

4. Evolution of Actions



This chapter should be cited as:

Isono, I. and H. Prilliadi (2023), 'Evolution of Actions' in Isono, I. and H. Prilliadi, *ASEAN's Digital Integration: Evolution of Framework Documents*. Jakarta: ERIA, pp.25-33.

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4.1. Evolution of Key Actions

4.1.1. ASEAN Single Window

The ASW is a regional single window system that aims to integrate AMS national single windows (NSWs) (Indira and Kusumasari, 2020). NSWs allow traders to submit all necessary information and documents electronically through a single point of entry to fulfil import, export, and transit-related regulatory requirements. The ASW is an important component of ASEAN economic integration as well as an important step for ASEAN's digital integration in terms of digitising trade facilitation processes and improving security and transparency through digitised trade procedures. While the ASW has progressed steadily as an AEC initiative, interestingly, ASEAN digital integration documents show that the idea of an ASW has emerged only in recent years.

The 2003 Declaration ASEAN Concord II (Bali Concord II) Annex recommended the adoption of a single window (ASEAN, 2003). The 2004 *Vientiane Action Programme* implied a strategy was needed to integrate customs structures in ASEAN for a harmonised customs environment in Section 2.3.5.1 (ASEAN, 2004b). It also emphasised the establishment of an ASEAN customs environment, assisted by ICT applications, by implementing the ASW and ASEAN e-customs. ASW implementation is also outlined in the 2004 *Roadmap for Integration of the e-ASEAN Sector* (ASEAN, 2004a) with the ASEAN Single Window Steering Committee as an implementing body. The same document recommended developing a single window, including the e-processing of trade documents at the national and regional levels (ASEAN, 2004a).

In December 2005, AMS passed the ASW Agreement, which paved the way for the implementation of a regional single window that would integrate AMS NSWs. In December 2006, *ASEAN signed the Protocol and Agreement to Establish and Implement the ASEAN Single Window*. It then adopted the *Memorandum of Understanding on the Implementation of the ASEAN Single Window Pilot Project* in July 2011, which aimed to implement an ASW pilot project to assess its benefits and challenges (ASEAN, 2011b).

The ASW legal framework was created when ASEAN adopted the *Protocol on the Legal Framework to Implement the ASEAN Single Window* in September 2015. Its purpose was to provide a legal framework for the operations, interactions, and e-processing of transactions amongst NSWs within the ASW environment while taking into account relevant international standards and best practices recommended by international agreements and conventions concerning trade facilitation and modernisation of customs techniques and practices (ASEAN, 2015c).

Support for the establishment of NSWs in Cambodia, Lao PDR, Myanmar, and Viet Nam was provided through the Initiative for ASEAN Integration. The completion of NSW establishment was incorporated into actions in the *Initiative for ASEAN Integration Work Plan III* in August. At the time of the development, Viet Nam had an NSW in place but had not integrated it into the platform of all technical control agencies. The *Review of the Initiative for ASEAN Integration Work Plan III* reported that, as of October 2019, NSWs had been completed in Cambodia, Lao PDR, Myanmar, and Viet Nam (ASEAN, 2020c).

The ASW's first functional module – the electronic exchange of preferential certificates of origin – was implemented by four of six pilot AMS in January 2018 (Hapsari, 2018). By the end of 2019, all 10 AMS joined the ASW live operations. The future aim of the system is to facilitate the electronic exchange of trade documents such as customs declarations, animal health certificates, and food safety certificates, and to improve the efficiency of cargo customs clearance (ASEAN, 2021b).

Despite this steady progress of the ASW in ASEAN economic integration, the ASW was mentioned late in ASEAN documents on digital integration. Although the ASW was included in the 2004 *Roadmap for Integration of the e-ASEAN Sector*, it was considered a 'common issue' and thus regarded as a customs measure that contributed to trade facilitation of ICT products rather than a measure of ICT (ASEAN, 2004a). The ASW was not mentioned in the ICT Masterplan 2015 (ASEAN, 2011a) nor the *ASEAN ICT Masterplan 2020* (ASEAN, 2016c). This contrasts with the 2007 *ASEAN Economic Community Blueprint*, which stated that the implementation of measures to simplify, harmonise, and standardise the application of ICT was necessary to realise the ASW (ASEAN, 2007).

In the digital integration documents, the ASW was finally encouraged in the DIFAP in 2019. The ADM 2025 emphasises the importance of the ASW in digitising the trade facilitation process and ensuring that businesses can trade digitally and securely, including cross-border transactions with other businesses and customers (ASEAN, 2021b). Moreover, the acceleration phase of the BSBR also recommends establishing ASW connections to ASEAN dialogue partners.

