially transitioned toward a **market-oriented economy** with the introduction of the Foreign Investment Law.
- Agriculture's GDP share gradually declined, while **Industry** saw **preliminary growth**, largely driven by the **export-oriented garment (Cut-Make-Pack) sector** and resource extraction.
- Industrialization was ultimately **stunted and distorted** because market reforms were **partial and inconsistent**.

❖ Reasons for Stunted Growth

- ❖ Partial Reforms
- ❖ lack of Infrastructure
- ❖ Institutional Instability

5

Historical Background

❖ 2011–2020: Reform, Opening, and Initial Structural Transformation

- Comprehensive political and economic reforms led to significant **liberalization** and a major influx of **Foreign Direct Investment (FDI)**.
- This period saw the **most visible structural change**: the Agriculture share of GDP continued to decline, while the **Industry and Services** shares both grew significantly.
- Policy targeted **diversification**, **Special Economic Zones (SEZs)**, and greater **integration into global value chains**.

❖ Failure to Achieve Transformation

- Industrial growth ultimately failed to achieve deep, sustainable transformation due to three persistent challenges:
 - 1) *Human Capital*
 - 2) *Infrastructure*
 - 3) *Weak and overburdened Institutional Capacity*

6

Current Industrialization Policy

- ❖ Primarily driven by a goal of **national self-sufficiency and import substitution**, especially in the wake of recent political and economic instability.
- ❖ The core strategy pivots on leveraging the country's natural resources through a strong focus on **agro-industrialization** and the simultaneous development of strategic, **high-tech sectors**.
- ❖ Leverage natural resources through Agro-Industrialization:
 - Create value-added products.
 - Ensure domestic food security.
 - Boost exports and support the rural population.
- ❖ Develop Strategic High-Tech Sectors:
 - Focus on Digital Economy, Electric Vehicles (EVs), and Smart Cities.

7

Current Industrialization Policy

- ❖ **Critical Infrastructure Development:**
 - *Priority on the Energy Sector.*
- ❖ **Promotion of MSMEs:**
 - *To generate jobs and diversify the industrial base.*
- ❖ **Building a Digital Foundation:**
 - *Implementing data ID cards and e-government systems.*

8

Current Industrialization Policy

❖ Investment activities in Myanmar (as of Sept 2025)

- *Total Value: US\$ 93918.319 million*
- *Permitted Projects: 2,433 Projects*
- *Source of countries/regions : 53 Countries/Regions*

❖ Top Investing Countries in Myanmar

- *Singapore: 28.42% of total investment*
- *China: 23.51% of total investment*
- *Thailand: 12.48% of total investment*

❖ Top Invested Sectors

- *Power Sector: 28.28%*
- *Oil & Gas Sector: 24.65%*
- *Manufacturing Sector: 14.60%*

9

Current Industrialization Policy

❖ Key Priority Investment Sectors

- 1) *Fertilizer manufacturing,*
- 2) *Cement manufacturing,*
- 3) *Iron and steel manufacturing*
- 4) *Agriculture and livestock farming and its related industries*
- 5) *Value-added foodstuffs manufacturing*
- 6) *Electric vehicle manufacturing,*
- 7) *Pharmaceutical and medical device manufacturing*
- 8) *Public transportation services*
- 9) *Production of edible oilseeds, contract farming for edible oil crops, production of various types of edible oil.*

10

Smart Innovation and Smart Cities

- ❖ *Smart innovation in Myanmar remains at a pilot stage. Key cities such as Yangon, Mandalay and Nay Pyi Taw have undertaken small-scale transportation and GIS projects, but systemic deficiencies limit scalability.*
- ❖ *The main constraints are:*
 - (a) **Energy reliability:** Frequent power outages increase operational costs and damage ICT equipment.
 - (b) **Broadband infrastructure:** Low fixed broadband penetration and limited fiber backbone capacity.
 - (c) **Governance fragmentation:** Multiple municipal entities with overlapping responsibilities hinder integrated planning.
 - (d) **Financing constraints:** Limited availability of long-term, low-cost finance for urban infrastructure.

