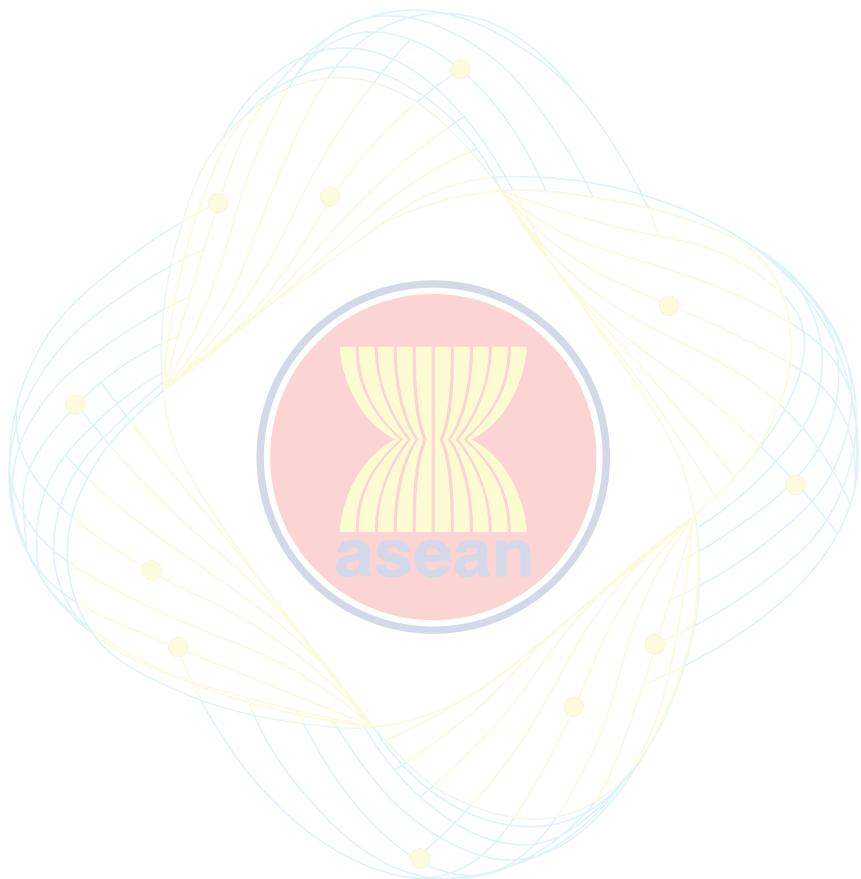




ASEAN DIGITAL MASTERPLAN 2030

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1. FOREWORD

In response to changing development needs, ASEAN Digital Ministers (ADGMIN) have periodically introduced regional Masterplans to support cooperation in the digital sector. Recent frameworks including the ASEAN ICT Masterplan 2016-2020 (AIM 2020), the ASEAN Digital Masterplan 2021-2025 (ADM 2025), have helped guide collective efforts to enhance digital connectivity, innovation, and inclusion across ASEAN.

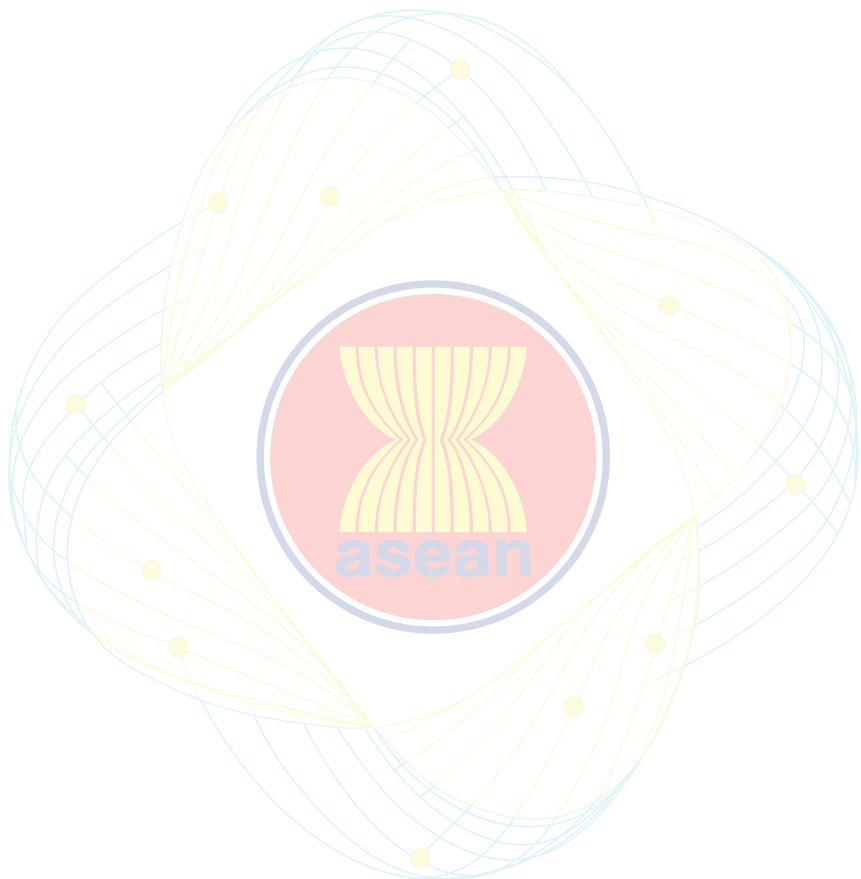
As digital technologies continue to advance and become increasingly embedded in all aspects of economic and social life, ADGMIN's shared approach to digital cooperation is being updated to reflect emerging trends, opportunities, and challenges. In this context, the ASEAN Digital Masterplan 2026-2030 (ADM 2030) is developed as the next phase in ASEAN's ongoing digital cooperation journey, building on earlier experiences and lessons learned.

ADM 2030 is intended to serve as a common strategic reference to support and encourage regional cooperation in the digital domain over the coming years. It aims to help ASEAN Member States advance their digital development efforts, strengthen regional connectivity and interoperability, and promote a trusted and inclusive digital environment, in a manner that is practical and responsive to national needs.

The Masterplan does not seek to impose obligations on ASEAN Member States, but rather to offer a flexible framework that respects different levels of readiness, national priorities, and development pathways, while fostering voluntary and mutually beneficial cooperation across the region.

ADM 2030 also provides a reference framework for ASEAN's Dialogue and Development Partners (DPs) when designing their cooperation plans in the digital sector. By outlining common priorities, strategic focus areas, and aspirational targets, the Masterplan helps DPs align their programs and investments with ASEAN's regional objectives, facilitating more coordinated, relevant, and impactful support.

Through this approach, ASEAN's central role as the coordinator and driving force of regional digital cooperation is reinforced, ensuring that initiatives are aligned, mutually supportive, and guided by ASEAN's priorities, while offering a clear entry point for Dialogue and Development Partners to contribute effectively to the region.



2. EXECUTIVE SUMMARY

Context and Purpose

The ASEAN Digital Masterplan 2030 (ADM 2030) sets out a shared strategic direction to guide regional digital cooperation for the period 2026-2030. Building on the foundations laid by previous frameworks, including the ASEAN ICT Masterplan 2020 (AIM 2020) and the ASEAN Digital Masterplan 2025 (ADM 2025), ADM 2030 responds to a rapidly evolving digital landscape marked by technological acceleration, increasing geopolitical and economic uncertainty, and growing expectations for inclusive and sustainable development.

As digital technologies continue to advance, become deeply embedded across economies, societies, and governance systems, ASEAN's digital cooperation has entered a more mature phase with the need to move beyond initial connectivity efforts toward a more comprehensive, deeply integrated, and seamless digital ecosystem that supports meaningful cross-border digital interaction among all ASEAN Member States.

Vision and Strategic Direction

The Masterplan sets out a clear vision of ***ASEAN as an integrated, secure, trusted, innovative, and inclusive digital community, where citizens and businesses can access opportunities, build capabilities, and thrive in the global digital economy.***

To realise this vision, ADM 2030 is therefore designed to support ASEAN Member States (AMS) in harnessing digital transformation and emerging technologies, including artificial intelligence (AI) as a key enabler of economic resilience, social inclusion, innovation, and sustainability, while strengthening ASEAN's collective position in the global digital economy.

Desired Outcomes (DO)

The vision of ADM 2030 is operationalized through eight interrelated Desired Outcomes (DOs) that collectively advance a people-centred, secure, and trusted digital transformation across ASEAN, addressing digital infrastructure, governance, innovation, industries, sustainability, and human capital:

1. Seamless and Inclusive Digital Infrastructure Across ASEAN
2. Sustainable and Intelligent Digital Government
3. Empowered, Safe, and Inclusive ASEAN Digital Society
4. Resilient, Secured, and Trusted Digital Ecosystem
5. Thriving ASEAN Innovation and Start-up Ecosystem
6. Smart and Digitally Transformed ASEAN Industries
7. Sustainable, Green, and AI-Driven Digital Transformation
8. Digital Talent and Future Skills

Collectively, these Desired Outcomes articulate what ASEAN seeks to achieve as a regional digital community, while recognising the diversity of national circumstances and development pathways among AMS.

Interoperability and Capability Uplift as Cross-Cutting Priorities

Interoperability is a central pillar of ADM 2030 and a key enabler of deeper regional digital integration. The Masterplan places particular emphasis on the co-design of practical interoperability frameworks, standards, guidelines, and technical approaches that can be applied across diverse national contexts.

Recognising that ASEAN Member States (AMS) are at different stages of digital readiness, the Masterplan 2030 prioritizes capability uplift, collaborative approaches, and the provision of shared enablers to support more consistent implementation and to help narrow development gaps across the region. This includes practical actions to strengthen cross-border digital connectivity, particularly through frameworks and coordination mechanisms that facilitate government-to-government digital interaction.

Deliverability, Timelines, and Measurement

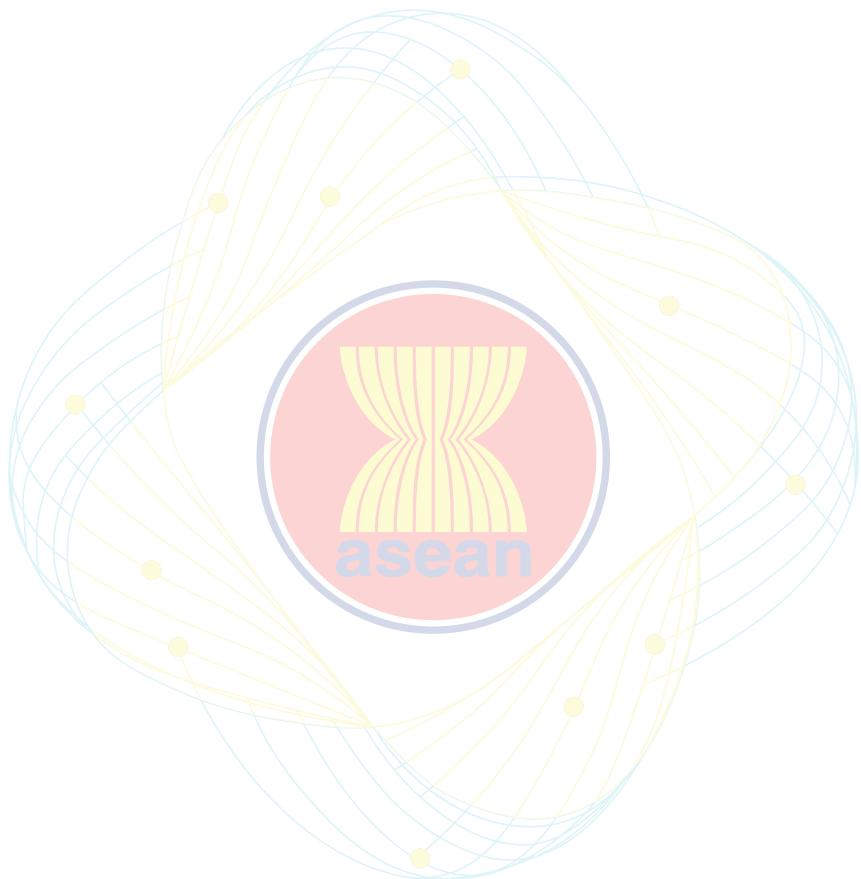
ADM 2030 also underscores the importance of practical and implementable approaches to strengthen cross-border digital connectivity, particularly through frameworks and coordination mechanisms that facilitate government-to-government digital interaction. The DOs and SMs under ADM 2030 are deliberately selected and structured to provide strategic clarity and a level of ambition that is both forward-looking and deliverable, helping to manage expectations, avoid unrealistic targets, and maintain focus on achievable milestones and meaningful outcomes.

ADM 2030 also provides indicative timelines and metrics of success as reference points, enabling ASEAN Member States to design and implement ASEAN-led initiatives across the 2026-2030 period and beyond, where appropriate. These initiatives are envisaged to follow established ASEAN modalities, with one or more AMS taking on coordinating roles, supported by the participation and consensus of other Member States, and delivering shared regional benefits, and remaining focused on achieving meaningful, outcome-oriented results.

Alignment and Partnerships

ADM 2030 is closely aligned with the ASEAN Economic Community (AEC) Strategic Plan 2026-2030 and its Strategic Measures, ensuring coherence with ASEAN's broader economic integration agenda and reinforcing the role of digital transformation as a cross-cutting enabler of growth, competitiveness, and resilience. The Masterplan also reflects an assessment of global trends, stakeholder consultations, and lessons learned from previous implementation cycles.

Effective implementation of ADM 2030 will require sustained collaboration among governments, regulators, the private sector, academia, regional institutions, and ASEAN's Dialogue and Development Partners. Through coordinated action, shared learning, and adaptive approaches tailored to national contexts, ADM 2030 seeks to ensure that digital transformation becomes a force for inclusive development, innovation, and long-term sustainability across the ASEAN region.



3. VISION FOR ADM 2030



3.1 The Vision

As ASEAN enters a new digital decade, ADM 2030 envisions a region where digital transformation serves as a key enabler of economic resilience, societal well-being, and sustainable development. The next phase of digital development must go beyond connectivity and infrastructure to create a future-ready ASEAN that:

- Ensures every citizen, including people with diverse abilities, has affordable and meaningful access to high-quality digital services, regardless of geography, gender, age, or income.
- Establishes trusted digital environments that uphold data protection and privacy, security, and responsible digital behaviour including efforts to safeguard consumers from scams and fraud over digital and telecommunication channels.
- Fosters homegrown innovation, digital entrepreneurship, and competitiveness in emerging sectors such as AI, green tech, digital health, and smart manufacturing.
- Drives regional integration through secure and trusted cross-border data flows, harmonized digital regulations, and collaborative digital governance frameworks.
- Anchors digital transformation in sustainability, inclusivity, and regional solidarity.

To realize this vision, ASEAN will pursue the following strategic objectives:

1. *Strengthen Digital Government and Infrastructure:* Develop trusted, interoperable, and resilient digital government systems supported by secure infrastructure and strong data governance while providing capacity uplift for AMSs with different readiness levels to ensure cohesive regional progress.
2. *Empower people and Enhance Digital Public Services:* Equip all ASEAN citizens with the skills, access, and user-centric digital government services to actively, safely and meaningfully engage in the digital world.
3. *Digitally Transform ASEAN Economies:* Boost regional productivity, support SMEs, and develop competitive digital industries aligned with global innovation trends.
4. *Build a Trustworthy and Secure Digital Future:* Promote regional cybersecurity cooperation, risk management and digital resilience across all Member States.
5. *Leverage Digital Technologies and Solutions for Sustainable Development:* Align digital policy and innovation with climate, education, and inclusion goals to build a more sustainable and equitable future.

6. *Foster Regional Collaboration and Global Leadership:* Strengthen ASEAN's position as a trusted and open digital region by enhancing cross-border interoperability, deepening strategic partnerships and supporting shared capability development to ensure all AMSs can participate effectively in global digital dialogues.

This ADM 2030 Vision will guide ASEAN's collective efforts through 2026-2030 and will be implemented taking into account different national realities, capacities and levels of development, and respecting national policies, priorities and applicable legal frameworks, and set the foundation for a connected, competitive, and compassionate digital future for all. Overall the vision for ADM 2030 will be:



Achieving this vision will require sustained and strategic collaboration among governments, regulators, industry, academia, and society of the ASEAN Member States. Each has a role to play in shaping ASEAN's digital future:

- **Public/ regulator sector actors** should lead regional coordination by setting coherent digital rules and standards, investing in shared infrastructure, responsibly managing public data, fostering environments for innovation, strengthening government digital capacity, and advancing ASEAN's collective digital interests in regional and global fora. Member States to enhance collaboration on key issues in the region through the established ASEAN Working Groups under the ADGSOM-ATRC and cross-sectoral mechanism of ASEAN and its Partners.
- **Private sector actors** must continue to innovate and invest in emerging technologies, develop inclusive digital services, and expand access to underserved markets through strong public-private partnerships and government facilitation. Private sector may also contribute funding for digital inclusion, upskilling, and cybersecurity to complement government and regional efforts.
- **Regional institutions and partners** should strengthen cooperation across AMS, promote shared digital infrastructure, and advance ASEAN's digital interests in regional and global platforms.

Together, these efforts will ensure that digital transformation becomes a force for inclusive development, economic competitiveness, and sustainable progress across ASEAN.