The ASW is an application of ICT – not ICT itself – such as ICT infrastructure development, ICT regulation, cybersecurity, and other technologies. Areas such as the ASW, where ICT technology is applied, were originally a separate area from ICT, similar to the digitised economy in the discussion of the definition of digital integration in Chapter 2. It was not previously treated as an ICT sector, although it is now considered an essential component of digital integration. In other words, this case is distinctive, as it suggests that the concept of digital integration in ASEAN has expanded.

4.1.2. E-Authentication and Digital Identity

Digital identity interoperability refers to the ability of different digital identity systems to work together seamlessly, allowing users to access services across different platforms and domains (OECD, 2022). Interoperability is essential for the effective expansion of digital identity, as it enables cross-border transactions and the exchange of information between different systems. However, achieving interoperability is a challenge that requires the development of common standards and protocols as well as the establishment of trust amongst different identity providers (Bazarhanova and Smolander, 2020).

While digital identity is an important aspect of the digital economy in ASEAN (Nengsi, 2019), it is only in recent years has it gained importance. In addition to the relatively traditional concepts of e-authentication and secure transaction initiatives, ASEAN is incorporating new digital identity initiatives into its digital integration. Digital identities are different from e-authentication and secure transactions. Digital identities correspond to the electronic information associated with an individual in a particular identity system, which is used by online service providers to authenticate and to authorise users for services protected by access policies (Chen, 2007). Digital identities are used to enable online interactions and transactions amongst people, enterprises, service providers, and government institutions (Paganelli and Polzonetti, 2007). E-authentication and secure transactions have been used for a long time to ensure secure communication amongst individuals, services, and devices through centralised digital entities (Gilani et al., 2020). Digital identities are more user-centric, while e-authentication and secure transactions are more service-centric (Paganelli and Polzonetti, 2007). Digital identities also preserve privacy, while e-authentication and secure transactions are more focussed on authentication and verification of identity as well as the integrity and authenticity of electronic information (Gilani et al., 2020).

The desire for secure transactions in ASEAN appeared in Article 5(c) of the *e-ASEAN Framework Agreement* (ASEAN, 2000). The ASEAN ICT Masterplan 2015 listed e-authentication and secure transaction as its Strategic Thrust 2 (ASEAN, 2015b). Meanwhile, digital identity appeared within the *Intra-ASEAN Secure Transactions Framework* to define the entity under terms and definitions (Wayuparb et al., 2014). Meanwhile, ASEAN has also deployed or is deploying digital identity systems. The ADII noted that the use of national digital identities is still in its infancy in ASEAN compared to developed countries (USAID and US-ASEAN Connect, 2021).

The *Work Plan for AAEC* and BSBR emphasise digital identity. The work plan has actions related to digital identity, such as encouraging all AMS to maintain – or adopt as soon as practicable – measures based on international norms for the use of interoperable e-authentication technologies. It also ensures stakeholder socialisation and compliance with e-authentication approaches (ASEAN, 2021f). Meanwhile, the BSBR highlights the establishment of ASEAN-wide unique business identification numbers (UBIN) and further work on business digital identities (ASEAN 2021c).

As such, digital identity is a new concept that ASEAN has only begun to address. Since digital trade agreements in other countries have started dealing with digital identities, concrete initiatives are expected to be developed in ASEAN through the DEFA and Post-2025 Agenda.

4.1.3. ASEAN CERT and CRISP

The CERT is responsible for monitoring, detecting, and responding to cybersecurity incidents in AMS. ASEAN recognises the importance of cybersecurity and has taken steps to establish a regional CERT to enhance cybersecurity cooperation and information sharing amongst AMS (Hapsari, 2018). The ASEAN CRISP works to enhance cybersecurity cooperation and information sharing amongst AMS. It aims to improve the region's cybersecurity resilience by facilitating the sharing of threat intelligence, best practices, and technical expertise amongst AMS. It also provides a forum for AMS to collaborate on cybersecurity capacity-building and training programmes. The establishment of the CRISP is a significant step towards enhancing cybersecurity cooperation and information sharing in ASEAN, which is essential for addressing the cybersecurity challenges faced by the region (Mizan et al., 2019).