11

Smart Mobility and Electric Vehicles (EVs)

- ❖ **Strategic Policy and Incentives**
 - **Strategic Priority:** EV and related activities (manufacturing, charging, batteries) are designated a Central Strategic Priority (MIC Promoted Sector, Noti. 1/2023).
 - **Key Incentives:** Investors receive Customs Duty & Tax Exemptions on imported machinery, equipment, spare parts, and construction materials.
- ❖ **Current Implementation Status (as of Sept 2025)**
 - **Approvals:** MIC has approved 13 Semi Knocked Down (SKD) EV car projects and 10 electric motorcycle projects.
 - **Domestic Focus:** A critical pattern shows 12 of the 13 approved EV car businesses are fully Myanmar-owned investments (Domestic Capital Success).

12

Table (1): Investment Status in Electric Vehicle and Motorcycle Manufacturing Projects (SKD System)

Investor Type	Projects	Investment (USD million)	Mode of Operation
Domestic	12	27.3	SKD
Foreign	1	6.0	SKD
Motorcycles (domestic)	7	4.8	SKD
Motorcycles (foreign)	3	6.0	SKD

13

Smart Mobility and Electric Vehicles (EVs)

❖ The Core Technological & Market Challenges

- ***Technology Gap (SKD to CKD):*** *The current strategy is failing to attract the substantial Foreign Technological Investment required to transition from low-value SKD (Assembly) to high-value CKD (Component Manufacturing).*
- ***Market Barriers (Survey):*** *Development is constrained by Limited Consumer Purchasing Power, Sparse Public Charging Infrastructure, and overall Grid Instability.*

14

Artificial Intelligence (AI) and Robotics

❖ Current Status and Implementation

- ***Limited Scope:*** AI and Robotics are currently restricted to small pilot programs in non-manufacturing sectors (e.g., FinTech, Logistics, and E-commerce).
- ***Negligible Automation:*** Manufacturing automation is negligible outside of a few exceptionally large, foreign-operated plants.

❖ Critical Gaps & Challenges

- ***Human Capital:*** Severe shortages in specialized skills, particularly in Data Science and Engineering.
- ***R&D and Linkage:*** Lack of dedicated local R&D laboratories and minimal university–industry cooperation.
- ***Governance and Data:*** Insufficient data governance frameworks and standards, which are essential for developing reliable and ethical AI models.

15

Artificial Intelligence (AI) and Robotics

❖ Regional Policy Alignment

- ***ASEAN Engagement:*** Myanmar actively participates in the ***Declaration on the Establishment of an ASEAN AI Safety Network (AI SAFE)***, Priority Economic Deliverable (PED) under the 2025 ASEAN chairmanship.
- ***Future Policy:*** This engagement ensures that Myanmar's national policy evolution on AI governance and ethics remains aligned with the broader ASEAN Guide on AI Governance and Ethics.

16

Green Energy Development

❖ Strategic Policy and Investment Success

- **Promoted Sector Status:** Green Energy (Solar, Wind, Hydro, and associated Transmission/Distribution) is a designated **Promoted Sector**, offering crucial customs duty and tax exemptions to investors.
- **Significant Investment Influx:** Policy support has yielded substantial success, with the MIC approving:
 - 1) 22 Foreign Solar and Hydro projects, totaling USD 14.7 Billion.
 - 2) 21 Local Solar and Hydro projects.

❖ Core Technical and Operational Challenges

- **Sector Under Stress:** The energy sector currently suffers from frequent power outages and transmission bottlenecks, directly reducing industrial competitiveness.
- **Grid Stability is Key:** The primary technical and regulatory challenge is Grid Stability and Integration. The network must be resilient enough to absorb the massive influx of intermittent power, especially from large-scale solar projects.
- **Regulatory Complexity:** Large projects (above 30 MW) face complex regulatory requirements, specifically concerning Power Purchase Agreements (PPAs) and approvals from the Ministry of Electric Power.