3.2 Desired Outcomes

| Desired Outcome | Rationale for selecting the Desired Outcome |
|--|--|
| DO1: Seamless and Inclusive Digital Infrastructure Across ASEAN | <p>Reliable digital infrastructure underpins the region's economic and societal transformation. To achieve this, ASEAN needs to ensure that connectivity is available, affordable, and accessible to all, including areas with limited digital connectivity.</p> <p>This desired outcome targets expanding high-speed broadband and 5G coverage, developing cloud and data center ecosystems, and national digital ID systems, supported by efficient spectrum allocation and the development of international cable linkages. Strengthening the resilience of submarine cables, diversifying connectivity paths including terrestrial links and LEO satellite connectivity and building redundancy will safeguard the region against disruption and promote regional interoperability, ensuring infrastructure systems can interconnect, exchange data, and support cross-border digital services.</p> <p>This outcome directly supports the ASEAN Economic Community (AEC) Strategic Plan 2026-2030, particularly the Strategic Measures on closing the digital divide, strengthening resilient ICT infrastructure, and promoting interoperability for trade and industrial integration.</p> |

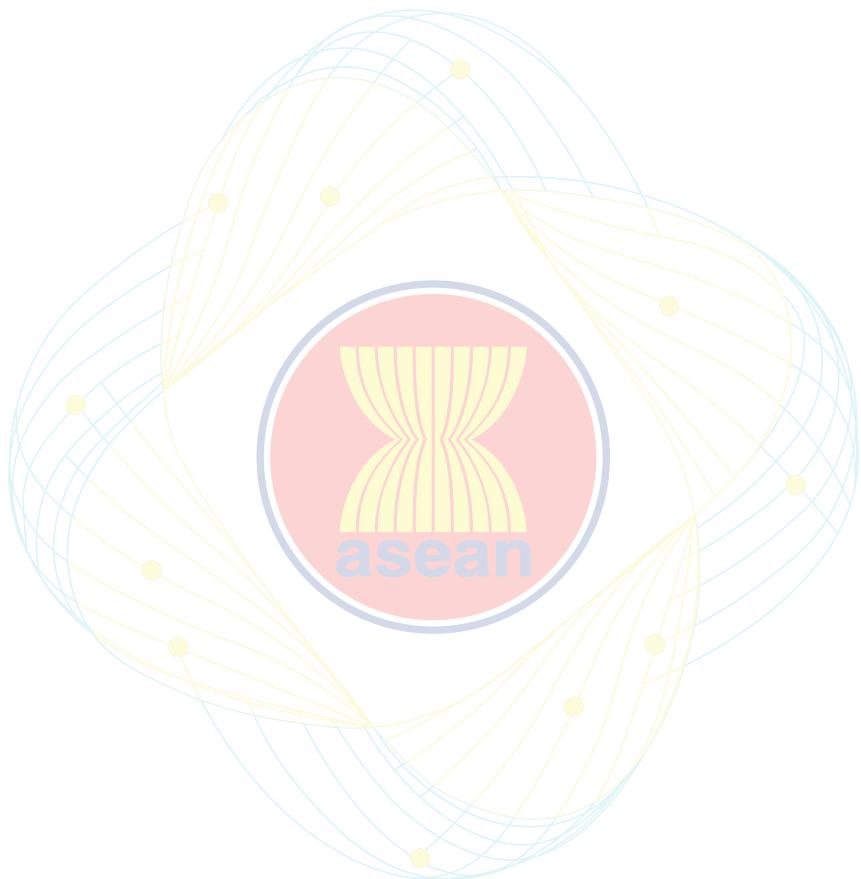
| Desired Outcome | Rationale for selecting the Desired Outcome |
|--|---|
| DO2: Sustainable and Intelligent Digital Government | <p>Public services must evolve to meet citizen expectations, technological advances, and environmental imperatives. This outcome promotes a sustainable and intelligent digital government by integrating citizen-centricity, evidence-based policymaking and service delivery and Environment, Sustainable and Governance (ESG) principles at both strategic and operational levels.</p> <p>Interoperability in government systems, such as digital ID, data exchange, and cross-border verification to ensure seamless regional collaboration. Leveraging AI, big data, and foresight tools enables governments to design policies and services that are informed, anticipatory, and aligned across the region.</p> <p>Strengthening digital competencies, capacity-building programs among civil servants and public sector leaders equips ASEAN governments to implement intelligent and sustainable digital strategies effectively.</p> <p>In addition, ensuring the resilience and continuity of essential public services in emergencies is also critical. Building secure and reliable government service platforms, including communication systems such as Public Protection and Disaster Relief (PPDR) broadband strengthens emergency response capabilities and supports uninterrupted service delivery.</p> <p>This outcome directly supports the ASEAN Economic Community (AEC) Strategic Plan 2026-2030, including the Strategic Measures on evidence-based policymaking, and the integration of sustainability into digital and economic policies and the resilience and responsiveness of public services during disaster and emergencies. By advancing sustainable and intelligent digital government, ASEAN enhances public sector resilience, improves citizen satisfaction, and sets a regional benchmark for trustworthy, inclusive, and future-ready governance.</p> |

| Desired Outcome | Rationale for selecting the Desired Outcome |
|---|---|
| DO3: Empowered, Safe and Inclusive ASEAN Digital Society | <p>A resilient digital society requires both empowered individuals and trusted digital environments. As ASEAN's digital transformation deepens, it is important that citizens are not only equipped with the skills, confidence, and protection to participate meaningfully and safely in digital life, but also safeguarded from the growing threat of online, digital and telecommunications scams. Protecting citizens from scams is crucial to ensuring the overall safety of the digital ecosystem and maintaining trust in the digital society.</p> <p>At the same time, addressing gaps in digital access and inclusion remains essential to ensure that no one is left behind. By strengthening digital literacy, promoting responsible digital behaviour, protecting digital rights, and supporting lifelong learning, ASEAN can foster a society where all people can benefit from and contribute to the region's digital future. This outcome emphasizes capability uplift for AMSSs with lower readiness, ensuring equal access to digital skills development and public awareness programs.</p> <p>This outcome directly supports AEC Strategic Measures on closing the digital divide, protecting all people across gender, geography, employment type (including gig workers), and underserved groups, enhancing digital skills, and promoting responsible digital growth.</p> |

| Desired Outcome | Rationale for selecting the Desired Outcome |
|--|--|
| DO4: Resilient, Secured and Trusted Digital Ecosystem | <p>Digital trust and data integrity are central to the adoption of digital services and facilitate trusted cross-border data flows. This outcome strengthens cybersecurity, privacy and anti-scam protection, while promoting open standards, enabling secure interoperability and trusted digital services. Collaboration among CERTs, including through timely and relevant incident response, threat sharing and capacity building and trusted data exchanges ensure coordinated incident response and consistent implementation of data protection across the region.</p> <p>To support AMSSs at different readiness levels, the outcome includes capacity-building programs, and technical guidance, while harmonising data protection (i.e. promoting good data governance and data management practices in the region and strengthening the protection for personal data), cloud security, Digital ID interoperability, and cross-border data flow mechanisms. By enabling trusted, resilient, and interoperable digital infrastructure, ASEAN fosters confidence, inclusion, and secure engagement for citizens, businesses, and governments.</p> <p>This outcome aligns with AEC Strategic Measures on promoting responsible digital growth, aligning regional practices with global norms, strengthening digital infrastructure, and addressing obstacles in e-commerce caused by illicit trade. It would also facilitate trusted cross-border data flows, strengthen protection for digital users in the region, as well as build stronger trust from foreign investors and businesses. By building resilience and trust, ASEAN enhances its position as a secure, reliable, and competitive digital hub.</p> |

| Desired Outcome | Rationale for selecting the Desired Outcome |
|--|---|
| DO5: Thriving ASEAN Innovation and Start-up Ecosystem | <p>To future-proof ASEAN's economy, innovation must be nurtured across sectors. This outcome focuses on promoting adoption and diffusion of emerging technologies, encouraging MSME innovation, and strengthens partnerships between academia, research institutions, and industry. Through regulatory sandboxes and public-private-academic collaboration, ASEAN will promote innovation and accelerate the commercialization of emerging technologies.</p> <p>This outcome aligns with AEC Strategic Measures on boosting ICT innovation, catalyzing start-up growth, strengthening knowledge networks, and leveraging the creative economy. By enabling ASEAN's start-up ecosystem to thrive, the region builds a stronger foundation for sustainable innovation, entrepreneurship, and global competitiveness.</p> |
| DO6: Smart and Digitally Transformed ASEAN Industries | <p>A competitive industrial base requires deep digital integration across all sectors. This outcome drives the digital transformation of strategic industries, health, education, manufacturing, and more, by supporting SMEs and large firms to adopt Industry 4.0 technologies, participate in global digital value chains, and build smart, tech-driven urban solutions. By enabling industries to digitally transform, ASEAN secures its role as a trusted global manufacturing and logistics hub.</p> <p>This outcome supports AEC Strategic Measures on advancing regional industrial potentials, promoting MSME productivity, strengthening digital capacity of trade and logistics stakeholders, and deploying STI solutions in transformative industries. It also leverages the ASEAN Digital Economy Framework Agreement (DEFA) to facilitate seamless cross-border digital trade, interoperable digital payment systems, and harmonized digital regulations, enabling industries to operate effectively in regional digital markets.</p> |

| Desired Outcome | Rationale for selecting the Desired Outcome |
|---|---|
| DO7: Sustainable, Green and AI-driven Digital Transformation | <p>ASEAN is advancing its digital transformation while preparing for the next phase of AI transformation. It is therefore important to ensure that AI risks, especially those unique to ASEAN are managed through AI testing and assurance, adoption of AI through common governance frameworks, internationally recognized AI standards to enhance the development of a trusted AI ecosystem that facilitates AI adoption. ASEAN could also take an active role in shaping how AI is governed and applied at global AI discussions.</p> <p>At the same time, ASEAN encourages digital development that is mindful of environmental impact, promoting energy-efficient infrastructure, circular ICT practices, and the use of digital and AI solutions to support climate resilience and resource optimisation.</p> <p>By integrating responsible AI and sustainability considerations into digital policies and system design, ASEAN fosters trust, safe and inclusive adoption of emerging technologies, and opportunities for innovation and growth across the region.</p> |
| | <p>This outcome supports AEC Strategic Measures on decarbonisation, resilient and sustainable digital infrastructure, circular and green industries, AI governance, technology-neutral regulation, and frontier technology adoption, positioning ASEAN to lead a sustainable, trusted, and innovative digital future.</p> |
| DO8: Digital Talent and Future Skills | <p>ASEAN faces a growing shortage of skilled talent in AI, cybersecurity, cloud, data science and emerging technologies, while automation and AI are transforming work. To remain competitive and inclusive in the digital economy, ASEAN needs to strengthen workforce capabilities through advanced reskilling, industry-aligned training, regional mobility, and foresight-driven talent planning.</p> <p>By advancing regional cooperation on talent development and future skills, ASEAN strengthens its competitiveness, supports industries' digital transition, and ensures that the region's workforce is prepared for emerging opportunities in the digital and green economies.</p> |
| | <p>These outcomes support AEC Strategic Measures on developing a sustainable pipeline of digital talent equipped to meet future economic and technological demands. By strengthening high-demand professional skills, exploring the feasibility for promoting regional mobility, and aligning workforce planning with market and technological foresight, ASEAN can ensure that its workforce is ready to support a seamless, innovative, and resilient digital economy by 2045.</p> |



4. SHAPING ADM 2030



4.1 Global context

The global business and policy environment is being reshaped by a set of powerful and overlapping macro forces. These forces span geopolitics, economics, technology, and societal change, and they are contributing to a period of heightened volatility, uncertainty, and fragmentation. Understanding these dynamics is essential for ASEAN as it navigates its digital transformation and regional integration journey.

Unbalanced Multipolarity

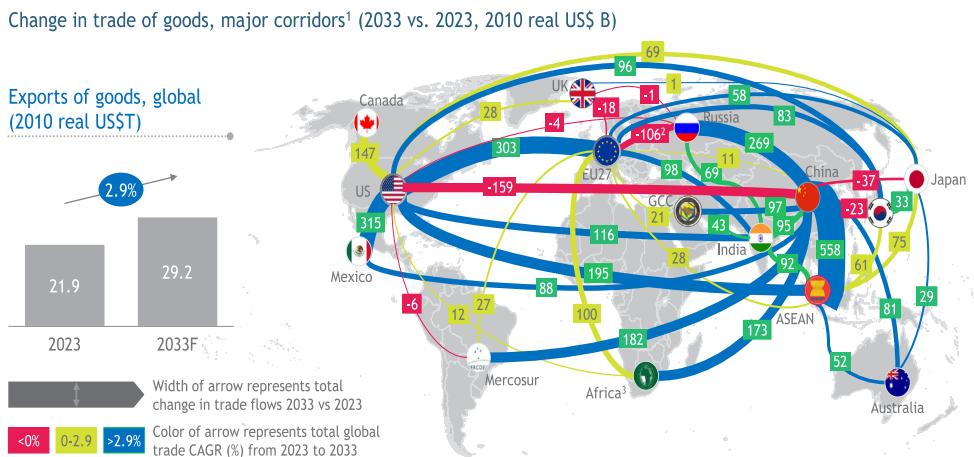
The global power landscape is becoming increasingly fractured. Instead of a single dominant bloc, multiple centers of influence are emerging, each pushing its own economic, political, and technological agenda.

Intensifying Economic Battlegrounds

Economic rivalry is intensifying, fueled by protectionism, competition over critical technologies, and shifting global trade flows. Governments are no longer competing only on trade and tariffs, but also on data governance, supply chains, and national industrial policy.

- Tectonic Trade Shifts: Countries are reconfiguring supply chains to reduce dependency on geopolitical rivals and build strategic resilience. This shift includes the movement toward nearshoring, friendshoring, and diversification away from single-market dependencies. ASEAN stands to benefit from this realignment as global companies look to Southeast Asia as an alternative manufacturing and logistics base. With its growing consumer market, strategic geography, and expanding trade agreements, the region is becoming increasingly attractive for supply chain rebalancing.

Global trade transformed, shaped by geopolitics; ASEAN among key regions to



1. Corridors in the map above represent ~45% of global trade in 2023. 2. Residual EU-Russia trade still remains in 2023 due to staggered sanction schedules.

1. Corridors in the map above represent ~45% of global trade in 2025. 2.
3. Africa countries grouped based on World Bank definition

Note: Does not include trade of services; FX rates are floating for the entire period; Sources: BCG Global Trade Model 2024, UN Comtrade, Oxford University, and World Bank.

Economics, IHS, WTO, BCG Analysis

- Tech and AI Race: Nations are investing heavily in artificial intelligence and emerging technologies to secure long-term leadership in innovation and defense.
- Navigating Economic Nationalism: Countries are enacting industrial policies, tightening foreign investment rules, and exerting more control over key sectors to preserve national interests.

| Rivalry across foundational tech and 'dual use' battlegrounds | | | | |
|--|---|---|--|---|
| Advanced digital/tech | Critical minerals | Aerospace & defense | Cleantech | Biotech & food |
|  Semiconductors  Artificial intelligence  Data centers  Quantum computing |  Energy transition minerals  Rare earth elements |  Defense  Space  Propulsion  Cybersecurity |  Electric vehicles  Batteries  Wind turbines  Photovoltaic  Hydrogen  Nuclear |  Pharmaceuticals  Biotechnology  Food & food-tech |
|  CHIPS and Science Act, exp. controls, reverse CFIUS  European Chips Act |  EO on 'Energy Emergency'  Critical Raw Materials Act  Export controls | various, incl.:  European Defense Industrial Strategy |  Inflation Reduction Act  Net Zero Industry Act  Tariffs on Chinese EVs |  BARDA initiatives  Critical Medicines Alliance |

4.1 Recurring Global Shocks

Disruptions are becoming more frequent and interconnected, straining systems that were not designed for constant volatility. From climate change to armed conflict and social polarization, these shocks are redefining global risk.

- Evolving Conflicts: Armed conflicts are escalating, involving both physical warfare and cyber operations, while drawing in global powers through complex alliances.
- Climate Refuses to be Ignored: Climate-related disasters are increasing in severity and frequency, directly impacting economies, migration patterns, and global cooperation.
- Polarized Populations: Societal cohesion is weakening in many countries due to political distrust, misinformation, disinformation, and growing divides along ideological and economic lines.

These global forces present both risks and opportunities for ASEAN. The region must navigate this complex landscape by strengthening its digital resiliency, enhancing regional cooperation, and investing in resilience and inclusivity. The ADM 2030 must be agile and forward-looking, positioning ASEAN to respond to geopolitical shifts, compete in the digital economy, and protect its people against rising global shocks. Strong regional frameworks, trusted digital ecosystems, and

inclusive innovation will be key to ensuring ASEAN thrives in this new era of global complexity.

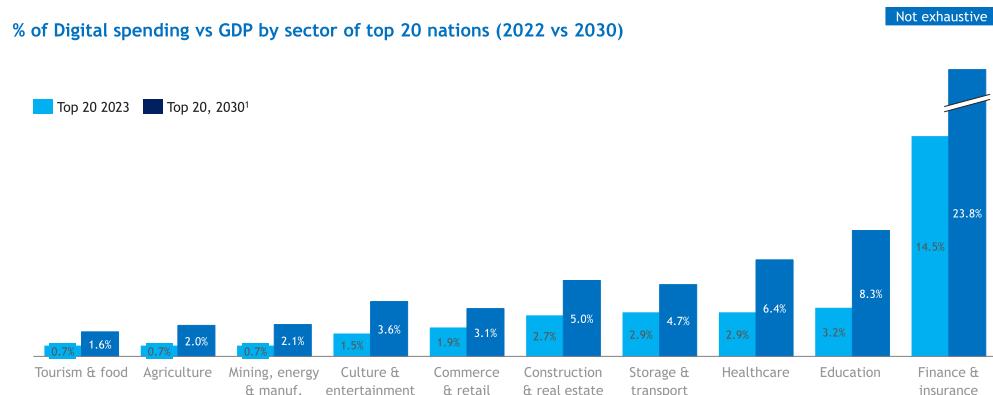
4.2 Global technology trends

The global digital landscape is evolving at an unprecedented pace, shaped by technological breakthroughs, geopolitical dynamics, and changing societal expectations. For ASEAN to remain competitive and resilient, it must stay attuned to these macro-level shifts and align its regional strategies accordingly. Several key global trends are expected to influence ASEAN's digital trajectory over the next decade.

- **Governments and businesses are accelerating investment in digital infrastructure and innovation:** Across the world, both public and private sectors are scaling up their investments in digital infrastructure, emerging technologies, and innovation ecosystems. From high-speed broadband and cloud computing to AI research and smart cities, digital transformation is being prioritized as a national imperative. Governments are deploying stimulus packages and industrial policies to digitize key sectors, while businesses are rethinking operations and customer engagement through digital-first strategies. For ASEAN, this trend underscores the urgency of closing infrastructure gaps, enhancing digital competitiveness, and enabling innovation-driven growth at both national and regional levels.

1 Surging Investment in Digital, Data and AI

Globally, the spending on digital transformation, data and AI is estimated to continue to increase to 2030, and this increase will be seen across sectors



Top 20 countries by digital spending/sector GDP in 2030 for each individual sector, GDP contribution % may not add up due to rounding
Top countries include: Singapore, Switzerland, South Korea, United States, Sweden, Japan, Canada, New Zealand, Malaysia, Belgium, Denmark, France, Netherlands, UK, Australia, Spain, Czech Republic, Chile, China, Italy
Source: Gartner; Oxford economics; BCG analysis

2 AI & Generative AI Reshaping Industries and Society

AI is driving impact across sectors...