The *Roadmap for Integration of the e-ASEAN Sector* made CERTs a key measure. It put in place minimum performance guidelines for setting up national CERTs and guidelines for information sharing between CERTs in ASEAN (ASEAN, 2004a). Through the 2006 Brunei Action Plan, AMS agreed to intensify capacity-building and training programmes for national CERTs and to strengthen the region's cybersecurity network by expanding ASEAN CERT incident drills to include ASEAN dialogue partners in 2007. The *ASEAN ICT Masterplan 2015* emphasised the importance of CERTs under Initiative 4.2 to promote network integrity, information security, and data protection (ASEAN, 2015b). In addition, the *ASEAN ICT Master Plan 2020* described a continued effort to establish an ASEAN Network Security Council to promote CERT cooperation and sharing of expertise. Under this master plan as well, a feasibility study on establishing an ASEAN CERT was conducted (ASEAN, 2016c). The 2017 *ASEAN Work Programme on Electronic Commerce* outlined an initiative to establish an international coordination mechanism amongst cybersecurity agencies to share best practices, exchange information on policies and strategies, and cooperate in response to cybersecurity incidents (ASEAN, 2017).

The BSBR called for two key requirements: the establishment of an ASEAN CERT and implementing an ASEAN CRISP memorandum of understanding (ASEAN, 2021b). To advance the implementation of the ASEAN CERT, Singapore is collaborating with other AMS on an operational framework that will outline the ASEAN CERT's purpose, scope, composition, partners, functions, and mechanism.

4.1.4. Interoperable E-Payment System and QR Code Framework

The promotion of e-payments in AMS is an important aspect of advancing the region's digital economy (Mizan et al., 2019). In particular, ASEAN advocates a unique initiative, an interoperable QR code framework, as QR codes are quick and easy payment methods that can be employed on a variety of platforms and devices and are rapidly gaining popularity in ASEAN as a means of facilitating e-payments. Digital platforms within ASEAN – such as Grab and Gojek – have contributed significantly to the spread of e-payments and e-money. Interoperable e-payment systems and QR code frameworks can help boost cross-border transactions and improve payment system efficiency. In addition, the ASEAN Payment Connectivity Initiative was established to promote the interoperability of e-payment systems across AMS. It seeks to establish common technical standards and protocols for e-payment systems as well as to promote trust and security in their use (Najib and Fahma, 2020).

The definitions of secure payments and e-payments can be differentiated based on their security features. Secure payments refer to payment methods that are protected by security measures to prevent unauthorised access and fraud (Casado-Aranda, Liébana-Cabanillas, Sánchez-Fernández, 2018). E-payments are broader, which encompasses various methods, including credit cards, prepaid cards, e-cash, and e-checks. E-payment methods are used for e-commerce transactions and are considered the most common payment method (Halaweh, 2017). However, concerns over privacy, security, and reliable execution of payments are important factors that discourage customers from adopting existing e-payment methods. Secure payments are designed to address these concerns by providing additional security measures to protect against unauthorised access and fraud.

Several documents before the adoption of the DIFAP developed e-payments in ASEAN. The *ASEAN ICT Masterplan 2020*, in promoting digital trade in ASEAN (Action Point 1.1.1), sought to raise awareness of digital trade and the use of e-payments amongst businesses so that they could better transact with their suppliers and customers, including online consumer protection (ASEAN, 2016c). Meanwhile, Initiative 5 of the MPAC 2025 seeks to raise awareness of digital trade and the use of e-payments amongst businesses so that they can better transact with suppliers and customers, including online consumer protection (ASEAN, 2016b).

The DIFAP's output includes the implementation of cross-border retail payments and payment innovations, such as fast payments and QR code payments (ASEAN, 2019b). The BSBR focusses on the development of an ASEAN interoperable QR code framework. It also seeks to implement interoperable cross-border real-time retail payment systems based on an ASEAN framework and implementing policy guidelines (ASEAN, 2021c).

4.1.5. Digitalisation of ASEAN MSMEs

Digitalisation of ASEAN MSMEs has become a central issue in digital policy. MSMEs play a significant role in driving the growth of the internet economy in Southeast Asia (Google, Temasek, Bain & Company, 2022). The COVID-19 pandemic has also accelerated the digitalisation of MSMEs in ASEAN, as businesses had to adapt to the new normal of remote work and online transactions (Mendoza and Tadeo, 2023). According to Bain & Company (2018), 75% of ASEAN MSMEs see the benefits of digital integration, but only 16% fully utilise digital technologies. Assisting more MSMEs in making better use of digital tools could significantly contribute to ASEAN economic development.

ASEAN has long recognised the importance of MSMEs in the context of economic integration, although only around 2015 were the importance of MSMEs made explicit in ASEAN's digital integration documents. More precisely, although the *e-ASEAN Framework Agreement* discussed the need for capacity-building programmes – including education and training for 'small business enterprises', ICT workers, policymakers, and regulators – no SME-specific objectives or initiatives were mentioned until 2015 (ASEAN, 2000). This is another good example of how the focus of digital integration in ASEAN has expanded and changed with the development and diffusion of technology.