Current Industrial Development Issues

Table (2): MIC Promoted Sectors for 4IR & Green Energy Investment Incentives

Promoted Sector (MIC Notification)	Investment Area	Zone 1 (Least Developed)	Zone 3 (Adequately Developed)	FDI/Status Highlight
Smart Mobility (EV)	EV Manufacturing, Charging Services, Battery Production	7 Years Income Tax Exemption	3 Years Income Tax Exemption	23 EV/e-motorcycle businesses approved (SKD) as of Sep 2025 (mostly domestic)
Green Energy	Renewable Energy (Solar, Wind, Thermal) Production	7 Years Income Tax Exemption	3 Years Income Tax Exemption	USD 14.7 Billion in foreign solar/hydro projects permitted
Digital Transformation	Telecommunications, IT Services, Data Centers, Fiber Optics	7 Years Income Tax Exemption	3 Years Income Tax Exemption	Endorsements for Mobile Money, E-Ticketing, E-Visa services approved
Traditional Manufacturing	Cement, Iron/Steel, Pharmaceuticals, Value-Added Foodstuffs	7 Years Income Tax Exemption	3 Years Income Tax Exemption	Priority Investment Sectors (fertilizer, cement, iron/steel manufacturing)

Green Energy Development

❖ Relevance of Cooperation

- **Direct Applicability:** *The Republic of Korea's expertise, particularly through the ASEAN-ROK Electrical Safety Cooperation Network, is directly applicable.*
- **Focus:** *This cooperation can mitigate technical and operational risks by focusing on best practices for electrical safety management in New and Renewable Energy facilities.*

19

Digital Transformation

Market Potential & Investment Success

- **Mobile-First Opportunity:** *High mobile penetration and mobile-first usage create strong growth potential for sectors like **FinTech, E-commerce, and remote services.***
- **Significant Investment:** *MIC has designated digital sectors (Telecom, Data Centers, Fiber) as promoted, attracting **47 projects** valued at **USD 6.77 Billion** (including 34 foreign investments).*
- **Service Efficiency:** *Crucial digital services (mobile money, e-visa, e-ticketing) have been approved, enabling greater efficiency in public services and commerce.*

Core Constraints

- **Higher-Value Limit:** *Digital transformation remains constrained by persistent issues:*
 - 1) **Regulatory Uncertainty**
 - 2) **Frequent Internet Shutdowns**
 - 3) **Low Fixed-Broadband Penetration** (which limits high-value data center and remote work activities).

20

Korea–Myanmar Industrial Cooperation

❖ Financial Framework (EDCF Loans)

- **EDCF Loans:** Korea Exim Bank provides significant Economic Development Cooperation Fund (EDCF) loans for infrastructure development.
- **Total Commitment:** Framework agreements cover up to USD 1.5 Billion (USD 500M signed in 2014 and USD 1B signed in 2019).
- **Target Sectors:** Funds primarily support core infrastructure (roads, bridges, electricity) and social sectors (agriculture, health, education, HRD).

❖ Technical Assistance & Grants (KOICA)

- **Grant Provider:** ODA grants and technical assistance are provided by KOICA and relevant Korean ministries.
- **Key Programs:** Includes the KOICA World Friends Korea Program, KOICA Seminars, and key knowledge exchange initiatives like the Knowledge Sharing Program (KSP) and the Economic Innovation Partnership Program (EIPP).

❖ Current Status of Cooperation (Post-Feb 2021)

- **Suspension of New Aid:** The Republic of Korea suspended new ODA loan and grant assistance to Myanmar since February 2021.
- **Continued Engagement:** Cooperation has shifted to focus on humanitarian assistance, delivered through United Nations (UN) and INGOs.

21

❖ Financial and Strategic Cooperation Frameworks

- **Financial Commitment (EDCF):** Korea provided two large EDCF Framework Agreements totaling USD 1.5 Billion for loan assistance, targeting infrastructure (roads, bridges, electricity) and social development sectors. *Myanmar-Korea Friendship Bridge (Dala Bridge) is nearly finished.*
 - **Key Instruments:** Korea acts as a significant partner using strategic instruments such as the joint **Korea–Myanmar Industrial Complex (KMIC)**, **KOICA**, **KOTRA**, and the **Knowledge Sharing Program (KSP)**.
 - **Corporate Engagement:** Key Korean corporations (**Hyundai**, **LG**, **Samsung**, **POSCO**) are active, bringing essential technology and capital to the Myanmar market.

22

❖ **Korea–Myanmar Industrial Complex (KMIC)**

➤ **Strategic Role:** *KMIC is a joint Myanmar–Korea investment intended to serve as a **foundational platform** for:*

- 1) Industrial **Digital Transformation** and **Technology Transfer**.
- 2) General Manufacturing-Sector Development.