AI and machine learning impact on sectors

>\$500 B

Value will be created by 2035 in automotive sector¹, enabled by AI-driven automation

\$360B

Annual savings by 2030 in the healthcare sector², enabled by AI-driven automation and optimization

44%

Share of employment at risk of being automated by AI solutions in legal sector³

...and more

1. BCG market reports on robo taxis and high-tech robotics 2. What happens when AI comes to healthcare (CEPR) 3. Industries with highest potential for automation - Focus on US 4. Generative AI could raise global GDP by 7% (Goldman Sachs) 5. Report by International Energy Agency

... and this is being fueled even further by GenAI

Non-Exhaustive

Generative AI impact on global economy

\$7 Trn

Potential global GDP value created by Gen AI⁴ in the next 10 years

-3-7x

Increase in global electricity demand driven by data centers by 2030⁵ (varies by AI adoption by 2030)

300 M

Full-time jobs at risk of being automated by Gen-AI⁴ in the next 10 years

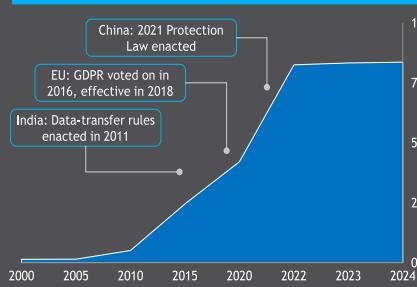
...and more

- AI/GenAI are reshaping industries and redefining global competition:** Artificial Intelligence, especially the rise of generative AI (GenAI), is redefining the boundaries of what machines can do. GenAI is transforming content creation, automating complex tasks, and enabling new models of productivity in sectors such as healthcare, education, finance, and manufacturing. Countries and companies that can effectively develop, govern, and deploy AI will gain strategic advantages in innovation, efficiency, and influence. ASEAN must therefore invest in AI capabilities, ensure responsible and ethical use, and prepare its workforce to adapt to AI-integrated economies.

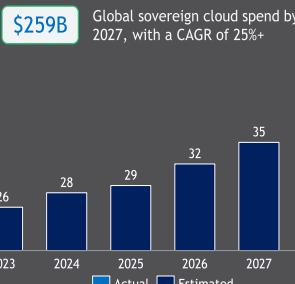
3 Digital Sovereignty & Tech Geopolitics Intensifying

The Volume of Geofenced Data Has Increased, and Sovereign Cloud is on the Rise

Estimated share of global data subject to transnational transfer restrictions, by year (%)¹



Sovereign cloud share of total IaaS market, by year (% of global revenue)²

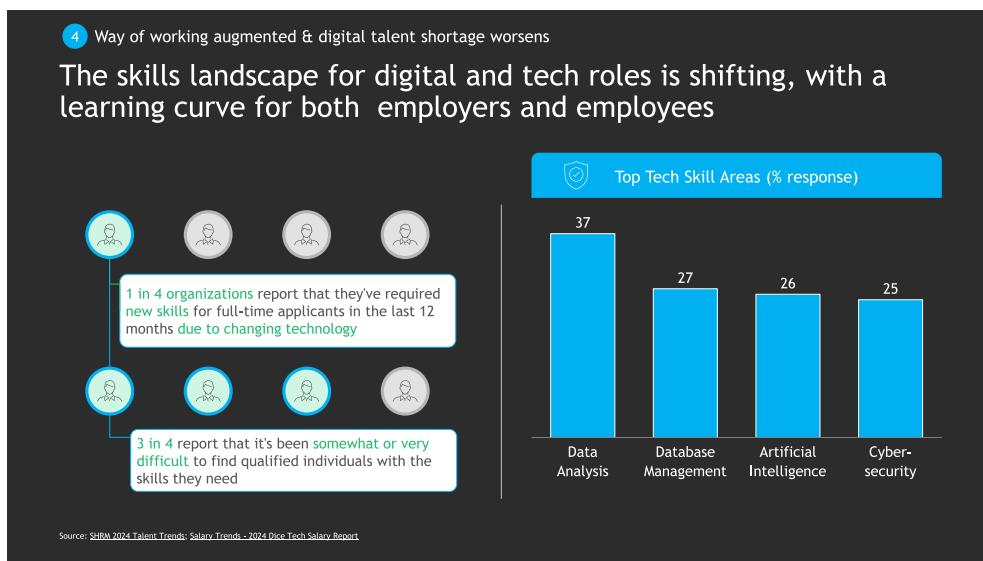
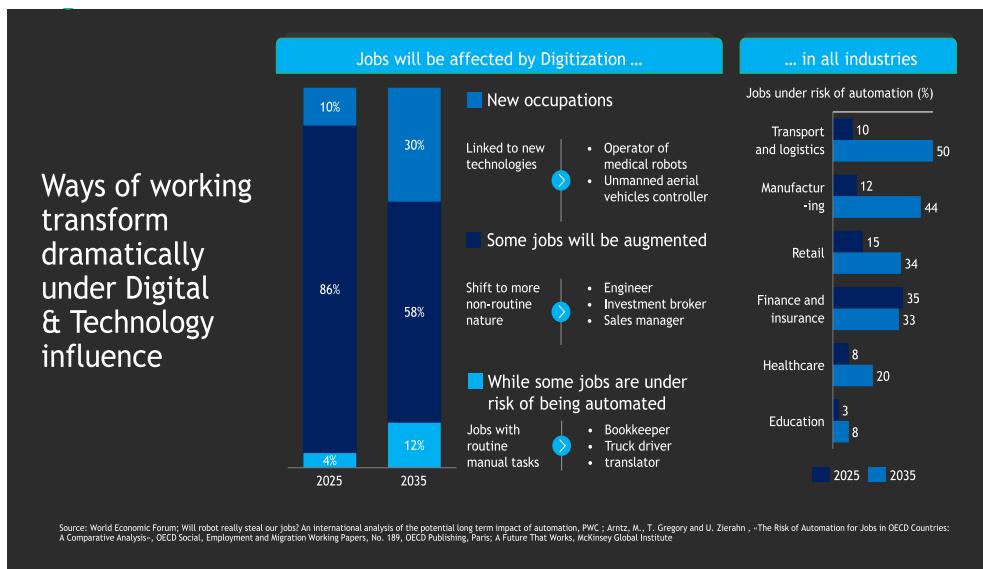


1. A given country's data is considered geofenced (or restricted in its flow across national borders) upon adoption of data localization rules. Estimates of country shares of global data are based on the number of active mobile broadband subscriptions and are weighted by a country's score in the UN E-Government Development Index, which measures government digitization and serves as proxy for the economy's overall level of digitization (2022).

2. AaaS = Application as a Service; IaaS = Infrastructure as a Service; SaaS = Software as a Service.

Note: GDPR = General Data Protection Regulation; IaaS = Infrastructure as a service; SaaS = Software as a service; Note: GDPR = General Data Protection Regulation; IaaS = Infrastructure as a service; SaaS = Software as a service. Sources: OECD; N. Cory & L. Daskalakis, "How Barriers to Cross-Border Data Flows Are Spreading Globally, What They Cost, and How to Address Them" (Information Technology & Innovation Foundation, 2021); DataGuidance; Global Data Alliance; UN E-government Development Index; International Telecommunication Union; IDC's Worldwide Managed Cloud Services Survey (2022); BCG Henderson Institute analysis.

- **Digital sovereignty is rising, as nations assert greater control over data, cloud, and technology standards:** A growing number of countries are seeking to assert control over their digital infrastructure, data governance, and technology ecosystems. This push for digital sovereignty reflects concerns about privacy, security, geopolitical dependencies, and economic competitiveness. As a result, data localization laws, national cloud strategies, and local tech standards are becoming more common. For ASEAN, this trend presents both challenges and opportunities. The region will need to balance national priorities with the benefits of cross-border integration, while working toward interoperability and shared governance frameworks that support trust and openness.



- **Augmented work and the growth of Digital Talent Gap:** The global digital economy is grappling with a persistent and deepening shortage of skilled talent. Roles in areas such as artificial intelligence, cybersecurity, cloud engineering, and data science are increasingly difficult to fill, even as demand continues to grow. At the same time, automation and AI are transforming how work is done, augmenting human tasks, replacing repetitive roles, and creating entirely new categories of employment. These shifts require large-scale reskilling and upskilling, not only in the technology sector but across the broader economy. For ASEAN, the dual challenge of talent scarcity and evolving job demands calls for urgent investment in human capital. Strengthening digital education systems, expanding lifelong learning, and fostering regional collaboration on talent development and mobility will be essential to ensure the region remains competitive and inclusive in the digital age.
- **Digital sustainability is gaining prominence as a policy and business priority:** The environmental footprint of digital technologies is coming under increasing scrutiny. Data centers, blockchain networks, and device production all contribute to carbon emissions and resource consumption. At the same time, digital tools are playing a key role in enabling green transitions, from smart grids and precision agriculture to climate monitoring and emissions tracking. As digital and sustainability agendas converge, governments and companies are embracing digital sustainability as a dual objective. ASEAN has an opportunity to lead in this space by promoting green digital infrastructure, embedding sustainability into tech strategies, and aligning its digital growth with global climate goals.

4.3 Alignment of the ADM 2030 with the AEC Strategic Plan 2026-2030 and its Strategic Measures

The ASEAN Digital Masterplan 2030 (ADM 2030) is developed in close alignment with the ASEAN Economic Community (AEC) Strategic Plan 2026-2030 and its Strategic Measures, for which ADGSOM has been designated as Lead or Co-Lead sectoral body. Mapping ADM 2030 to the AEC Strategic Plan ensures that the digital agenda contributes directly to ASEAN's economic integration priorities while avoiding duplication with the work of other sectoral bodies.

This alignment clarifies ADGSOM's role in providing digital policy, and infrastructure frameworks in support of broader economic, trade, labour, and innovation objectives. It also facilitates access to resources, strengthens monitoring and evaluation through the AEC results framework, and demonstrates ASEAN's collective commitment to digital transformation as a driver of inclusive growth. By embedding ADM 2030 within the AEC architecture, ADGSOM helps to secure coherence, complementarity, and visibility of ASEAN's digital cooperation efforts across all three pillars.

Rationale for Selecting the Desired Outcomes

The Desired Outcomes (DOs) of the ASEAN Digital Masterplan 2026-2030 (ADM 2030) have been selected to reflect ASEAN's collective ambition to build

an integrated, secure, trusted, innovative, and inclusive digital future. They are grounded in lessons from ADM 2021-2025, shaped by emerging trends in technology and global context, and informed by consultations with ASEAN Member States and stakeholders.

In addition, this selection is in alignment with the ASEAN Economic Community (AEC) Strategic Plan 2026-2030 and its Strategic Measures, for which ADGSOM has been designated as Lead or Co-Lead sectoral body. This ensures that the ADM 2030 is not a standalone agenda but a complementary framework that supports ASEAN's broader economic integration priorities, including digital trade, industrial transformation, innovation ecosystems, and sustainable growth. Mapping the DOs and its Enabling Actions (EAs) to the AEC Strategic Measures strengthens policy coherence, clarifies ADGSOM's mandate, and helps to avoid duplication with the work of other sectoral bodies such as those responsible for trade, customs, labour, or science and technology. This alignment also facilitates monitoring and evaluation through the AEC results framework, secures synergies with Dialogue Partners and international organisations, and demonstrates ASEAN's commitment to a whole-of-community approach to digital cooperation.

5. DESIRED OUTCOMES AND ENABLING ACTIONS



5.1 Desired Outcomes and Enabling Actions

| DO/EA | Description | Importance |
|-------|--|------------|
| DO1 | Seamless and Inclusive Digital Infrastructure Across ASEAN | |
| 1.1 | Promote regional approaches to expanding affordable, high-speed broadband and 5G coverage to all areas, including in rural, remote and underserved areas | H |
| 1.2 | Support the development of secure, interoperable, and rights-based national digital identity systems to facilitate trusted electronic transactions across ASEAN Member States | M |
| 1.3 | Strengthen ASEAN cooperation on creating enabling environment for cloud and data center, including cloud adoption, cross-border cloud services to support digital infrastructure development. | M |
| 1.4 | Optimize telecommunication infrastructure to boost connectivity by strengthening regional spectrum planning for 5G and future 6G needs, (including lower 6 GHz band for unlicensed use, MSS harmonisation, and post-WRC-27 spectrum allocation), coordinating satellite services policies, and support the transition from 2G/3G networks to more efficient technologies | H |
| 1.5 | Promote cooperation among ASEAN Member States and with relevant stakeholders in strengthening the resilience and repair of submarine cables in the region | H |
| 1.6 | Operationalise the implementation of the ASEAN framework on Digital Public Infrastructure (DPI) and going upward to develop foundational elements of an ASEAN Digital Stack to enable interoperable, trusted and scalable regional digital services. | M |
| 1.7 | Strengthen regional collaboration and public-private partnerships for the planning, building, operation, and maintenance of secure and resilient digital infrastructure, ensuring lifecycle sustainability and interoperability across AMS | L |
| 1.8 | Develop readiness assessment tools, interoperability guidelines, and implementation best practices to support AMS in adopting of cross-border digital public infrastructure | H |

| DO/EA | Description | Importance |
|------------|---|------------|
| DO2 | Sustainable and Intelligent Digital Government | |
| 2.1 | Promote improvements in public service delivery through user-centric, interoperable, and secure digital government platforms, enhancing accessibility and service quality across ASEAN Member States | H |
| 2.2 | Encourage the use of data analytics, artificial intelligence (AI), and foresight tools to support evidence-based policymaking, strategic planning, and anticipatory governance | H |
| 2.3 | Support the expansion of the scope, quality, and accessibility of digital public services to ensure inclusive access for all segments of society | M |
| 2.4 | Strengthen the integration of sustainability and environmental, social, and governance (ESG) considerations into digital government policies, systems, and implementation practices | M |
| 2.5 | Enhance digital competencies, leadership capabilities, and change-management skills among civil servants and public sector leaders to support effective digital transformation | H |
| 2.6 | Support ASEAN Member States in mainstreaming ADM 2030 principles on sustainability, inclusion, interoperability, and whole-of-government digital transformation into national digital strategies and masterplans | M |
| 2.7 | Strengthen regional cooperation on the use of digital technologies to enhance Public Protection and Disaster Relief (PPDR) systems, supporting preparedness, response coordination, and information sharing during emergencies | H |
| 2.8 | Support ASEAN Member States through training programmes, shared digital enablers, peer-learning mechanisms, and technical assistance to help narrow capability gaps in interoperability, data governance, AI governance, and cross-border digital government services | H |
| DO3 | Empowered, Safe and Inclusive ASEAN Digital Society | |
| 3.1 | Promote digital literacy, digital safety, and responsible digital participation through community-based outreach, mass communication, and accessible digital learning initiatives | H |

| DO/EA | Description | Importance |
|------------|--|------------|
| 3.2 | Strengthen financial and entrepreneurial digital literacy to support micro, small, and medium enterprises (MSMEs), self-employed workers, and underserved groups in accessing fintech platforms, alternative financing models, and secure digital services | H |
| 3.3 | Strengthen regional cooperation on digital trust, ethics, and responsible digital behavior, including coordinated efforts to educate and safeguard consumers from scams, fraud and harmful digital practices across digital and telecommunication channels | H |
| 3.4 | Promote inclusive access to digital tools, platforms, and services by addressing digital access gaps across geography, gender, economic status, employment types, and underserved communities | H |
| 3.5 | Support lifelong digital skills development for citizens and the workforce through open digital platforms, mobile-based learning tools, and flexible learning models | H |
| 3.6 | Promote the use of regulatory sandboxes and pilot initiatives for digital society solutions, establish common criteria for evidence-based scaling, and facilitate the exchange of best practices across ASEAN | H |
| DO4 | Resilient, Secured and Trusted Digital Ecosystem | |
| 4.1 | Promote data protection and privacy regulations across AMS, enhance mechanisms for trusted cross-border data flows, and encourage industry awareness of Privacy Enhancing Technologies (PETs) to support secure and lawful data use, in accordance with applicable national laws and regulations | H |
| 4.2 | Promote cross-border interoperability of Digital ID systems to enable trusted transactions and secure identity verification across ASEAN | M |
| 4.3 | Strengthen national and regional cybersecurity capabilities including enhanced collaboration among ASEAN Member States' Computer Emergency Response Teams (CERTs) and coordinated incident response mechanisms. | H |

| DO/EA | Description | Importance |
|------------|--|------------|
| 4.4 | Support alignment of cloud security standards and promote secure, resilient and trusted cloud services and critical digital infrastructure across the region | M |
| 4.5 | Promote region-wide interoperability and open data standards to enable seamless, trusted and secure cross-border digital services. | M |
| 4.6 | Enhance consumer protection and regional cooperation measures to mitigate digital fraud, online scams, and illicit online activities, including illicit trade in e-commerce | H |
| 4.7 | Strengthen regional data governance capabilities through shared guidelines, technical guidance, assessment frameworks, training modules, and peer-learning programmes to support consistent implementation of data governance | H |
| 4.8 | Enable and facilitate trusted cross-border data flows through policy dialogue, technical cooperation, and capacity-building initiatives, in line with ASEAN frameworks and national regulatory contexts | M |
| DO5 | Thriving ASEAN Digital Innovation and Start-up Ecosystem | |
| 5.1 | Promote adoption and innovation in digital and emerging technologies through regulatory sandboxes, pilot projects and regional testbeds. | H |
| 5.2 | Promote open data policies, access and innovation-friendly data ecosystems to support new products, services, and digital research | H |
| 5.3 | Promote ASEAN creative economy through digital platforms, cross-border content innovation, and support for creative start-ups and SMEs in areas such as gaming, media, culture, and design | M |
| 5.4 | Support cross-sectoral efforts in developing ASEAN-wide policy frameworks to strengthen science, technology, and innovation (STI) collaboration, technology transfer, and commercialization, including spin-offs and joint ventures through incubation, funding, academia-industry partnership | M |
| 5.5 | Strengthen access to finance and improve the investment environment for ASEAN's digital innovation and start-up ecosystem | M |

| DO/EA | Description | Importance |
|------------|--|------------|
| DO6 | Smart and Digitally Transformed ASEAN Industries | |
| 6.1 | Develop common principles and interoperability guidelines for shared industrial digital platforms and infrastructure, including smart factories, digital twins, and industrial data spaces | H |
| 6.2 | Promote ASEAN industrial participation and integration in global digital supply chains through enhanced digital connectivity, traceability, and industrial integration | M |
| 6.3 | Support the implementation of DEFA through digital enablers for ASEAN industries. | H |
| 6.4 | Work closely with relevant ASEAN sectoral bodies and the private sector to enhance MSME adoption of enabling technologies and integration into high-impact industries, including tailored digitalisation programmes for exporters to upgrade value-added production and adopt future technologies. | M |
| 6.5 | Support relevant ASEAN sectoral bodies including trade- and customs-led bodies (e.g. SEOM, ASW), in promoting automation and advanced digitalisation across ASEAN industries to strengthen industrial supply chain resilience and accelerate recovery from disruptions. | L |
| DO7 | Sustainable, Green, and AI-Driven Digital Transformation | |
| 7.1 | Promote green and energy-efficient digital infrastructure and data centres | H |
| 7.2 | Develop a regional measurement and reporting framework for the environmental impacts of digital activities, including carbon footprint, energy consumption, and resource efficiency. | H |
| 7.3 | Promote circular economy practices in the digital sector, including sustainable design, reuse, and responsible lifecycle management of digital technologies. | M |
| 7.4 | Scale up the use of digital technologies to support green development and sustainable solutions, including the application of AI for environmental monitoring, resource management, and climate resilience. | H |
| 7.5 | Integrate green and sustainability criteria into national and regional digital transformation policies, strategies, and implementation frameworks | M |

| DO/EA | Description | Importance |
|------------|--|------------|
| 7.6 | Operationalise the ASEAN Guide on AI Governance and Ethics, the Generative AI expansion, and the ASEAN Responsible AI Roadmap | M |
| 7.7 | Strengthen ASEAN's collective capacity for AI through regional coordination mechanisms, including the ASEAN Working Group on AI Governance and the ASEAN AI Safety Network | H |
| 7.8 | Develop regional guidance on AI risk oversight, safety and adaptive regulatory approaches to support responsible AI deployment | M |
| 7.9 | Develop globally aligned ASEAN AI standards and participate in shaping global AI governance frameworks | M |
| 7.10 | Develop an ASEAN Digital Outlook to monitor digital trends, emerging technologies, and sustainability practices across the region | H |
| DO8 | Digital Talent and Future Skills | |
| 8.1 | Develop advanced digital skills and capacity-building programmes to support emerging technologies and future workforce needs. | H |
| 8.2 | Strengthen collaboration between governments, industry, and research institutions in developing and delivering digital skills and talent programmes. | H |
| 8.3 | Support regional centres of excellence and international collaboration in emerging and frontier digital technologies. | H |
| 8.4 | Explore cross-border recognition of digital qualifications and credentials to support regional talent mobility and knowledge exchange. | M |
| 8.5 | Promote sustainable, inclusive, and future-ready digital workforce policies and governance frameworks. | L |
| 8.6 | Support cross-sectoral efforts in workforce development and protection through the use of digital tools and IoT-enabled solutions | M |
| 8.7 | Develop high-quality ASEAN digital talent to support the growth, competitiveness, and resilience of the digital economy. | H |
| 8.8 | Promote inclusive reskilling and upskilling initiatives for MSMEs and gig workers to support their participation in the digital economy. | H |