In the economic integration context and amongst ASEAN documents, MSMEs were mentioned in the *ASEAN Vision 2020* (ASEAN, 1997). The vision promoted a modern and competitive SME sector in ASEAN, which would contribute to the industrial development and efficiency of the region. The *ASEAN Economic Community Blueprint 2025* strengthened the role of MSMEs as part of its outcome to realise a 'resilient, inclusive, people-oriented and people-centred ASEAN' (ASEAN, 2015a).

The 2004 *ASEAN Sectoral Integration Protocol for e-ASEAN* and *Roadmap for the Integration of the e-ASEAN Sector*, 2006 *Brunei Action Plan*, and 2011 *ICT Masterplan 2015*, do not make specific reference to SMEs. However, under the *ICT Masterplan 2015*'s actions, a project to 'promote and encourage the deployment of IPv6 for small and medium enterprises (SMEs)' was initiated (ASEAN, 2015b).

The importance of MSMEs is explicitly stated in post-2015 documents on digital integration. Action Point 1.1.1 of the *ASEAN ICT Masterplan 2020* recommends encouraging and enhancing digital trade, especially for SMEs, through policy innovation, awareness raising, electronic trading, and other better ways of trading and payments (ASEAN, 2016c). *The Master Plan on ASEAN Connectivity 2025* supports the adoption of technology by MSMEs as stated under the digital innovation pillar (ASEAN, 2016b). The DIF states that the core of digital integration is to transform the competitive base of ASEAN and local businesses, including MSMEs. Amongst the six priority areas, the explanations in '(ii) protect data while supporting digital trade and innovation', and '(v) foster entrepreneurship' refer to MSMEs (ASEAN, 2018a). The DIFAP also refers to upskilling MSMEs in '(iv) broaden digital talent base' in the revised description of the six priority areas (ASEAN, 2019b).

The digitalisation of MSMEs is encouraged in documents on digital integration as well as initiatives in the SME field. The ASEAN SME Academy, for example, provides online training and resources to assist ASEAN MSMEs in adopting digital technologies. The ASEAN Coordinating Committee on Micro, Small, and Medium Enterprises (ACCMSME) also developed a strategic action plan to encourage the region's MSMEs to 'go digital'. Initiatives include the creation of digital platforms for MSMEs, provision of digital training and support, and promotion of e-commerce and digital marketing.

The *Work Plan for AAEC* promotes digitalisation for MSMEs by encouraging the conduct of annual business surveys to measure the perceived adequacy of existing competition laws and policies in the e-commerce sector, with particular attention on the views of MSMEs (ASEAN, 2021f). The BSBR recommends the initiation of negotiations and adoption for the DEFA, which specifies that it should include matters deemed essential to capitalise on the ongoing digital transformation in the region, prepare MSMEs for digital transformation, and develop a digitally ready workforce (ASEAN, 2021c).

4.2. Comparison of Actions

As the topology map shows, since the DIFAP, a series of framework documents have been adopted with strategic action lists, i.e. the DIFAP, ACRF, ADM, BSBR, and *Work Plan for AAEC*. Each framework document has a focus, and there are similarities and differences in their approaches to certain key areas.

4.2.1. Comparison Table

Actions in key documents are compared in the Appendix. The actions of all documents are compared by topic (e.g. trade facilitation and e-commerce legal framework).

The selection criteria for actions in each document are as follows. The DIFAP has six priority areas, and each priority area consists of initiatives. For the ACRF, initiatives and programmes are categorised as actions to be considered in this book. The ACRF has five broad strategies; this book focusses on initiatives under 'Broad Strategy 4: Accelerating Inclusive Digital Transformation' and digital-related initiatives under 'Broad Strategy 3: Maximising the Potential of Intra-ASEAN Market and Broader Economic Integration'. The ADM 2025 uses

enabling actions to achieve desired outcomes. These enabling actions are thus analysed and placed under categories. The BSBR is divided into recovery, acceleration, and transformation phases. There are several measures grouped inside each phase where each measure has actions. Each topic of the *Work Plan for AAEC* includes at least one objective that reflects a subsidiary goal or constituent element of the topic's desired outcome. Each objective is placed within the *Work Plan for AAEC* as an action.

The DIFAP has the broadest coverage of topics regarding the digital sector. In the comparison table, the DIFAP has actions placed under all topics, whereas the other documents have blank cells (i.e. no actions in several specific topics). Duplication of actions are avoided. Where the same action is used, the source is clearly stated, but the overlap is limited. It is therefore worthwhile to integrate and to evaluate the actions in all five documents, as shown in the Appendix. Moreover, there are relevant actions across multiple documents – the DIFAP, ACRF, and BSBR. The focus of the individual actions is differentiated in each. The ADM 2025 and *Work Plan for AAEC* share some of the same actions but often present separate actions.