❖ **Target Industries:** Food and Beverage, Construction Materials, Textile/Garment, Logistics, and **Part-Assembling** (Machinery and Automotive).

❖ **Status:** Phase-1 development is **underway** with an extended construction period.

23

Technical Assistance and Human Resources Development

➤ **ODA Grant Focus:** *Korea provided grants for several foundational projects critical for industrial capacity building:*

- 1) **Vocational Training:** Establishment of the **TVET Teacher Training Institute** and specific Industrial/Motor Vehicle Technology Training Schools (e.g., Thagara, Magway).
- 2) **Digital Roadmap:** Assisted in the **National ICT Development Master Plan Formulation**, facilitating the development of the digital economy.
- 3) **Knowledge Exchange:** Delivered technical expertise through the KSP, EIPP, and KOICA's World Friends program.

Target Areas for Future Strategic Cooperation

➤ *Future cooperation is strongly aligned with Myanmar's modernization goals in key areas: **Electric Vehicles (EVs)**, **Renewable Energy Systems**, **Smart-City Platforms**, and targeted **Vocational Training**.*

24

Cooperation with ASEAN and Regional Integration

Myanmar is actively embedded in ASEAN's most ambitious economic and digital initiatives:

➤ *Digital Economy*

- 1) **Regional Roadmap:** Myanmar is actively engaged in the **Bandar Seri Begawan Roadmap (BSBR)** for digital acceleration and transformation.
- 2) **Key Framework:** The focal agency for the critical **ASEAN Digital Economy Framework Agreement (DEFA)** is the Department of Information Technology and Cyber Security (ITCSD). **Negotiation Status: 70% of the DEFA negotiation is substantively completed.**
- 3) **Strategic Outcome:** This progress positions Myanmar to significantly benefit from future regional digital trade, enhanced data flow protocols, and standardized digital economic cooperation.

25

Cooperation with ASEAN and Regional Integration

AI and Governance

- The Ministry of Transport and Communication is participating in the establishment of the ASEAN AI Safety Network (AI SAFE), demonstrating a forward-looking commitment to the ethical governance of Artificial Intelligence technologies in line with regional policy guidance.

Smart Mobility Standards

- Myanmar participates in ASEAN policy discussions regarding the EV ecosystem, notably the Development of Policy Recommendation and Guidelines to support the ASEAN EV Implementation Roadmap, including the regional EV Battery Passport system.
- ❖ *ASEAN–Korea mechanisms (AKFTA, AKSCN, STARTUPS Partnership) can facilitate standards harmonization and SME linkages.*
- ❖ *Regional corridors (GMS, Dawei, and BIMSTEC initiatives) can improve connectivity.*

26

Geopolitical Dimensions of Industrial Policy

- ❖ Myanmar pursues a multi-vector diplomacy, creating both opportunities and risks for international partners.
- ❖ Relations with partners like **SCO, BRICS, and EAEU** provide access to alternative financing sources.
- ❖ Despite outreach, **ASEAN remains central** and critical for trade and regional economic integration.

27

Future Prospects and the Upcoming Election

- ❖ A credible and successful reform outcome following the election is expected to **materially improve the investment climate**.
- ❖ This improvement could **restore donor confidence** and **unlock currently stalled projects** and funding.
- ❖ Stakeholders (including Korea) should proactively design **modular cooperation agreements**.
- ❖ These modules should be structured to **proceed on a technical level** under different political settings, ensuring resilience and continuity.
- ❖ Focus should be placed on non-partisan areas where cooperation is always needed:
 - *energy reliability,*
 - *vocational training,*
 - *public health, and*
 - *digital infrastructure.*

28

Policy Recommendations

❖ For Myanmar :

- *strengthen an independent Investment Promotion Office with clear dispute-resolution mechanisms.*
- *Fast-track grid stabilization projects and prioritize renewable mini-grids for industrial parks.*
- *Implement targeted vocational training for EV, electronics and ICT sectors with Korean assistance.*

29

Policy Recommendations

❖ For improving cooperation with Republic of Korea (Government & Private Sector):

- *Expand KMIC to include an innovation cluster for AI, robotics and EV components.*
- *Provide blended finance (EDCF + private) for solar+storage projects linked to industrial zones.*
- *Launch a Korea–Myanmar AI scholarship and technical exchange program.*

30

Policy Recommendations

- ❖ For enhancing cooperation with ASEAN and Multilateral Partners:
 - *Offer technical assistance on regulatory harmonization and standards for smart manufacturing.*
 - *Support Myanmar's integration into regional value chains through SME clustering and logistics hubs.*

31

Thank You!