*Note: (H: High, M: Medium, L: Low)

Explanation of proposed Importance Levels

The proposed importance levels (High, Medium, Low) assigned to each Enabling Action (EA) under ADM 2030 are intended to provide indicative prioritisation to guide sequencing, resource allocation, and coordination at the regional level. This prioritisation reflects a combination of factors, including regional strategic relevance, potential cross-border impact, urgency of implementation, readiness across ASEAN Member States, and alignment with agreed ASEAN commitments and frameworks.

Actions designated as **High priority** represent foundational enablers, critical trust and security elements, or high-impact interventions that are essential to achieving ADM 2030's core objectives and are expected to be initiated early in the implementation cycle. **Medium-priority** actions generally support consolidation, scaling, or policy alignment, building on earlier groundwork and allowing for differentiated implementation across Member States. **Low-priority** actions are typically longer-term, context-dependent, or enabling actions that complement higher-priority initiatives and may be pursued progressively based on national readiness and available resources.

Importantly, the proposed importance levels are not prescriptive and are designed to remain flexible and adaptable. They may be reviewed and adjusted over time to reflect evolving national circumstances, technological developments, emerging regional needs, and implementation experience. This flexible approach supports ASEAN's diversity, allows Member States to align ADM 2030 implementation with domestic priorities and capacities, and reinforces a pragmatic, outcome-oriented pathway towards inclusive, sustainable, and resilient digital transformation across the region.

DO1: Seamless and Inclusive Digital Infrastructure Across ASEAN

A robust and inclusive digital infrastructure is the bedrock of ASEAN's digital transformation. This Desired Outcome ensures that every ASEAN Member State (AMS) has access to affordable, high-speed, and secure digital networks, laying the foundation for sustainable economic growth, collective development, and regional integration. Through coordinated action and investment, ASEAN can unlock the benefits of next-generation connectivity and ensure that no citizen or business is left behind.

EA 1.1: Promote regional approaches to expanding affordable, high-speed broadband and 5G coverage to all areas, including in rural, remote and underserved areas

Despite significant progress in internet penetration across ASEAN, gaps remain particularly in rural, remote, and communities with limited access to connectivity. Expanding broadband and 5G coverage will require concerted national and regional investments in fiber-optic backbones, last-mile technologies, and 5G infrastructure. Encouraging public-private partnerships, universal service funds, and regional infrastructure programs can help reduce the digital divide. Moreover, ensuring affordability is crucial, AMS should consider pricing policies and

subsidies to make broadband accessible to all income levels, thereby promoting digital inclusion and economic participation.

EA 1.2: Support the development of secure, interoperable, and rights-based national digital identity systems to facilitate trusted electronic transactions across ASEAN Member States

A trusted digital identity is a cornerstone of inclusive digital economies. Without it, citizens may face barriers accessing essential services, both public and private. This Enabling Action encourages ASEAN Member States to build digital ID systems that are secure, interoperable, and rights-based, supported by robust electronic authentication mechanisms, public key infrastructure (PKI), and digital signature frameworks to ensure authenticity, data integrity, and protection against fraud and impersonation. Interoperability is key, not just within national systems, but across borders, to facilitate regional mobility, trade, and cross-border public and private service delivery. Alongside technical development, public trust must be earned through strong privacy protections and transparent governance.

ASEAN can support this process by providing common principles, technical frameworks, and knowledge-sharing to help countries strengthen their national digital ID architecture and build public trust in its use.

ASEAN will also encourage cooperation and information-sharing to support the progressive development of mutual recognition approaches and roadmaps for cross-border acceptance of digital signatures and electronic authentication, taking into account national readiness, legal frameworks, and regulatory practices.

EA 1.3: Strengthen ASEAN cooperation on creating enabling environment for cloud and data center, including cloud adoption, cross-border cloud services to support digital infrastructure development.

As ASEAN's digital economy grows, demand for high-capacity, reliable, and secure cloud and data infrastructure continues to increase. This Enabling Action aims for strengthening ASEAN cooperation on creating enabling environment for domestic and regional data centers, as well as the development of cloud ecosystems that can support essential services and emerging technologies. Resilient infrastructure will ensure better business continuity, enhance government service delivery, and reduce dependence on external hosting environments. Public-private collaboration and a focus on energy-efficient design will be vital in building scalable, sustainable platforms.

EA 1.4: Optimize telecommunication infrastructure to boost connectivity by strengthening regional spectrum planning for 5G and future 6G needs, (including lower 6 GHz band for unlicensed use, MSS harmonisation, and post-WRC-27 spectrum allocation), coordinating satellite services policies, and support the transition from 2G/3G networks to more efficient technologies

Efficient spectrum allocation and robust international connectivity are essential to enabling fast, stable, and low-latency digital services. The Action targets the harmonization of 5G and future 6G spectrum planning-covering the lower 6

GHz band for unlicensed use and post-WRC-27 allocations-to minimize market fragmentation and deployment costs. Furthermore, it fosters coordinated policies for satellite services and Non-Terrestrial Networks (NTN/Direct-to-Device) to ensure resilient cross-border continuity, while facilitating migration from legacy 2G/3G networks to next-generation technologies.

This Action also supports the transition towards IPv6 and IPv6-ready network infrastructure as a foundation for scalable, secure, and future-proof digital connectivity in ASEAN.

EA 1.5: Promote cooperation among ASEAN Member States and with relevant stakeholders in strengthening the resilience and repair of submarine cables in the region

ASEAN's digital economy growth is underpinned by robust digital infrastructure, including submarine cables that enable international connectivity for businesses and communities. To support ASEAN's digitalisation capabilities and ambitions, the region must remain committed to improving inter-connectivity while safeguarding the digital infrastructure that is essential for cross-border connections. Investments in resilient submarine cable systems are necessary to strengthen ASEAN's position in global internet infrastructure. Joint efforts in planning, maintenance, and repair will enhance regional resilience and support the growing demands of data-intensive applications and services.

This Action will be led by the ASEAN Working Group on Submarine Cables (WG-SC) as well as other relevant frameworks on submarine cable protection and repairs including facilitating the application of best practices outlined in the Enhanced ASEAN Guidelines on Strengthening Resilience and Repair of Submarine Cables.

EA 1.6: Operationalise the implementation of the ASEAN framework on Digital Public Infrastructure (DPI) and going upward to develop foundational elements of an ASEAN Digital Stack to enable interoperable, trusted and scalable regional digital services.

Digital Public Infrastructure (DPI) comprises foundational digital systems-such as digital identity, digital payments, and data exchange layers-that underpin a wide range of public and private services. This EA sure aims to operationalize the ASEAN Regional Digital Public Infrastructure (DPI) Framework and, building upon it, progressively develop the foundational elements of an ASEAN Digital Stack.

A shared and interoperable approach to DPI will facilitate seamless cross-border service delivery, support innovation, and strengthen regional digital integration. The implementation of the framework will include the development of regional trust mechanisms, such as those supporting verifiable credentials, to ensure the authenticity, security, and scalability of digital services across ASEAN.

The implementation of the ASEAN Digital Public Infrastructure and Digital Stack should be guided by the principles of openness, sustainability, and public

trust, while allowing flexibility for phased and differentiated adoption in line with national readiness. These foundational elements will also enable emerging use cases, including Industrial Internet and Industrial Internet of Things (IIoT) applications, by supporting trusted data exchange and interoperability across industrial and production ecosystems in ASEAN.

EA 1.7: Strengthen regional collaboration and public-private partnerships for the planning, building, operation, and maintenance of secure and resilient digital infrastructure, ensuring lifecycle sustainability and interoperability across AMS

This Enabling Action aims to ensure long-term sustainability and technical interoperability across ASEAN Member States (AMS), creating a seamless, robust, and integrated regional digital foundation. Through public-private partnerships and coordinated regional approaches, ASEAN can mobilize resources and expertise and investment to deploy critical systems such as data centers, 5G networks, and submarine cables.

The Action encourages the adoption of international best practices and standards (e.g., ISO, ITU, IEC), as well as open secure, and environmentally sustainable principles throughout the infrastructure lifecycle. A lifecycle approach that covers planning, deployment, operation, maintenance, and periodic review will ensure long-term efficiency, security, interoperability, and adaptability to technological change.

Regional collaboration under this action may also include strengthening interoperable, resilient, and secure core Internet infrastructure, including domain name system (DNS) capabilities, to enhance regional digital trust and continuity of cross-border digital services

EA 1.8: Develop readiness assessment tools, interoperability guidelines, and implementation best practices to support AMS in adopting of cross-border digital public infrastructure

This Action aims to provide ASEAN Member States with practical tools and guidance to evaluate their current capabilities, adopt interoperable standards, and implement cross-border digital public infrastructure effectively. By offering readiness assessments, clear guidelines, and best practices, it helps ensure consistent, secure, and seamless integration of digital services across the region, supporting equitable participation and reducing disparities among AMSs at different levels of digital maturity.

DO2: Sustainable and Intelligent Digital Government

Governments across ASEAN have a vital role to play in leading the digital transformation journey. A future-ready public sector must go beyond digitizing existing services. It must also embed intelligence, sustainability, and inclusiveness into how it designs and delivers services to people and businesses. This Desired Outcome envisions a region where public digital services are accessible, efficient, and designed around the needs of citizens, while also aligning with long-term environmental and development goals.

EA 2.1: Promote improvements in public service delivery through user-centric, interoperable, and secure digital government platforms, enhancing accessibility and service quality across ASEAN Member States

Citizens increasingly expect fast, seamless, and personalized services from their governments. Meeting these expectations requires more than putting forms online. ASEAN should invest in developing fully public digital platforms that are intuitive, accessible to all users, and capable of delivering end-to-end services. This includes mechanisms for exchanging experiences, documenting best practices, and strengthening Member States' capacities in streamlining processes, reducing manual steps, designing services around user needs rather than administrative boundaries, creating communities of practice and peer-learning programmes, supporting cross-border collaboration through joint training, technical assistance, and service design labs. Inclusive service design also requires content and interfaces that are accessible to people with disabilities, elderly users, and those with limited digital literacy.

EA 2.2: Encourage the use of data analytics, artificial intelligence (AI), and foresight tools to support evidence-based policymaking, strategic planning, and anticipatory governance

ASEAN Member States should accelerate the use of artificial intelligence and advanced data analytics in government planning, monitoring, and service delivery to enable real-time, data-informed decision-making. By harnessing administrative and geospatial data, governments can identify gaps, anticipate risks, and design more targeted and effective interventions. This effort will require investment in secure data platforms, cross-agency data sharing, and robust safeguards for privacy and security, alongside capacity building for civil servants and data professionals to strengthen skills in data analysis and algorithmic literacy. Regional collaboration on tools, methodologies, and pilot projects will further support scalable adoption and ensure that policymaking across ASEAN is more adaptive, transparent, and impactful.

EA 2.3: Support the expansion of the scope, quality, and accessibility of digital public services to ensure inclusive access for all segments of society

Access to digital public services should not be limited by location, income, or level of digital literacy. This Enabling Action calls for AMS to extend service coverage to communities and populations with limited digital access. Governments should develop inclusive digital outreach strategies, ensure mobile-friendly and multilingual access, and expand support for citizens unfamiliar with digital tools. In doing so, they can help reduce barriers to participation and ensure everyone benefits from the efficiencies and transparency that digital government can offer. Expanding services also means ensuring their reliability, security, and trustworthiness.

EA 2.4: Strengthen the integration of sustainability and environmental, social, and governance (ESG) considerations into digital government policies, systems, and implementation practices

Sustainability is no longer a separate agenda; it must be built into the very core of digital government strategies. This Enabling Action encourages ASEAN Member States to integrate environmental considerations into the planning, procurement, and operation of digital systems. Examples include adopting energy-efficient technologies, minimizing e-waste, and promoting the use of green data centers. Sustainability also means thinking long term: public investments in digital platforms should be resilient, scalable, and aligned with broader national climate and development commitments.

Sustainability should be a core principle in how digital transformation is planned, implemented, and governed. This Enabling Action calls on AMS to integrate environmental, social, and governance (ESG) considerations into national digital strategies and policies. Governments should promote energy-efficient infrastructure, prioritize paperless service delivery, and adopt inclusive design standards that ensure equitable access for all. Embedding ESG in procurement processes, digital regulation, and public-sector innovation can help ensure that digital development advances climate goals, social equity, and responsible technology use. In doing so, ASEAN can lead by example in building a digital future that is not only innovative and inclusive, but also sustainable.

EA 2.5: Enhance digital competencies, leadership capabilities, and change-management skills among civil servants and public sector leaders to support effective digital transformation

Develop training programs to enhance the digital literacy, leadership, and innovation capabilities of public officials. Building human capacity is essential for the successful design, implementation, and governance of digital government initiatives.

EA 2.6: Support ASEAN Member States in mainstreaming ADM 2030 principles on sustainability, inclusion, interoperability, and whole-of-government digital transformation into national digital strategies and masterplans

This Action aims to support AMSs in integrating ADM2030's sustainability and inclusion principles into their national digital masterplans. ADM2030 will serve not only as a regional blueprint but also as a guide for AMS in updating and implementing their national digital strategies. Regional-national alignment will be promoted through dedicated policy dialogues, mapping exercises, and shared monitoring frameworks, ensuring that ASEAN's collective vision is realised through coherent national actions.

By sharing best practices, AMSs can enhance institutional mechanisms, governance frameworks, coordination structures, and accountability processes, ensuring effective and coherent implementation of digital initiatives across ministries and agencies

EA 2.7: Strengthen regional cooperation on the use of digital technologies to enhance Public Protection and Disaster Relief (PPDR) systems, supporting preparedness, response coordination, and information sharing during emergencies

ASEAN faces increasing risks from natural disasters and public safety threats, requiring resilient and digitally enabled emergency services. Strengthening PPDR capabilities calls for reliable broadband networks, both terrestrial and satellite, to ensure uninterrupted connectivity during crises and maintain continuity of critical services. ASEAN should promote the use of real-time video, drones, robotics, and other digital tools to enhance situational awareness, accelerate response, and improve the safety of frontline teams. Greater regional collaboration through shared protocols, best practices, and interoperable standards will enable more coordinated and effective cross-border disaster response, ultimately improving protection for communities across the region.

EA 2.8: Support ASEAN Member States through training programmes, shared digital enablers, peer-learning mechanisms, and technical assistance to help narrow capability gaps in interoperability, data governance, AI governance, and cross-border digital government services

This Action aims to strengthen the capacities of AMSs at different readiness levels by providing practical tools, knowledge, and collaborative opportunities. Training programmes enhance technical and managerial skills, shared enablers (such as templates, frameworks, and platforms) reduce duplication of effort, and peer exchanges facilitate learning from best practices across the region. Technical assistance packages provide targeted support to implement interoperable, secure, and regionally aligned digital initiatives, ensuring that all Member States can participate effectively in ASEAN's digital ecosystem.

DO3: Empowered, Safe, and Inclusive ASEAN Digital Society

Building an inclusive and trusted digital society requires more than infrastructure. It depends on people who have the skills, confidence, and protection to engage safely and meaningfully in digital life. As ASEAN deepens its digital transformation, bridging digital divides, strengthening public awareness, protecting rights, and supporting the capacity of both individuals and MSMEs are critical. This Desired Outcome focuses on empowering citizens and businesses to participate fully in the digital economy, promoting responsible digital behaviour, and ensuring no one is left behind in the region's digital future.

EA 3.1: Promote digital literacy, digital safety, and responsible digital participation through community-based outreach, mass communication, and accessible digital learning initiatives

This Action focuses on expanding digital literacy and digital safety awareness beyond formal education systems through coordinated national and regional efforts. It emphasizes community-based outreach, mass communication campaigns, and accessible digital learning tools to improve public understanding of online risks, including scams, disinformation, cyberbullying, and unsafe digital practices. Particular attention is given to at-risk and hard-to-reach groups by using culturally appropriate, inclusive, and user-friendly formats to promote responsible and confident digital participation across ASEAN.

EA 3.2: Strengthen financial and entrepreneurial digital literacy to support micro, small, and medium enterprises (MSMEs), self-employed workers, and

underserved groups in accessing fintech platforms, alternative financing models, and secure digital services

This Action aims to enhance the financial and entrepreneurial digital capabilities of MSMEs, self-employed workers, and underserved groups to enable their effective participation in the digital economy. It supports the development of targeted training programmes, practical tools, and awareness initiatives to improve understanding and safe use of fintech platforms, digital payments, alternative financing mechanisms, and online business services. By strengthening these capabilities, the Action contributes to greater financial inclusion, business resilience, and equitable digital economic participation across ASEAN.s

EA 3.3: Strengthen regional cooperation on digital trust, ethics, and responsible digital behavior, including coordinated efforts to educate and safeguard consumers from scams, fraud and harmful digital practices across digital and telecommunication channels

Building digital trust requires a collective approach to ethical standards, responsible conduct, and shared values in the digital environment. This Action supports regional cooperation under the ASEAN Working Group on Anti-Online Scam (WG-AS) as well as other relevant frameworks on the prevention and suppression of online scams, promoting of ethical use of digital technologies and respectful behavior in digital spaces. Initiatives may include developing regional principles on digital ethics, shared guidelines, knowledge-sharing platforms on online safety, disinformation, scams and fraud over digital and telecommunicaton channels including their disruptions and launching sustained public education initiatives to promote responsible digital citizenship. Partnerships among governments, academia, and the private sector help ensure that approaches are inclusive, culturally sensitive, and adaptable to emerging challenges.

EA 3.4: Promote inclusive access to digital tools, platforms, and services by addressing digital access gaps across geography, gender, economic status, employment types, and underserved communities

Digital inequality remains a challenge across the region. Women, older adults, persons with disabilities, residents in remote and rural areas, underserved communities, and workers in vulnerable employment types, including gig economy workers, continue to face barriers to meaningful digital access and participation.

This Action calls for targeted and inclusive initiatives to address these gaps through equitable policies, localized outreach, and community-based programmes and the provision of basic digital literacy and other essential skills necessary for meaningful use of digital tools and services. Member States are encouraged to expand access to affordable and accessible digital devices, assistive technologies, inclusive platforms, and connectivity solutions, as well as multilingual and locally relevant digital content, in accordance with national circumstances.

This may include promoting inclusive design and accessibility of digital tools and platforms, including support for multilingual and local-language digital environments, such as Internationalized Domain Names (IDNs), to enable broader participation in the digital society across ASEAN.

EA 3.5: Support lifelong digital skills development for citizens and the workforce through open digital platforms, mobile-based learning tools, and flexible learning models

Lifelong learning is essential to ensure that individuals across all age groups can adapt to rapid changes in technology and the digital economy. This Action supports the expansion of accessible learning platforms such as mobile applications, online courses, and modular training programs that are flexible, affordable, and available in local languages. These platforms enable workers in transition, entrepreneurs, and older adults to strengthen their digital capabilities and remain active in the digital society. Community-based delivery and partnerships with local institutions can help reach populations and communities with limited access to digital learning and promote continuous digital upskilling.

EA 3.6: Promote the use of regulatory sandboxes and pilot initiatives for digital society solutions, establish common criteria for evidence-based scaling, and facilitate the exchange of best practices across ASEAN

This Enabling Action promotes ASEAN cooperation in developing and operating regulatory sandboxes for digital society solutions, with a focus on user protection, vulnerable groups, digital skills development, and safe and responsible digital practices. Regulatory sandboxes provide a controlled environment for testing innovative approaches, allowing policymakers to assess risks, effectiveness, and social impacts before wider adoption.

Building on evidence generated from sandbox trials, this Action also supports the coordination of criteria, procedures, and knowledge-sharing mechanisms for scaling up effective digital society models across ASEAN. In addition, by facilitating the exchange of pilot results, evaluation frameworks, and best practices through shared repositories, ASEAN can enhance policy learning, promote consistent implementation, and accelerate the adoption of proven solutions while respecting national contexts.

DO4: Resilient, Secured and Trusted Digital Ecosystem

Trust and resilience are essential pillars of a digitally enabled ASEAN. As digital technologies become more embedded in public services, economic activity, and daily life, ensuring the security and reliability of digital systems is no longer optional. This Desired Outcome focuses on building a digital environment that is secure, transparent, and prepared to withstand emerging threats. It also emphasizes the importance of shared standards and responsible data governance to support seamless connectivity across the region.

EA 4.1: Promote data protection and privacy regulations across AMS, enhance mechanisms for trusted cross-border data flows, and encourage industry awareness of Privacy Enhancing Technologies (PETs) to support secure and lawful data use, in accordance with applicable national laws and regulations

People are more likely to engage with digital services when they are confident that their personal data is adequately protected. This Enabling Action calls on ASEAN Member States to adopt clear, comprehensive data protection laws that safeguard

user rights and define responsibilities for data controllers and processors. These laws should include mechanisms for redress and oversight and be supported by strong institutions. Where possible, alignment with international best practices will help facilitate cross-border trust and cooperation, particularly in areas such as digital trade and cloud services.

As data moves more frequently between countries, the ability to manage it responsibly becomes a key enabler of regional integration. This Enabling Action supports regional cooperation under the ASEAN Working Group on Digital Data Governance (WG-DDG) as well as other relevant frameworks on the creation of governance models that allow for secure and trusted cross-border data flows. Member States are encouraged to focus on strengthening data management and governance policies through incorporating the principles set out in the ASEAN Framework on Personal Data Protection and ASEAN Framework on Digital Data Governance, promoting accountability in data handling while fostering industry awareness of the ASEAN Model Contractual Clauses (MCCs) and other mechanisms (e.g., binding corporate rules), in a manner that complies with AMS' respective legal and regulatory requirements.

This also includes encouraging organisations to draw on best practices outlined in the ASEAN Data Management Framework and promoting the application of industry best practices for data protection and cybersecurity in accordance with national laws and regulations. Member States are further encouraged to consider the use of recognised certifications such as the Global CBPR and PRP¹ systems to support trusted cross-border data flows, subject to domestic legal and regulatory frameworks.

PETs has been gaining traction as a viable means to satisfy data protection obligations. It has the potential to safeguard data protection for data collaboration, particularly when involving commercial stakeholders residing in different jurisdictions. The use of PETs can also strengthen protection for digital users in the region, as well as allow businesses to gain insights from personal data without compromising privacy.

EA 4.2: Promote cross-border interoperability of Digital ID systems to enable trusted transactions and secure identity verification across ASEAN

As ASEAN's economies and societies become more interconnected, the ability to verify identities seamlessly across borders is essential for enabling trusted digital transactions, supporting regional mobility, and expanding cross-border public and private services. This Action focuses on creating a common regional trust framework that allows national digital ID systems-once established domestically-to interoperate securely and consistently among Member States. ASEAN can

¹ The Operational Framework for Global CBPR and PRP was endorsed at the 5th ADGMIN in January 2025, which provides a step-by-step guidance on adopting the Global CBPR.

facilitate agreements on mutual recognition, technical standards, assurance levels, and governance mechanisms that uphold privacy and security while enabling frictionless verification for travel, trade, education, and financial services. By advancing cross-border interoperability, ASEAN will strengthen regional integration and unlock new opportunities for digital cooperation and economic activity.

EA 4.3: Strengthen national and regional cybersecurity capabilities including enhanced collaboration among ASEAN Member States' Computer Emergency Response Teams (CERTs) and coordinated incident response mechanisms.

Cybersecurity threats are increasing in frequency, scale, and sophistication, posing significant risks to both public and private sectors across ASEAN. Strengthening national cybersecurity capabilities must therefore go hand in hand with enhanced regional coordination. Through established ASEAN cybersecurity cooperation mechanisms including the ASEAN Regional CERT and relevant frameworks, ASEAN can facilitate timely information sharing, earlier threat detection, and more coordinated incident response. Joint training programmes, simulation exercises, and the development of shared protocols will further enhance preparedness, improve response effectiveness, and strengthen collective cyber resilience across the region.

EA 4.4: Support alignment of cloud security standards and promote secure, resilient and trusted cloud services and critical digital infrastructure across the region

As digital transformation accelerates across ASEAN, cloud services and critical digital infrastructure have become essential foundations for secure, efficient, and scalable service delivery. Ensuring their reliability requires consistent security practices and shared standards that allow governments and businesses to operate with confidence across borders. This Action encourages ASEAN to work toward greater alignment of cloud security frameworks, certification schemes, and risk management approaches so that Member States can benefit from trusted and interoperable cloud environments. Strengthening the resilience of data centres, networks, and other critical digital infrastructure will enhance regional preparedness against cyber threats, disruptions, and emerging risks. Through coordinated standards, capacity building, and information sharing, ASEAN can promote a secure and robust digital ecosystem that supports innovation and sustainable regional growth.

EA 4.5: Promote region-wide interoperability and open data standards to enable seamless, trusted and secure cross-border digital services.

This Enabling Action promotes the adoption of open standards and interoperable digital platforms across ASEAN to enable seamless cross-border digital services. It emphasizes the integration of security-by-design principles into open data ecosystems, including the use of encryption, authentication, and access control mechanisms, to ensure data protection and trust. By combining interoperability with secure data-sharing frameworks, ASEAN can reduce fragmentation, foster innovation, and support the development of trusted regional digital services in the context of the ASEAN Digital Economy Framework Agreement (DEFA).

EA 4.6: Enhance consumer protection and regional cooperation measures to mitigate digital fraud, online scams, and illicit online activities, including illicit trade in e-commerce

This Action oversees regulatory and operational measures against illicit trade in e-commerce. ADGSOM will contribute by participating in cross-sectoral dialogues and providing inputs from the digital policy perspective to ensure that digital legal frameworks, standards, and trust mechanisms are aligned with enforcement needs. Such collaboration will enhance the effectiveness of regional mechanisms to combat illicit trade, protect consumers, and maintain fair competition in ASEAN's digital economy.

EA 4.7: Strengthen regional data governance capabilities through shared guidelines, technical guidance, assessment frameworks, training modules, and peer-learning programmes to support consistent implementation

This Action aims to build ASEAN Member States' capacity to implement robust, consistent, and effective data governance across the region. By providing shared resources, training, and peer-learning opportunities, it helps harmonize practices, improve compliance with data protection and privacy standards, and ensure that all AMSs at different readiness levels can manage data responsibly, securely, and efficiently.

EA 4.8: Strengthen regional data governance capabilities through shared guidelines, technical guidance, assessment frameworks, training modules, and peer-learning programmes to support consistent implementation of data governance

This Action aims to facilitate secure and reliable cross-border data exchanges within ASEAN by establishing common governance frameworks, standards, and protocols. It supports regional interoperability, strengthens trust among governments and businesses, and ensures that cross-border digital services can operate smoothly while safeguarding data privacy and security.

DO5: Thriving ASEAN Innovation and Start-up Ecosystem

Innovation is central to ASEAN's vision of a competitive, dynamic, and future-ready digital economy. A thriving and technologically enabled ecosystem of start-ups and enterprises can drive job creation, attract investment, and position the region at the forefront of global technological shifts. This Desired Outcome focuses on nurturing innovation through supportive policies, stronger collaboration between sectors, and targeted investments in skills, research, and emerging technologies such as AI. By fostering an environment where ideas can grow into impact, ASEAN can unlock new sources of growth and resilience.

EA 5.1: Promote adoption and innovation in digital and emerging technologies through regulatory sandboxes, pilot projects and regional testbeds.

As technologies such as artificial intelligence, blockchain, the Internet of Things, and quantum computing, etc. continue to evolve, ASEAN should facilitate experimentation, adoption and learning. Regulatory sandboxes offer a safe,

structured environment for innovators to try out new products and services and shape thinking among Member States on flexible, forward-looking regulatory frameworks that support innovation while managing risks. Dialogue between regulators, technologists, and users is key to ensuring policies remain balanced, inclusive, and responsive.

As ASEAN's innovation ecosystem matures, greater connectivity among platforms and testbeds will be essential. This measure aims to link digital innovation environments across Member States, including regulatory sandboxes, AI testing facilities, cloud-based prototyping platforms, and shared infrastructure for emerging technologies. By enabling start-ups and innovators to access these environments across borders, ASEAN can reduce duplication, lower barriers to scale, and foster cross-border collaboration on new technology solutions. A connected regional innovation infrastructure will help position ASEAN as a cohesive and competitive hub for next-generation digital development.

EA 5.2: Promote open data policies, access and innovation-friendly data ecosystems to support new products, services, and digital research

Access to published public sector data can unlock new waves of digital innovation. Entrepreneurs, researchers, and technology developers often rely on data to build solutions in sectors such as transportation, smart cities, digital health, and education. This Enabling Action calls for the development of open data frameworks that encourage secure, ethical, and interoperable access to government datasets. It also encourages collaboration between data holders and digital innovators to ensure that data is usable, relevant, and linked to innovation outcomes. A strong open data ecosystem will empower start-ups to build more relevant, data-driven products and services.

EA 5.3: Promote ASEAN creative economy through digital platforms, cross-border content innovation, and support for creative start-ups and SMEs in areas such as gaming, media, culture, and design.

ADGSOM may assist relevant sectoral bodies by supporting the development of sector specific guidelines for AI ethics for creative sectors

ector, by focusing on practical use cases and scenarios and guiding principles to support growth of the industry.

EA 5.4: Support cross-sectoral efforts in developing ASEAN-wide policy frameworks to strengthen science, technology, and innovation (STI) collaboration, technology transfer, and commercialization, including spin-offs and joint ventures through incubation, funding, academia-industry partnership

ADGSOM could support cross-sectoral efforts on digital policy frameworks and facilitate cross-sectoral dialogue to align with regional digital innovation goals. ADGSOM also could contribute to cross-sectoral efforts to drive collaboration between academia, research institutions, and industry, in the areas on digital standards, open data policies, and interoperability frameworks to strengthen start-up ecosystems.

EA 5.5: Strengthen access to finance and improve the investment environment for ASEAN's digital innovation and start-up ecosystem

Access to finance is a key enabler for digital innovation and start-up growth across ASEAN. This Enabling Action aims to improve the regional investment environment and facilitate greater access to funding for digital start-ups and innovation-driven enterprises, supporting their ability to scale across borders.

ASEAN may explore public-private partnership approaches, including the potential establishment of an ASEAN Digital Venture Fund, to catalyse investment, crowd in private capital, and complement national funding initiatives. In parallel, this Action encourages the development of common guidelines and policy dialogue to enhance regulatory alignment and transparency in technology investment, helping attract regional and foreign investors and position ASEAN as an integrated and competitive digital innovation hub.

DO6: Smart and Digitally Transformed ASEAN Industries

Industries across ASEAN are undergoing a period of rapid change driven by digital technologies. To remain competitive and resilient, ASEAN's key economic sectors must embrace transformation through the adoption of advanced technologies, modernised infrastructure, and innovative-enabling ecosystems. This Desired Outcome focuses on accelerating digital transformation in priority industries such as manufacturing, agriculture, logistics, and tourism. It supports the development of regionally aligned frameworks, digital infrastructure, and enterprise capabilities that foster innovation, improve productivity, and strengthen ASEAN's role in global value chains. By embedding digital tools and practices into industrial development, the region can drive sustainable growth and economic inclusion.

EA 6.1: Develop common principles and interoperability guidelines for shared industrial digital platforms and infrastructure, including smart factories, digital twins, and industrial data spaces

Shared digital platforms and industrial digital infrastructure are critical to enabling scalable and cost-effective transformation. This Action focuses on developing a set of ASEAN-wide guiding principles that support interoperability, data standardisation, and secure cross-border use of industrial platforms. These principles can inform national policy while promoting convergence on technical standards for cloud-based industrial systems, digital twins, and smart factory environments. Strengthening the regional foundation for platform interoperability will reduce duplication and enhance collaboration across industrial ecosystems.

EA 6.2: Promote ASEAN industrial participation and integration in global digital supply chains through enhanced digital connectivity, traceability, and industrial integration

Digital transformation can enable ASEAN industries to better integrate into global supply chains by improving traceability, agility, and connectivity. This Action focuses on supporting industries to adopt technologies for supply chain transparency, AI for demand forecasting, and IoT for real-time logistics tracking.

In parallel, at the regional level, efforts to harmonise data sharing standards and certification protocols will enhance trust and reduce friction in cross-border trade. By facilitating regional digital industrial networks and cross-border innovation clusters will strengthen ASEAN's digital supply chain capabilities, positioning the region as a competitive and trusted global manufacturing and logistics hub.

EA 6.3: Support the implementation of ASEAN Digital Economy Framework Agreement (DEFA) through digital enablers for ASEAN industries.

ADGSOM supports efforts to enhance the digital readiness of industry-relevant trade stakeholders, including industrial exporters and manufacturing MSMEs, promoting interoperable digital systems, trusted digital services, and enabling digital standards. This includes supporting regulatory coherence, interoperable digital payments, and secure digital transactions in line with the ASEAN Digital Economy Framework Agreement (DEFA). This Action also encourages capacity building, adoption of enabling technologies, and coordination with relevant private sector actors to ensure that ASEAN industries can fully integrate into regional and global digital value chains.

EA 6.4: Work closely with relevant ASEAN sectoral bodies and the private sector to enhance MSME adoption of enabling technologies and integration into high-impact industries, including tailored digitalisation programmes for exporters to upgrade value-added production and adopt future technologies.

ADGSOM can support relevant ASEAN sectoral bodies, such as COSTI that leads MSME innovation and technology adoption, by aligning digital policy frameworks, ensuring interoperability, and facilitating the design and promotion of shared digital platforms as well as adoption of emerging technologies like AI that enable MSMEs to scale and integrate into regional value chains. ADGSOM can tap on expertise of Industry, and Dialogue and Development Partners to support AI adoption among MSMEs.

EA 6.5: Support relevant ASEAN sectoral bodies including trade- and customs-led bodies (e.g. SEOM, ASW), in promoting automation and advanced digitalisation across ASEAN industries to strengthen industrial supply chain resilience and accelerate recovery from disruptions.

ADGSOM contributes by providing digital standards, cross-sectoral dialogue, and policy guidance to help align industrial automation and advanced digitalisation initiatives with regional digital infrastructure, data interoperability, and trusted digital frameworks. This coordination supports industries in adopting smart manufacturing and digital technologies that enhance operational efficiency, agility, and resilience against future shocks.