SESSION 4

Forging Korea-ASEAN Value Chains: Enhancing Mutual Development in Sustainable Smart Innovation Industries

Ms. Latdavanh Songvilay

Director General, Macroeconomic Research Institute
Lao Academy of Social and Economic Science
LAOS

LAO RENEWABLE ENERGY POLICY

OPPORTUNITIES FOR ASEAN-KOREA COOPERATION

UNDER GLOBAL VALUE CHAIN TRANSFORMATION

Ms. Latdavanh Songvilay
Director General, Macroeconomic Research Institute
Lao Academy of Social and Economic Science
LAOS



Lao Renewable Energy Policy Opportunities for ASEAN-Korea Cooperation under Global Value Chain Transformation

Latdavanh Songvilay
Lao Academy of Social and Economic Sciences

13 November 2025

Table of contents

Introduction
Laos' renewable energy context
Opportunities for collaboration
Conclusion



2

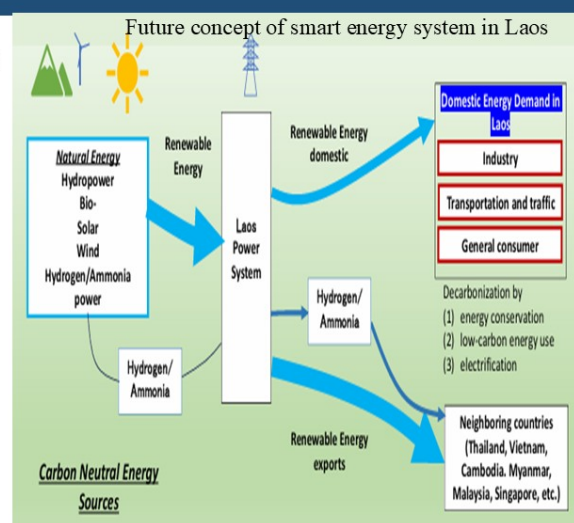
Introduction

- **Context:** The global push for decarbonization and sustainable growth is reshaping economic and industrial strategies. ASEAN, Korea, and Laos are at the forefront of this transformation, seeking to leverage smart innovation for mutual development.
- **Focus:** This presentation highlights Laos' innovation policies for green energy, showcases examples of government-led initiatives, and explores avenues for Laos-ASEAN-Korea cooperation in reorganizing global value and supply chains for sustainable development.

3

Laos' Energy Context

- **Hydropower:** Laos is the “Battery of Southeast Asia,” exporting hydropower to Thailand, Vietnam, and beyond. However, climate variability and regional demand are driving diversification.
- **Energy Diversification:** diversify from hydropower pathway toward solar, wind, biomass, and smart energy systems.
- Laos projected to increase renewable share to 85% by 2040 (8th ASEAN Energy Outlook)
- *Laos can play an important role as a clean energy partner in regional transformation.*