DO7: Sustainable, Green, and AI-Driven Digital Transformation

As ASEAN accelerates its digital development and the adoption of advanced technologies, sustainability must become a core design principle. Digital transformation and frontier technologies from AI and blockchain to advanced robotics, immersive technologies, quantum computing, and biotechnology, offer opportunities to enhance efficiency and innovation, but also bring environmental

impacts, increased digital emissions measurement, product lifecycle management, and technology risk. To achieve a sustainable digital and AI transformation, ASEAN will:

EA 7.1: Promote green and energy-efficient digital infrastructure and data centres

As demand for cloud computing and data storage grows, data centres are becoming one of the largest sources of energy consumption in the digital sector. Building on ASEAN's ongoing work to develop sustainable data centre guidelines, this Action focuses on supporting adoption and implementation of sustainable data centre practices, energy efficiency, renewable energy integration, and environmentally responsible operations while sharing best practices on standards, certification schemes, and performance benchmarks. Considering developing an ASEAN Action Plan on the Promotion of Green Digital Initiatives to provide guidance on sustainable ICT development, including energy-efficient data centres, low-carbon digital infrastructure, and environmentally responsible operations.

EA 7.2: Develop a regional measurement and reporting framework for the environmental impacts of digital activities, including carbon footprint, energy consumption, and resource efficiency.

Understanding the environmental footprint of digital transformation is essential for informed policymaking. This Action promotes developing a foundation such as common metrics, baseline studies, voluntary reporting, and pilot initiatives to measure and track emissions from digital infrastructure, platforms, and services, supporting climate targets and improving transparency.

EA 7.3: Promote circular economy practices in the digital sector, including sustainable design, reuse, and responsible lifecycle management of digital technologies.

The production and disposal of ICT equipment represent a growing source of e-waste in ASEAN. This Action supports the development of regional guidance on policies for recycling, e-waste management, eco-design extended product lifecycles and sustainable supply chains in the digital sector, aligned with regional policies and public awareness initiatives.

EA 7.4: Scale up the use of digital technologies to support green development and sustainable solutions, including the application of AI for environmental monitoring, resource management, and climate resilience.

Digital tools can help accelerate green transitions in areas such as energy, transport, agriculture, and urban development. This Action focuses on sharing proven solutions and best practices across sectors such as energy, transport, agriculture, and urban development through collaborative platforms, pilot projects, and public-private partnerships.

EA 7.5: Integrate green and sustainability criteria into national and regional digital transformation policies, strategies, and implementation frameworks

Embedding Environmental, Social, and Governance (ESG) principles into national and regional digital transformation strategies to guide investment, procurement, and responsible decision-making.

EA 7.6: Operationalise the ASEAN Guide on AI Governance and Ethics, the Generative AI expansion, and the ASEAN Responsible AI Roadmap

The ASEAN Guide on AI Governance and Ethics and its Generative AI expansion provides a regional reference for responsible AI adoption. This Action focuses on working through the WG-AI to translate the guide into practice by helping Member States adapt its principles into national laws, policies, and sector-specific regulations.

EA 7.7: Strengthen ASEAN's collective capacity for AI through regional coordination mechanisms, including the ASEAN Working Group on AI Governance and the ASEAN AI Safety Network

Building a regional community of practice through regional mechanisms including WG-AI, the ASEAN AI Safety Network as well as other relevant frameworks, ASEAN can address safety challenges in a more proactive and unified way, by pursuing the following approaches:

- The safe deployment of AI requires coordinated monitoring, technical expertise, and policy alignment across Member States. Through planned and structured cooperation under regional mechanisms, ASEAN can strengthen its collective capacity in AI safety by exchanging best practices, promoting interdisciplinary collaboration, developing multi-stakeholder partnerships, enhancing capacity building and research, and fostering collaboration with external partners.
- These mechanisms can also support coordinated assessments of Member States' readiness, including governance capacity, human capital, infrastructure, and innovation ecosystems. They should provide tailored policy guidance and highlight good practices from across the region, ensuring that all Member States can raise their baseline of preparedness and advance together.
- Effective governance of advanced technologies also requires strong institutional capacity. This includes providing training programmes for policymakers, regulators, and civil servants in areas such as AI ethics and safety, as well as broader frontier technologies like blockchain. Capacity-building should extend to technical expertise, including data science, algorithmic literacy, and risk assessment, enabling ASEAN to deliver technical assistance and create a pool of regional experts who can provide guidance to governments.

EA 7.8: Develop regional guidance on AI risk oversight, safety and adaptive regulatory approaches to support responsible AI deployment

AI and new technologies evolve faster than traditional regulatory cycles. To balance innovation and risk management, ASEAN should create regional guidance on risk oversight and adaptive regulation. This includes developing a common risk classification framework, establishing regulatory sandboxes where new applications can be tested safely, and supporting policy experimentation in priority sectors such as digital health, financial services, and climate resilience. Member States can use these frameworks to accelerate innovation while managing

uncertainty, and ASEAN can serve as a platform for sharing sandbox results, lessons, and regulatory innovations across borders. Such guidance will help Member States keep pace with technological change while ensuring public trust and safety.

EA 7.9: Develop globally aligned ASEAN AI standards and participate in shaping global AI governance frameworks

ASEAN's influence in shaping global technology governance depends on building internal coherence first. This SM proposes to harmonise regional standards for AI and other emerging technologies, covering certification schemes, safety benchmarks, safety and assurance frameworks, testing protocols, and interoperability standards. By reducing regulatory fragmentation and driving common approaches and standards for the region, ASEAN can create a larger, more attractive digital market and ensure businesses face fewer barriers when operating across Member States. This dual approach-regional harmonisation and global engagement-will allow ASEAN to safeguard its interests and ensure that international standards reflect the realities of developing regions.

EA 7.10: Develop an ASEAN Digital Outlook to monitor digital trends, emerging technologies, and sustainability practices across the region

ASEAN requires a comprehensive mechanism to monitor digital transformation across Member States. This Action proposes the development of an ASEAN Digital Outlook that cover broader dimensions of digital inclusion, innovation, and sustainability. The Outlook will serve as a regional reference point, enabling policymakers to track progress, compare performance, and identify targeted support needs, while promoting peer learning and showcasing regional best practices.

DO8 Digital Talent and Future Skills

EA 8.1: Develop advanced digital skills and capacity-building programmes to support emerging technologies and future workforce needs.

This Enabling Action promotes the development of advanced digital skills through specialised training programmes, including online learning platforms, bootcamps, and mentorship schemes in high-demand areas such as artificial intelligence, cybersecurity, cloud computing, data science, and robotics. It aims to build professional competencies aligned with regional and global labour market needs across ASEAN.

EA 8.2: Strengthen collaboration between governments, industry, and research institutions in developing and delivering digital skills and talent programmes.

This Enabling Action facilitates collaboration among governments, industry, and research institutions through joint research projects, pilot programmes, and regional knowledge-sharing networks. It aims to ensure that education, training curricula, and skills development initiatives remain aligned with emerging technologies and evolving labour market demand.

EA 8.3: Support regional centres of excellence and international collaboration in emerging and frontier digital technologies.

This Enabling Action supports the establishment and strengthening of ASEAN centres of excellence in emerging technologies such as artificial intelligence, cybersecurity, cloud computing, and data science. These centres will serve as regional knowledge-sharing platforms and promote international collaboration through joint research, academic-industry partnerships, and participation in global innovation initiatives.

EA 8.4: Explore cross-border recognition of digital qualifications and credentials to support regional talent mobility and knowledge exchange.

This Enabling Action supports relevant ASEAN sectoral bodies in exploring digital policy frameworks and studying the feasibility of interoperable systems that enable cross-border recognition of digital skills, certifications, and professional credentials. This cooperation aims to facilitate regional talent mobility and knowledge exchange while avoiding duplication of sectoral mandates.

EA 8.5: Promote sustainable, inclusive, and future-ready digital workforce policies and governance frameworks.

This Enabling Action promotes the development of regional guidelines, standards, and frameworks to support sustainable, inclusive, and ESG-aligned digital workforce initiatives. It includes foresight-driven workforce planning using digital tools and analytics to anticipate emerging skills needs, identify talent gaps, and guide workforce development, retention strategies, and equitable access to training across ASEAN.

EA 8.6: Support cross-sectoral efforts in workforce development and protection through the use of digital tools and IoT-enabled solutions

This Enabling Action supports relevant ASEAN sectoral bodies in leveraging digital platforms, IoT-enabled solutions, and public-private partnerships to improve workforce development, job-matching, and labour protection. It explores interoperable frameworks and the adoption of digital tools to enhance transparency, efficiency, and worker protection, particularly for vulnerable groups and gig economy workers.

EA 8.7: Develop high-quality ASEAN digital talent to support the growth, competitiveness, and resilience of the digital economy.

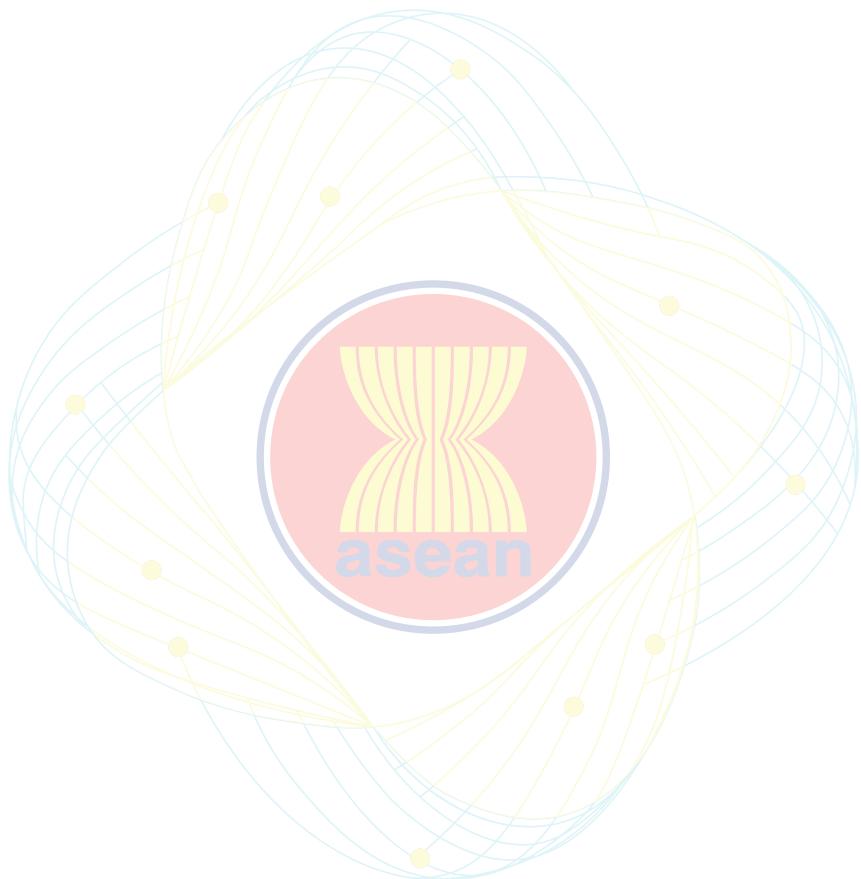
This Enabling Action aims to develop a pool of high-quality digital talent as a strategic asset to support the growth of ASEAN's digital economy and enhance the region's long-term competitiveness. It may include initiatives such as ASEAN digital technology scholarship programmes, joint training and degree programmes between leading regional universities and global technology companies, and the establishment of an ASEAN digital expert network to promote knowledge exchange, mentorship, and regional collaboration.

EA 8.8: Promote inclusive reskilling and upskilling initiatives for MSMEs and gig workers to support their participation in the digital economy.

This Enabling Action promotes standardized, accessible, and affordable digital

skills training programmes for MSMEs, self-employed workers, and gig workers, recognising their critical role in ASEAN's digital economy. It encourages the development of free or low-cost training modules delivered through online platforms and mobile tools, focusing on practical digital, financial, and platform-based skills.

The Action supports cross-sectoral collaboration to align training content with labour market needs, enhance worker protection, and ensure inclusive access to skills development opportunities, thereby improving productivity, employability, and resilience while ensuring that no one is left behind in ASEAN's digital transformation.



6. ADM 2030 IMPLEMENTATION PLAN



6.1 Timeline for ADM 2030

| DO/ SM | Description | Proposed Timeline |
|-----------|--|----------------------|
| DO1 | Seamless and Inclusive Digital Infrastructure Across ASEAN | |
| 1.1 | Promote regional approaches to expanding affordable, high-speed broadband and 5G coverage to all areas, including in rural, remote and underserved areas | 2026-2028 |
| 1.2 | Support the development of secure, interoperable, and rights-based national digital identity systems to facilitate trusted electronic transactions across ASEAN Member States | 2029-2030 |
| 1.3 | Strengthen ASEAN cooperation on creating enabling environment for cloud and data center, including cloud adoption, cross-border cloud services to support digital infrastructure development. | 2029-2030 |
| 1.4 | Optimize telecommunication infrastructure to boost connectivity by strengthening regional spectrum planning for 5G and future 6G needs, (including lower 6 GHz band for unlicensed use, MSS harmonisation, and post-WRC-27 spectrum allocation), coordinating satellite services policies, and support the transition from 2G/3G networks to more efficient technologies | 2026-2028 |
| 1.5 | Promote cooperation among ASEAN Member States and with relevant stakeholders in strengthening the resilience and repair of submarine cables in the region | |
| 1.6 | Operationalise the implementation of the ASEAN framework on Digital Public Infrastructure (DPI) and going upward to develop foundational elements of an ASEAN Digital Stack to enable interoperable, trusted and scalable regional digital services. | 2029-2030 |
| 1.7 | Strengthen regional collaboration and public-private partnerships for the planning, building, operation, and maintenance of secure and resilient digital infrastructure, ensuring lifecycle sustainability and interoperability across AMS | 2028 and beyond |
| 1.8 | Develop readiness assessment tools, interoperability guidelines, and implementation best practices to support AMS in adopting of cross-border digital public infrastructure | 2026-2028 |

| DO/ SM | Description | Proposed Timeline |
|-----------|---|----------------------|
| DO2 | Sustainable and Intelligent Digital Government | |
| 2.1 | Promote improvements in public service delivery through user-centric, interoperable, and secure digital government platforms, enhancing accessibility and service quality across ASEAN Member States | 2026-2028 |
| 2.2 | Encourage the use of data analytics, artificial intelligence (AI), and foresight tools to support evidence-based policymaking, strategic planning, and anticipatory governance | 2026-2028 |
| 2.3 | Support the expansion of the scope, quality, and accessibility of digital public services to ensure inclusive access for all segments of society | 2029-2030 |
| 2.4 | Strengthen the integration of sustainability and environmental, social, and governance (ESG) considerations into digital government policies, systems, and implementation practices | 2029-2030 |
| 2.5 | Enhance digital competencies, leadership capabilities, and change-management skills among civil servants and public sector leaders to support effective digital transformation | 2026-2028 |
| 2.6 | Support ASEAN Member States in mainstreaming ADM 2030 principles on sustainability, inclusion, interoperability, and whole-of-government digital transformation into national digital strategies and masterplans | 2028-2030 |
| 2.7 | Strengthen regional cooperation on the use of digital technologies to enhance Public Protection and Disaster Relief (PPDR) systems, supporting preparedness, response coordination, and information sharing during emergencies | 2026-2028 |
| 2.8 | Support ASEAN Member States through training programmes, shared digital enablers, peer-learning mechanisms, and technical assistance to help narrow capability gaps in interoperability, data governance, AI governance, and cross-border digital government services | 2026-2028 |
| DO3 | Empowered, Safe and Inclusive ASEAN Digital Society | |
| 3.1 | Promote digital literacy, digital safety, and responsible digital participation through community-based outreach, mass communication, and accessible digital learning initiatives | 2026-2028 |

| DO/ SM | Description | Proposed Timeline |
|------------|--|----------------------|
| 3.2 | Strengthen financial and entrepreneurial digital literacy to support micro, small, and medium enterprises (MSMEs), self-employed workers, and underserved groups in accessing fintech platforms, alternative financing models, and secure digital services | 2026-2028 |
| 3.3 | Strengthen regional cooperation on digital trust, ethics, and responsible digital behavior, including coordinated efforts to educate and safeguard consumers from scams, fraud and harmful digital practices across digital and telecommunication channels | 2029-2030 |
| 3.4 | Promote inclusive access to digital tools, platforms, and services by addressing digital access gaps across geography, gender, economic status, employment types, and underserved communities | 2026-2030 |
| 3.5 | Support lifelong digital skills development for citizens and the workforce through open digital platforms, mobile-based learning tools, and flexible learning models | 2026-2028 |
| 3.6 | Promote the use of regulatory sandboxes and pilot initiatives for digital society solutions, establish common criteria for evidence-based scaling, and facilitate the exchange of best practices across ASEAN | 2026-2030 |
| DO4 | Resilient, Secured and Trusted Digital Ecosystem | |
| 4.1 | Promote data protection and privacy regulations across AMS, enhance mechanisms for trusted cross-border data flows, and encourage industry awareness of Privacy Enhancing Technologies (PETs) to support secure and lawful data use, in accordance with applicable national laws and regulations | 2026-2028 |
| 4.2 | Promote cross-border interoperability of Digital ID systems to enable trusted transactions and secure identity verification across ASEAN | 2029-2030 |
| 4.3 | Strengthen national and regional cybersecurity capabilities including enhanced collaboration among ASEAN Member States' Computer Emergency Response Teams (CERTs) and coordinated incident response mechanisms. | 2026-2028 |
| 4.4 | Support alignment of cloud security standards and promote secure, resilient and trusted cloud services and critical digital infrastructure across the region | 2029-2030 |

| DO/ SM | Description | Proposed Timeline |
|------------|--|----------------------|
| 4.5 | Promote region-wide interoperability and open data standards to enable seamless, trusted and secure cross-border digital services. | 2029-2030 |
| 4.6 | Enhance consumer protection and regional cooperation measures to mitigate digital fraud, online scams, and illicit online activities, including illicit trade in e-commerce | 2026-2028 |
| 4.7 | Strengthen regional data governance capabilities through shared guidelines, technical guidance, assessment frameworks, training modules, and peer-learning programmes to support consistent implementation of data governance | 2026-2029 |
| 4.8 | Enable and facilitate trusted cross-border data flows through policy dialogue, technical cooperation, and capacity-building initiatives, in line with ASEAN frameworks and national regulatory contexts | 2028-2030 |
| DO5 | Thriving ASEAN Innovation and Start-up Ecosystem | |
| 5.1 | Promote adoption and innovation in digital and emerging technologies through regulatory sandboxes, pilot projects and regional testbeds. | 2026-2028 |
| 5.2 | Promote open data policies, access and innovation-friendly data ecosystems to support new products, services, and digital research | 2026-2028 |
| 5.3 | Promote ASEAN creative economy through digital platforms, cross-border content innovation, and support for creative start-ups and SMEs in areas such as gaming, media, culture, and design | 2029-2030 |
| 5.4 | Support cross-sectoral efforts in developing ASEAN-wide policy frameworks to strengthen science, technology, and innovation (STI) collaboration, technology transfer, and commercialization, including spin-offs and joint ventures through incubation, funding, academia-industry partnership | 2029-2030 |
| 5.5 | Strengthen access to finance and improve the investment environment for ASEAN's digital innovation and start-up ecosystem | |
| DO6 | Digitally Transformed ASEAN Industries | |
| 6.1 | Develop common principles and interoperability guidelines for shared industrial digital platforms and infrastructure, including smart factories, digital twins, and industrial data spaces | 2026-2028 |