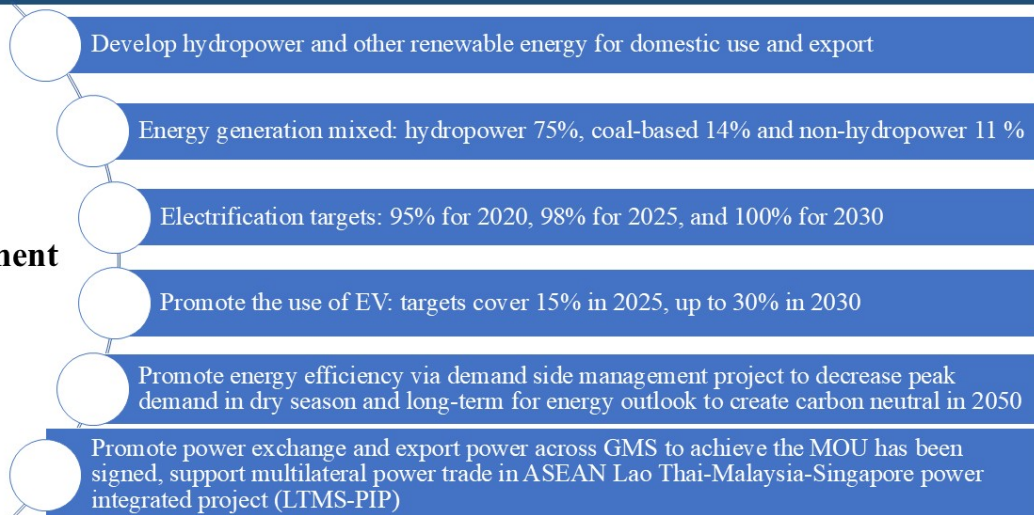


Source: Department of Policy-Planning and Evaluation, MOIC, Laos

4

Laos' Energy Context

National Energy Development Strategy



Source: Department of Policy-Planning and Evaluation, MOIC, Laos

Laos' Energy Context

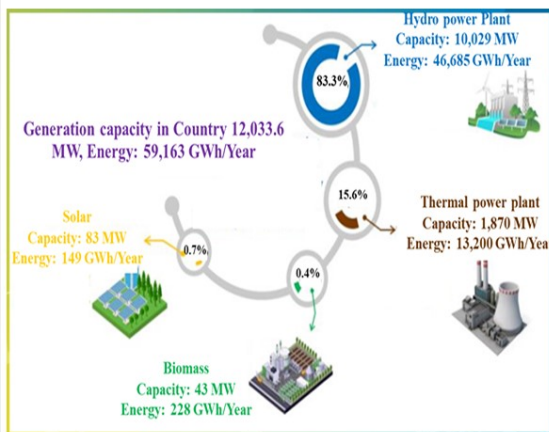
Investment Incentives and Public-Private Partnerships

- **Fiscal Incentives:** Tax breaks, profit tax exemptions, and a Renewable Energy Fund to attract private investment.
- **Tariff Policy:** Higher feed-in tariffs for solar and wind compared to hydropower to stimulate investment.
- **PPP Models:** Collaboration with international partners for infrastructure, technology transfer, and capacity building.

6

Laos' Energy Context

Country Generation Capacity in 2024



Source: Department of Policy-Planning and Evaluation, MOIC, Laos

Power Generation Planning (Non-hydropower)

Solar Energy	14 existing projects (83 MW) 50 projects under FS (>9,500 MW)
Wind Power	35 projects under FS (>12,000 MW) 3 projects under construction (2,300 MW) and plan to export to Vietnam soon
Biomass	4 existing power plants (119 MW) 1 project is under construction (6 MW)
Biofuel	2 demonstration projects (Vientiane Cap., Luangprabang)
Biogas	2 digester (30 kW Virapong Pig Farm, 260 kW Pig Farm)
Green hydrogen	Under feasibility

Opportunities for Collaboration

Regional Power Grid and Cross-Border Trade

- **ASEAN Power Grid (APG):** Laos is a key player in the APG, exporting renewable electricity to Thailand, Vietnam, Cambodia, and China. The Laos-Thailand-Malaysia-Singapore (LTMS) Power Integration Project is a milestone in multilateral electricity trade.
- **Korea-Laos Green Growth Partnership:** Korea is a major investor in Laos' green energy sector, supporting solar, wind, and smart grid projects. Recent MOUs include e-bike infrastructure and solar power development.

Opportunities for Collaboration

Supply Chain Resilience and Value Addition

- **ASEAN-Korea Strategic Partnership:** Korea's investments in ASEAN are expanding to include electric vehicles, batteries, and biotechnology, supporting regional supply chain resilience and green industrialization.
- **Regional Manufacturing Hubs:** Develop Laos as a hub for green energy components (e.g., solar panels, batteries), integrating into ASEAN-Korea supply chains.
- **Circular Economy and Waste Management:** Collaborate on recycling, e-waste management, and sustainable materials, leveraging Korean expertise.