| DO/ SM | Description | Proposed Timeline |
|------------|--|----------------------|
| 6.2 | Promote ASEAN industrial participation and integration in global digital supply chains through enhanced digital connectivity, traceability, and industrial integration | 2029 and beyond |
| 6.3 | Support the implementation of DEFA through digital enablers for ASEAN industries. | 2026-2028 |
| 6.4 | Work closely with relevant ASEAN sectoral bodies and the private sector to enhance MSME adoption of enabling technologies and integration into high-impact industries, including tailored digitalisation programmes for exporters to upgrade value-added production and adopt future technologies. | 2029 and beyond |
| 6.5 | Support relevant ASEAN sectoral bodies including trade- and customs-led bodies (e.g. SEOM, ASW), in promoting automation and advanced digitalisation across ASEAN industries to strengthen industrial supply chain resilience and accelerate recovery from disruptions. | After 2030 |
| DO7 | Sustainable, Green, and AI-Driven Digital Transformation | |
| 7.1 | Promote green and energy-efficient digital infrastructure and data centres | 2026-2028 |
| 7.2 | Develop a regional measurement and reporting framework for the environmental impacts of digital activities, including carbon footprint, energy consumption, and resource efficiency. | 2026-2028 |
| 7.3 | Promote circular economy practices in the digital sector, including sustainable design, reuse, and responsible lifecycle management of digital technologies. | 2026-2028 (pilot) |
| 7.4 | Scale up the use of digital technologies to support green development and sustainable solutions, including the application of AI for environmental monitoring, resource management, and climate resilience. | 2026-2028 |
| 7.5 | Integrate green and sustainability criteria into national and regional digital transformation policies, strategies, and implementation frameworks | 2029 and beyond |
| 7.6 | Operationalise the ASEAN Guide on AI Governance and Ethics, the Generative AI expansion, and the ASEAN Responsible AI Roadmap | 2026-2028 |

| DO/ SM | Description | Proposed Timeline |
|------------|--|----------------------|
| 7.7 | Strengthen ASEAN's collective capacity for AI through regional coordination mechanisms, including the ASEAN Working Group on AI Governance and the ASEAN AI Safety Network | 2026-2028 |
| 7.8 | Develop regional guidance on AI risk oversight, safety and adaptive regulatory approaches to support responsible AI deployment | 2026-2028 |
| 7.9 | Develop globally aligned ASEAN AI standards and participate in shaping global AI governance frameworks | 2029-2030 |
| 7.10 | Develop an ASEAN Digital Outlook to monitor digital trends, emerging technologies, and sustainability practices across the region | 2026-2028 |
| D08 | Digital Talent and Future Skills | |
| 8.1 | Develop advanced digital skills and capacity-building programmes to support emerging technologies and future workforce needs. | 2026-2028 |
| 8.2 | Strengthen collaboration between governments, industry, and research institutions in developing and delivering digital skills and talent programmes. | 2026-2028 |
| 8.3 | Support regional centres of excellence and international collaboration in emerging and frontier digital technologies. | 2026-2028 |
| 8.4 | Explore cross-border recognition of digital qualifications and credentials to support regional talent mobility and knowledge exchange. | 2029 and beyond |
| 8.5 | Promote sustainable, inclusive, and future-ready digital workforce policies and governance frameworks. | 2029 and beyond |
| 8.6 | Support cross-sectoral efforts in workforce development and protection through the use of digital tools and IoT-enabled solutions | 2026-2029 |
| 8.7 | Develop high-quality ASEAN digital talent to support the growth, competitiveness, and resilience of the digital economy. | 2026 and beyond |
| 8.8 | Promote inclusive reskilling and upskilling initiatives for MSMEs and gig workers to support their participation in the digital economy. | 2026 and beyond |

Proposed Timelines of the ADM2030

Proposed timelines under ADM 2030 are structured to reflect a phased and realistic implementation approach over the 2026-2030 period, while maintaining flexibility for longer-term initiatives. Enabling Actions scheduled for implementation within 2026-2030 focus on foundational enablers, capability uplift, and regionally coordinated frameworks that can deliver tangible outcomes within the Masterplan's timeframe. These include policy alignment, capacity-building, interoperability frameworks, and pilot deployments that establish the basis for deeper integration.

Actions indicated as "2029-2030" represent consolidation and scaling phases, building on earlier groundwork to advance cross-border interoperability, trusted digital services, and region-wide implementation. Timelines marked as "and beyond" or "after 2030" are applied selectively to Actions that require sustained investment, long-term institutional coordination, or continued evolution beyond the ADM 2030 cycle, such as advanced industrial digitalisation, large-scale infrastructure partnerships, and regional talent mobility frameworks. Where appropriate, pilot or phased implementation approaches are incorporated to allow testing, learning, and adaptation across diverse national contexts before broader rollout. This reflects ASEAN's commitment to evidence-based scaling and practical deliverability, particularly in areas involving emerging technologies, green digital solutions, and advanced regulatory or technical frameworks.

Overall, the proposed timelines are aligned with the priority levels assigned to each Enabling Action in ADM 2030, ensuring that high-priority actions are initiated early in the implementation cycle, while medium- and longer-term priorities are sequenced to avoid overstretching national capacities. This approach supports strategic clarity, manages expectations, and reinforces ADM 2030's focus on achievable milestones, meaningful outcomes, and sustained regional cooperation across different stages of digital readiness among ASEAN Member States.

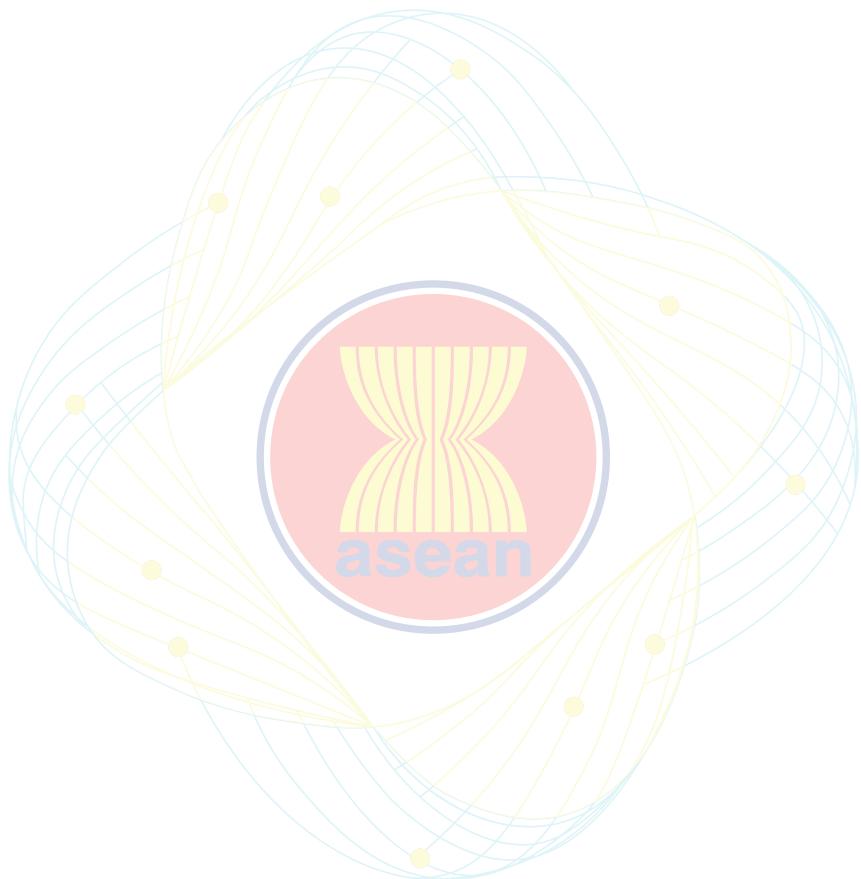
6.2 Metrics of success

The success of each Desired Outcome in ADM 2030 will depend on the effectiveness and integration of its corresponding Enabling Actions. To assess progress in a meaningful and comparable way, a set of outcome-oriented metrics is proposed. These metrics are designed to capture tangible improvements in digital access, adoption, security, innovation, and inclusion across ASEAN. Where possible, the indicators draw on existing global standards and datasets. In other cases, bespoke ASEAN-level data collection, including region-wide surveys and reporting by Member States, will be needed. To ensure consistency, metrics should be tracked annually for each AMS. Where appropriate, comparisons with international benchmarks outside ASEAN will also help highlight areas of global alignment and opportunities for improvement based on evolving best practices.

| Desired Outcome | Metrics | Source |
|--|---|--|
| DO1: Seamless and Inclusive Digital Infrastructure Across ASEAN | <ul style="list-style-type: none"> Percentage of AMS with $\geq 95\%$ broadband population coverage Number of AMS with operational national digital ID systems Cloud/data center capacity growth (in MW or storage) by AMS | ITU, ASEAN surveys; data from national ICT authorities |
| DO2: Sustainable and Intelligent Digital Government | <ul style="list-style-type: none"> ASEAN Digital Government Maturity Index- Share of public services available end-to-end online Percentage of AMS integrating AI or data analytics in public policy | ASEAN survey, UN E-Government Development Index (EGDI) |
| DO3: Empowered, Safe and Inclusive Digital Society | <ul style="list-style-type: none"> Public trust level in online safety, digital services, and protection of personal data, privacy, and online safety (survey-based) Percentage of AMS with established national mechanisms for reporting and addressing online safety incidents Incidence and amount of loss to digital scams reported (regional) | ASEAN survey, National reports |
| DO4: Resilient, Secured and Trusted Digital Ecosystem | <ul style="list-style-type: none"> Number of AMS with national cybersecurity and data protection laws Trend of major cybersecurity incidents (regional) | ASEAN survey, National CERTs, Reports from WG-DDG, ITU |

| | | |
|--|---|--|
| DO5: Thriving ASEAN Innovation and Start-up Ecosystem | <ul style="list-style-type: none"> Number of active tech start-ups and scale-ups in ASEAN R&D investment as % of GDP in digital and emerging technology sectors ASEAN-wide participation in innovation support initiatives, and regulatory sandbox programs | ASEAN survey, National innovation reports; SME reports |
| DO6: Smart and Digitally Transformed ASEAN Industries | <ul style="list-style-type: none"> Share of MSMEs adopting digital tools/platforms Level of digital adoption across key priority sectors (e.g. manufacturing, logistics, health, education) Digital readiness or digital maturity scores of SMEs across AMS | ASEAN survey, Industry benchmarking |
| DO7: Sustainable, Green, and AI-Driven Digital Transformation | <ul style="list-style-type: none"> Number of ASEAN-level policy guidelines, principles, or reference frameworks on green and energy-efficient digital infrastructure developed or coordinated by ADGSOM Regional framework on measuring and reporting emissions from digital activities adopted by AMS by 2030 Number of regional or cross-border initiatives using digital solutions for green development Number of ASEAN-supported regional pilot projects/sandboxes on AI, big data, or emerging technologies supported by ADGSOM-related working groups Number of AMS adopting technology-neutral and innovation-enabling regulatory approaches by 2030 ASEAN contributions to global AI governance frameworks or international standards bodies | ASEAN survey; Reports from WG-AI and ASEAN AI Safety Network, Partner tracking |

| | | |
|--|--|--------------|
| DO8: Digital Talent and Future Skills | <ul style="list-style-type: none"> • Number of ASEAN-wide and national digital skills training programmes implemented, and number of participants completing such programmes • Number of joint workforce development initiatives on digital talent development involving governments, industry, and research or training institutions • Number of regional or interoperable frameworks, standards, or policy guidelines developed to support digital skills recognition and mobility • Number of regional policies, guidelines, or frameworks adopted to promote future-ready digital talent and future skills development | ASEAN survey |
|--|--|--------------|



7. APPENDIX



TRANSFORMATION

7.1 Appendix A: Approach to developing ADM 2030

1. Purpose and Design Principles

The approach to developing the ADM 2030 was based on 5 key principles:

- Strategic - anchored in a clear understanding of global and regional shifts affecting ASEAN's digital future.
- Systematic - using structured tools, templates, and frameworks rather than adhoc inputs.
- Comparative - enabling crosscountry comparison while respecting national differences.
- Consultative - grounded in direct engagement with AMS and relevant stakeholders.
- Actionoriented - focused on producing a plan that can realistically be implemented.

The methodology combined qualitative and descriptive analytical techniques, structured comparison, and iterative validation, ensuring both analytical depths.

-2. Overall Process Architecture

The development of the DMP 2030 followed a fourphase process:

- **Phase 1 - Strategic Context and Trends Analysis**
Build a shared fact base on global megatrends, technology developments, and policy directions shaping ASEAN's digital trajectory.
- **Phase 2 - ASEAN Member State Inputs and Engagement**
Gather structured information from all AMS through a common survey template, document review, and consultations.
- **Phase 3 - Integrated Analysis, Thematic Synthesis, and Prioritisation**
Integrate trends and country inputs into a coherent analytical framework, identify key themes and initiative options, and prioritise them using clear criteria.
- **Phase 4 - Alignment, Validation, and Consolidation of the ADM**
Align the proposed directions with existing ASEAN frameworks and governance structures, validate with AMS and sectoral bodies, and finalise the ADM.

3. Phase 1 - Strategic Context and Trends Analysis

3.1 Scope and Objectives

The first phase created a structured view of the environment in which the ADM 2030 would operate. The objective was not to predict the future, but to identify robust forces and developments that ASEAN must take into account when setting its digital direction.

Three analytical lenses were used:

- **Global megatrends:** longterm shifts in demographics, economics, society, and sustainability.
- **Technology and innovation trends:** major digital technologies and their adoption patterns.
- **Policy and regulatory developments:** emerging approaches to digital governance in other regions.

3.2 Global Megatrends

A scan of global and regional sources, complemented by existing ASEAN documents, informed a set of megatrends with direct relevance to the ADM:

- **Demographic and social change** - including a large youth cohort, emerging ageing dynamics, rapid expansion of the middle class, and evolving expectations for digital access to services and opportunities.
- **Urbanisation and spatial patterns** - high and rising urbanisation rates, growth of secondary cities, and the persistent risk of rural areas lagging behind in infrastructure and services.
- **Sustainability and climate risk** - increasing frequency and severity of climaterelated events and the growing importance of lowcarbon, resilient development, where digital technologies are critical enablers.
- **Economic and geopolitical realignments** - shifts in trade flows, supply chains, investment patterns, and strategic interest in data, technology, and digital infrastructure, all influencing ASEAN's positioning in global value chains.

These megatrends were translated into concrete implications for digital policy, such as the need for resilient infrastructure, inclusive digital access, skills transformation, and regional coordination on crossborder digital issues.

3.3 Technology and Innovation Trends

The methodology then examined a core set of technology trends with high relevance for ASEAN:

- Artificial Intelligence (AI), including generative AI and datadriven analytics, with potential applications across public administration, health, education, manufacturing, logistics, and finance.
- Cloud computing and data platforms, enabling shared services, scalable government systems, and integrated data use, while raising questions about security, governance, and interoperability.
- Connectivity infrastructure - including fixed and mobile broadband, fibre

backbones, submarine cables, and satellite solutions - as the foundation for digital inclusion and advanced services.

- Cybersecurity and digital trust, including threats to critical infrastructure, identity, and financial systems, and the need for coordinated responses and standards.
- Digital payments, fintech, and platforms, creating new opportunities for SMEs and consumers and reshaping financial and commercial ecosystems.

For each trend, the analysis considered:

- Current status and trajectory globally;
- Existing or emerging adoption in ASEAN; and
- Strategic implications for regional cooperation (for example, shared frameworks, joint investments, or capacity building).

3.4 Policy and Regulatory Developments

Finally, the phase reviewed international experience with:

- Data protection and datasharing frameworks.
- Digital trade and digital economy arrangements.
- Cybersecurity strategies and cooperation mechanisms; and
- Early regulatory approaches to AI and platform governance.

This provided reference points for ASEAN's own choices and highlighted areas where regional coherence could increase certainty for businesses and citizens.

The outputs of Phase 1 were synthesised in a concise Strategic Context Note, which served as a foundation for discussions in later phases.

4. Phase 2 - ASEAN Member State Inputs and Engagement

4.1 Structured Survey Instrument

To capture AMS perspectives in a systematic way, a common survey instrument was developed and disseminated. It was structured into thematic modules to enable comparability while allowing countries to reflect their specific circumstances.

Key modules included:

- National digital vision, strategies, and governance structures.
- Digital infrastructure and connectivity status and plans.
- Digital government platforms and key public services.

- Digital economy, innovation ecosystems, and SME digitalisation.
- Data governance, AI, and emerging technology initiatives.
- Cybersecurity strategies, institutions, and capabilities.
- Digital skills, inclusion, and targeted programmes for vulnerable groups.

Each module combined closed questions (for structured comparison) with open questions (to capture nuance, examples, and country-specific insights). AMS were also asked to indicate:

- Their top national priorities for digital transformation over the ADM period; and
- Areas where they saw strong value from ASEAN-level cooperation or regional platforms.

4.2 Document Review

Survey responses were complemented by a document review, including:

- National digital masterplans and ICT strategies.
- Relevant sectoral plans (e.g. for education, health, transport, industry).
- Laws and regulations related to data, cybersecurity, ecommerce, and digital services; and
- Existing ASEAN and subregional initiatives in the digital domain.

This ensured that survey responses were grounded in official documents and that the analysis reflected both stated strategies and actual programmes.

4.3 Consultative Workshops and Direct Engagement with ASEAN Member States

To further deepen engagement and validate findings from the survey and document review, a series of consultative workshops and direct engagement sessions were organised with ASEAN Member States (AMS). These consultations provided an interactive platform for open dialogue and peer exchange, enabling AMS to share perspectives on their current digital development status, emerging challenges, and national priorities.

The workshops facilitated in-depth discussions on key thematic areas of the Digital Masterplan, allowing participants to elaborate on survey responses, clarify policy contexts, and highlight good practices and lessons learned. They also provided an opportunity for AMS to articulate their expectations for regional cooperation, including desired outcomes, implementation modalities, and the role of ASEAN-level mechanisms and platforms in supporting national efforts.

Inputs gathered through these consultations helped refine the analysis, identify common priorities and divergences across AMS, and ensure that the proposed

directions and outcomes of the next phase of ASEAN digital cooperation are responsive to Member States' needs, realistic in implementation, and aligned with national circumstances.

5. Phase 3 - Integrated Analysis, Thematic Synthesis, and Prioritisation

5.1 Analytical Framework

In Phase 3, information from the trends analysis (Phase 1) and AMS inputs (Phase 2) was combined into an integrated view. The work followed a structured analytical framework which:

- Mapped country information against the key thematic areas emerging from the trends (e.g. infrastructure, government platforms, economy and innovation, data and AI, cybersecurity, skills and inclusion);
- Identified patterns and clusters across AMS (for example, common strengths, recurring constraints, and areas of differentiated readiness);
- Crossreferenced national priorities with regional opportunities, to ensure proposed initiatives reflect real demand.

Qualitative techniques were used to classify AMS responses by theme and issue. This allowed for systematic aggregation and comparison without reducing the richness of country narratives.

5.2 Identification of CrossCutting Themes

Through this integrated analysis, a set of crosscutting themes emerged as central pillars for the ADM 2030, including:

- Building robust, secure, and inclusive digital infrastructure and connectivity;
- Strengthening digital government foundations, platforms, and services;
- Accelerating the digital transformation of businesses and economic sectors, particularly SMEs; Enabling the digital economy, including e-commerce, digital trade, and cross-border digital services, to support inclusive economic growth and regional market integration;
- Advancing data governance, AI readiness, and the responsible use of emerging technologies;
- Promoting the digital creative economy, leveraging digital platforms, content innovation, and cultural and creative industries
- Enhancing cybersecurity, resilience, and digital trust;
- Scaling up digital skills and ensuring inclusion, so all groups can participate in the digital economy; Developing digital talent, digital workers, and future skills.

These cross-cutting themes form the organising framework for the strategic directions, Digital Outcomes, and Enabling Actions articulated in the ADM 2030, ensuring coherence across policy domains and alignment between digital transformation, economic integration, and sustainable development objectives across ASEAN.

5.3 Development of Initiative Options

For each theme, a portfolio of initiative options was developed. These options ranged from policy frameworks and coordination mechanisms to shared platforms, capacitybuilding programmes, and pilot projects. For each initiative, the methodology specified:

- The strategic objective and the problem or opportunity it addresses;
- The expected ASEAN valueadded, i.e. why regional cooperation is required or beneficial;
- The indicative scope of activities and main outputs;
- The types of actors are likely to be involved (ASEAN bodies, national agencies, private sector, others).

Draft initiative descriptions were discussed with relevant ASEAN bodies and selected AMS to ensure they were realistic, relevant, and not duplicative of existing efforts. This consultative approach helped refine initiatives so that they are realistic, responsive to national capacities, and capable of delivering tangible regional benefits within the ADM 2030 timeframe.

5.4 Prioritisation Approach

Because resources and attention are finite, initiative options were prioritised using a transparent set of qualitative criteria:

- Impact and regional relevance - potential to significantly advance ASEAN's digital integration, competitiveness, or inclusion.
- Feasibility and readiness - likelihood of achieving meaningful progress within the ADM timeframe, given technical, financial, and institutional conditions.
- Inclusiveness - ability to benefit multiple AMS, including those at earlier stages of digital development, and to narrow rather than widen digital divides.
- Alignment with national priorities - consistency with the priorities expressed by AMS in surveys and consultations.
- Synergy with existing ASEAN frameworks - degree to which initiatives reinforce or operationalise existing commitments rather than creating parallel tracks.

Initiatives were then grouped into:

- Core priority initiatives to be emphasised in the ADM;
- Supporting initiatives that complement the core set; and
- Longerterm initiatives that may require further preparatory work.

Initiatives were also broadly phased (nearterm, mediumterm, longerterm) to support planning and sequencing discussions.

6. Phase 6 - Alignment, Validation, and Consolidation

6.1 Alignment with ASEAN Frameworks and Sectoral Plans

In this phase, the proposed strategic directions and initiatives were systematically mapped against existing ASEAN documents and cooperation mechanisms. This included:

- Previous digital and ICT/ digital master plans;
- Economic and sociocultural strategic plans;
- Frameworks and guidelines on areas such as data, cybersecurity, and innovation.

The mapping exercise addressed three questions for each initiative:

1. Which existing ASEAN frameworks does this plan support or operationalise?
2. Does it fill an identified gap or respond to a new challenge?
3. Are there overlaps or potential conflicts that need to be clarified or avoided?

This ensured that the ADM 2030 is positioned as a coherent integrative framework within the wider ASEAN architecture.

6.2 Governance and Implementation Considerations

The methodology also considered the governance implications of the ADM. For each major initiative or cluster of initiatives, preliminary views were developed on:

- The need for crosspillar coordination (e.g. between economic, sociocultural, and politicalsecurity pillars);
- Requirements for partnerships with private sector, dialogue and development partners, or other stakeholders.

While detailed institutional decisions remain within ASEAN processes, this step ensures that initiatives are framed in a way that can be translated into practical action.

6.3 Validation and Consolidation

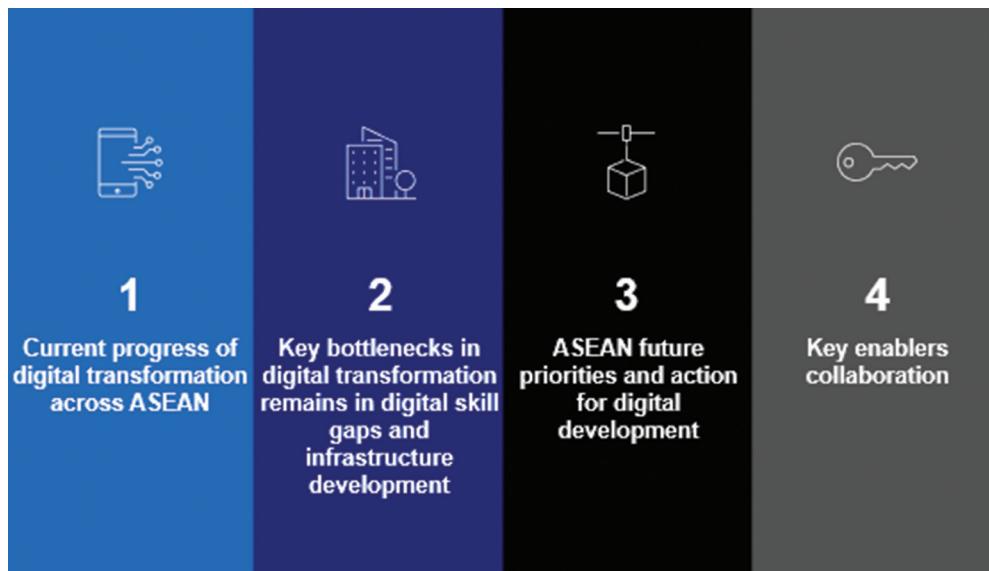
Draft strategic directions and alignment maps were shared with AMS and relevant ASEAN sectoral bodies for feedback and validation. Comments were incorporated through several rounds of revision, focusing on:

- Accuracy of description;
- Relevance and prioritisation of initiatives;
- Clarity of roles and linkages to existing frameworks.

In finalising the ADM 2030, particular attention was given to ensuring inclusiveness and balance across ASEAN Member States, avoiding prescriptive or one-size-fits-all approaches. The strategic directions and initiatives were designed to be flexible and non-exclusive, identifying possible implementation mechanisms without confining delivery to any single modality or institution. This approach allows initiatives to be implemented through a range of relevant ASEAN-led, sectoral, sub-regional, and partner-supported frameworks, thereby maximising opportunities for effective implementation.

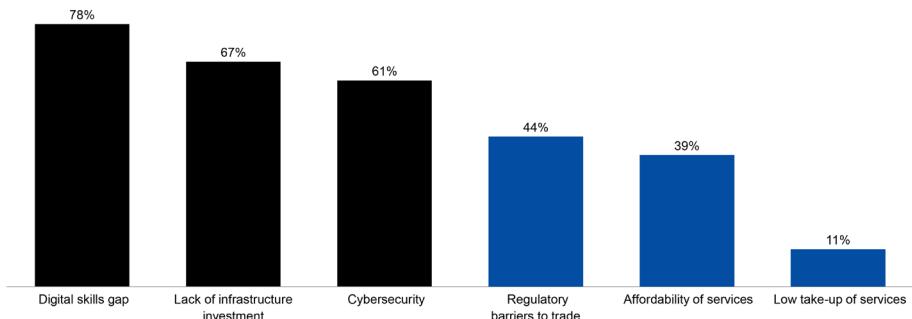
At the same time, efforts were made to maintain coherence and integrity across the entire document. Consistency was ensured in terms of policy intent, terminology, and structure, with careful alignment between strategic narratives, initiative portfolios, implementation pathways, and annexes. Language was harmonised throughout the text to reflect established ASEAN drafting conventions, supporting clarity, neutrality, and a shared understanding among all stakeholders.

7.2 Appendix B: Summary of survey response



Limited investment, fragmented systems, and low trust continue to hinder ASEAN's digital progress

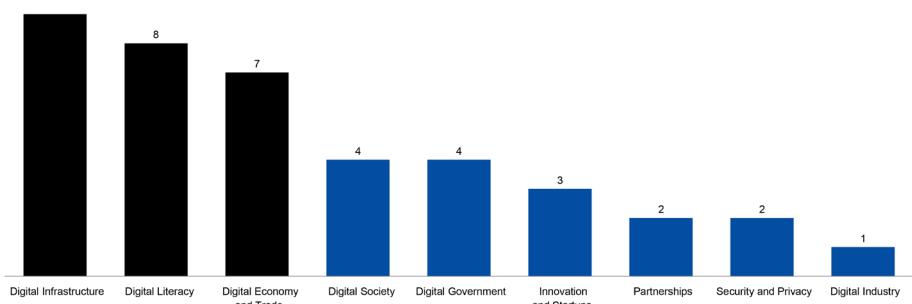
Question: 6. What are the top three barriers to achieving the ADM 2030 vision?

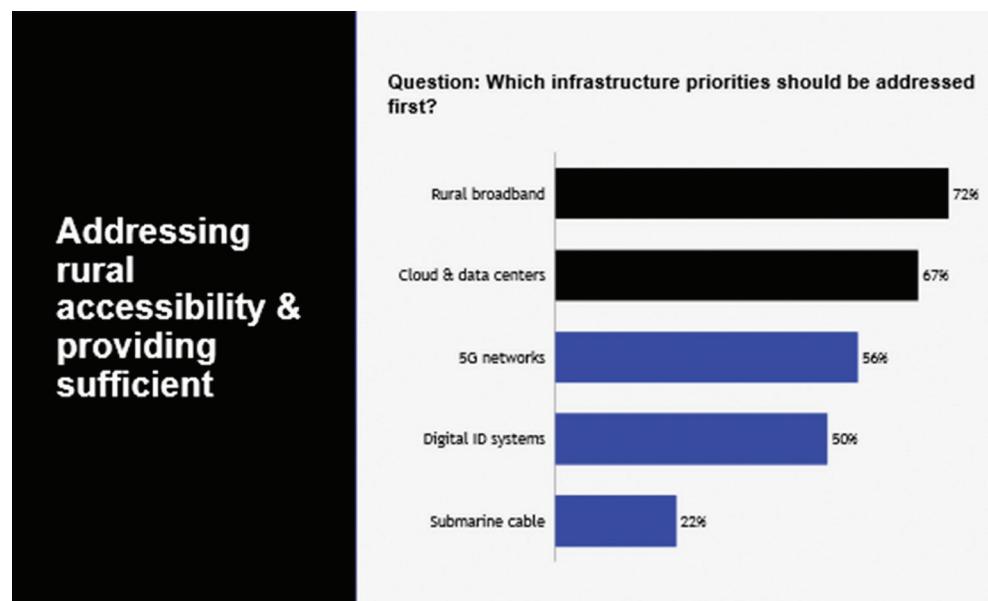


ASEAN Digital masterplan 2030 prioritize Digital infrastructure, Digital literacy and Digital Economy & Trade

ASEAN's countries key focus consensus

Which are top three aspects/ pillars that ADM 2030 should focus on?

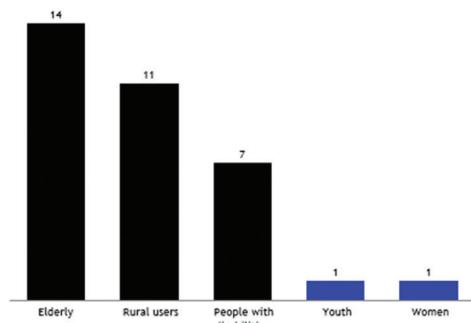




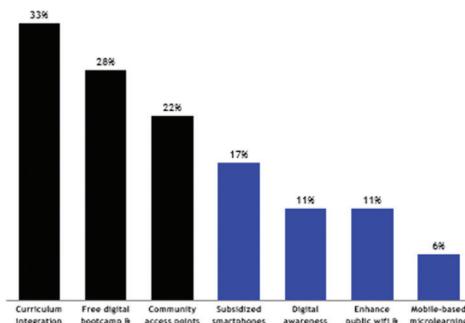
Bridging digital gaps requires empowering people with skills and local connectivity

Priority groups to address digital literacy

What are the top digital literacy gaps in your population?



Critical actions to address digital literacy gaps

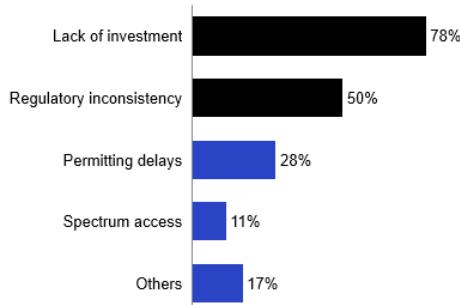


Infrastructure deep dive

Limited investment as biggest challenge for infrastructure deployment ...

...With rural connectivity biggest gap in investment

Question: What are the main barriers to digital infrastructure deployment in your country??



62%
Mentions investment in rural connectivity as biggest infrastructure gap

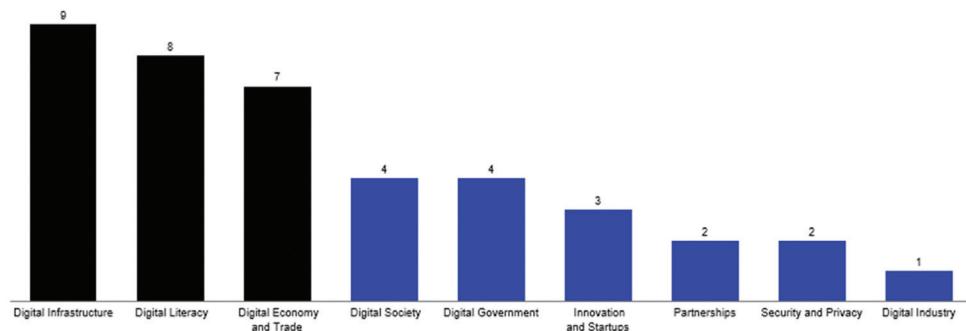
“ The biggest gaps are in long-term funding for rural connectivity and in scaling local data centers to meet growing demand, especially outside urban areas.

“ The 5G rollout in Thailand has not yet achieved full population coverage, particularly in rural and remote areas. The reason for this gap is the high cost of 5G deployment and the limited return on investment in low-density areas

ASEAN Digital masterplan 2030 prioritize Digital infrastructure, Digital literacy and Digital Economy & Trade

ASEAN's countries key focus consensus

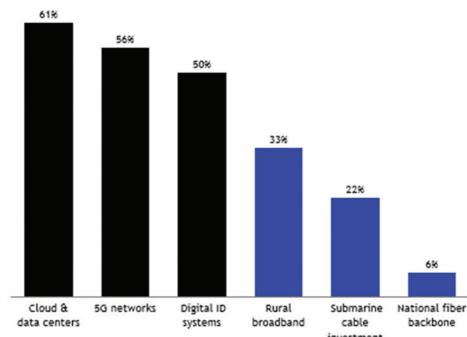
Which are top threes aspects/ pillars that ADM 2030 should focus on?



ASEAN's infrastructure priorities will be unlocked through coordinated policy and investment

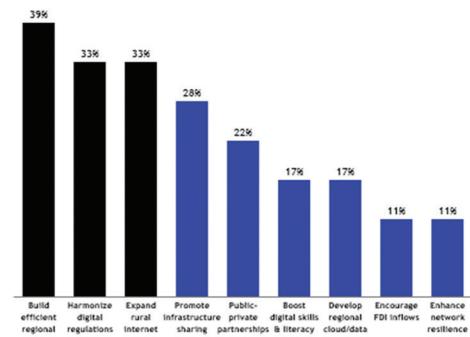
ASEAN infrastructure priorities

Which infrastructure priorities should be addressed first?



Critical actions to accelerate digital infrastructure

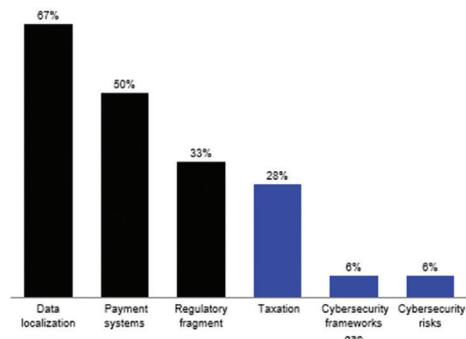
What could ASEAN do to improve digital infrastructure across the region?



Seamless cross-border trade demands integrated regulations and coordinated regional frameworks

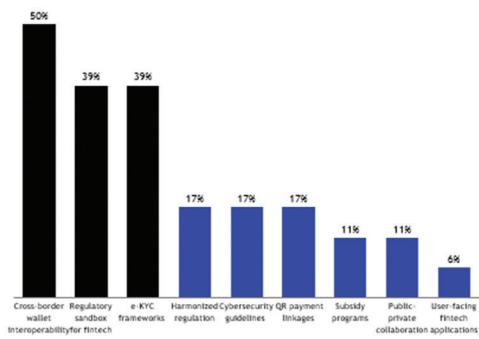
Fragmentation hinders ASEAN's digital trade

What are the top barriers to cross-border digital trade?



Critical actions to accelerate digital trade & economy

What could ASEAN do to improve digital infrastructure across the region?



ASEAN DIGITAL MASTERPLAN

2026 - 2030