9

Opportunities for Collaboration

Capacity Building and Knowledge Exchange

- **Technology and Knowledge Sharing:** Korea brings expertise in smart grids, digital transformation, and clean energy technologies. Joint workshops and business matching sessions foster collaboration in power equipment, digital skills, and smart city development.
- **Digital Skills and Innovation:** Expand training programs for digital and green skills, with Korean and ASEAN partners supporting Laos' workforce development.
- **Policy Harmonization:** Align standards, regulations, and incentives to facilitate cross-border investment and technology transfer.

10

Conclusion

- Lao PDR has a strong foundation in renewable energy, especially hydropower, solar, and wind.
- Smart innovation and green energy strategies in Laos, supported by ASEAN and Korea, offer a pathway to sustainable growth, energy security, and regional integration.
- Strengthen trilateral cooperation through joint investment, technology transfer, and policy alignment to realize the full potential of sustainable smart innovation and resilient global value chains.



8th ASEAN Energy Outlook (AEO8)

11

Thank you



Advancing Together: Korea–ASEAN Strategic Alliance Toward ASEAN Vision 2045

Dr. Korm Ribaun

Secretary General, National Committee of the Economic and Social Commission
for Asia and the Pacific, Council of Ministers
CAMBODIA

CLOSING REMARKS

H.E. Dr. Korm Ribaun
Secretary General,
National Committee of the Economic and Social Commission for Asia and the Pacific
CAMBODIA

Excellencies, ladies and gentlemen, dear friends,

As we come to the close of this remarkable symposium, allow me to express my deepest appreciation to all of you — over 140 policymakers, scholars, researchers, policy analysts and professionals — who have gathered here from across Korea, ASEAN, and Australia to share your insights, experiences, and visions for our common future.

Over the course of today's discussions, we have explored how Korea and ASEAN can advance together toward ASEAN Vision 2045, guided by the spirit of partnership, inclusiveness, and shared prosperity. We have reflected on the opportunities and challenges brought by global paradigm shifts — and, more importantly, on how our partnership can turn these challenges into engines of innovation and growth.

Our exchanges on sustainable smart innovation, green energy, digital transformation, and emerging technologies such as AI and robotics have reaffirmed the potential of Korea–ASEAN cooperation to drive transformation in our economies, industries, and societies. These discussions will no doubt contribute meaningfully to shaping a Comprehensive Strategic Partnership that is forward-looking, dynamic, and mutually beneficial.

The launch of ASEAN Vision 2045 marked a defining milestone for our region — a vision rooted in integration, resilience, and shared prosperity across the Political-Security, Economic, and Socio-Cultural

pillars. As ASEAN's trusted partner, Korea's continued commitment to aligning its initiatives with ASEAN's priorities will be crucial to realizing that vision.

Dear friends and colleagues,

What we have accomplished today goes beyond policy dialogue. It has strengthened the bonds of understanding and trust among our communities — the foundation upon which all meaningful cooperation is built. The symposium has shown that by working together, sharing experiences, and respecting each other's aspirations, we can indeed advance together toward a more prosperous and peaceful future for our region.

Before we conclude, I wish to extend my heartfelt thanks to our organizers — the National Committee for the Economic and Social Commission for Asia and the Pacific, and the Korea Research Initiatives, University of New South Wales, Australia — for their dedication and vision in making this event a success.

Our sincere appreciation also goes to our generous sponsors and partners — the Hyundai Motor Chung Mong-Koo Foundation and the Korea Foundation — for their steadfast support and contribution to fostering regional dialogue and cooperation.

Excellencies, ladies and gentlemen,

As we look ahead, let us carry forward the momentum and spirit of this symposium — to continue advancing together, hand in hand, toward a shared future of peace, prosperity, and partnership between Korea and ASEAN.

Thank you all for your active participation, your insights, and your friendship.

I wish each of you continued success in your endeavors, a pleasant evening, and a safe journey home.

Thank you.

2025 KACPE International Public Policy Symposium

National Committee for ESCAP, CAMBODIA
Korea Research Initiatives, UNSW, AUSTRALIA



현대차
정몽구 재단
Chung Mong-Koo Foundation

KOREA **KF**
FOUNDATION
한국국제교류재단