These depend on the circumstances and year in which each document was established. The DIFAP is the overall blueprint for ASEAN digital integration and outlines digital priorities in areas such as trade facilitation, data protection, digital payments, digital human resources, entrepreneurship, and regional coordination. The ACRF is acting as an integrated COVID-19 crisis exit strategy. The ACRF and its implementation plan build on the existence of the DIFAP and address both ASEAN's immediate needs for a successful transition to the 'new normal' and its medium- and long-term needs for resilience through the recovery phase. The BSBR was adopted after the ADM 2025 and aims to leverage the ongoing digital transformation in ASEAN without creating overlapping initiatives with the DIFAP, ACRF, AAEC (the agreement itself), and ADM 2025. It focusses on key actions from existing relevant initiatives in ASEAN that will have immediate and long-term benefits for the region's competitiveness.

The ADM 2025, which was adopted by ADGMIN as a successor of the *ASEAN ICT Masterplan 2020*, is a 5-year plan that aims to transform ASEAN into a leading digital community and economic bloc powered by secure and transformative digital services, technologies, and ecosystems. The document is more of a direction-setting document than a concrete action statement. The *Work Plan for AAEC*, which was supported by Australian ASEAN–Australia Development Cooperation Program Phase II, was developed for the continued expansion of ASEAN digital resilience and implementation of the AAEC. The actions of the work plan are non-binding because the proposals and activities are subject to further updates as necessary to reflect the fast and dynamic changes in e-commerce activities and digital innovation.

Therefore, ASEAN has produced several framework documents to respond to the COVID-19 pandemic and the expanding digital economy; these actions are related but unique. The DIFAP is an excellent framework with broad digital field coverage, while the ACRF, ADM 2025, BSBR, and *Work Plan for AAEC* – which were all issued after the pandemic – are complementary. The efforts of the five documents should be discussed in an integrated manner, bearing in mind the nature of the individual documents.

4.2.2. Similarities and Differences between the Documents

One of the key areas appearing in many of these documents is the ASW, which aims to facilitate seamless cross-border trade by enabling the electronic exchange of trade documents amongst AMS. The DIFAP emphasises the operationalisation of the ASW, with the ACRF calling for this in all 10 AMS by end-2021. The BSBR supports the establishment of ASW connections with ASEAN dialogue partners, and the *Work Plan for AAEC* supports the implementation of technical studies on ASW connections with dialogue partners and encourages a supplement to the *ASW Technical Guide*.

Another focus in these framework documents is the ASEAN-Wide Self-Certification system. ASEAN-Wide Self-Certification is intended to further strengthen the commitments of the ASEAN Trade in Goods Agreement by allowing traders to self-certify the origin of goods to qualify for preferential tariffs. The DIFAP includes the implementation of AWSC as one of its actions, and the ACRF more specifically articulates the action and recommends its introduction at the time of revision of the ASEAN+1 free trade agreements. There are no AWSC-related actions in the ADM 2025, BSBR, or *Work Plan for AAEC*.

Internet accessibility is also a common focus of the DIFAP, ACRF, and ADM 2025, with all three documents encouraging affordable internet access for rural and underserved areas. The DIFAP highlights the adoption of an ASEAN framework for affordable mobile voice, SMS, and data-roaming services within the region. The ACRF promotes transparent and affordable international mobile data-roaming services. The ADM 2025 promotes common roaming of mobile data services across ASEAN, aiming to reduce the cost of business travel in the region by lowering tariffs.

The priority of intellectual property in e-commerce is a common focus found in documents other than the ADM 2025. The *Work Plan for AAEC*, which places e-commerce as a central issue, outlines the most comprehensive actions. The ADM 2025 differs in that it fosters e-commerce, such as strengthening last-mile fulfilment cooperation and improving competitiveness in the digital economy.

Common to each framework document is the emphasis on cybersecurity. In particular, the CRISP is highlighted as a key mechanism for incident response coordination and information exchange between AMS. The ACRF and BSBR both encourage its implementation. The BSBR further emphasises the establishment of an ASEAN CERT to ensure a more secure regional cyberspace.

The development of interoperable cross-border real-time retail payment systems is another area of focus in the DIFAP, ACRF, and BSBR. The DIFAP encourages initiatives to promote interoperability amongst real-time retail payment systems by adopting international standards. Subsequently, the ACRF and BSBR have set out more advanced actions to implement interoperable cross-border real-time retail payment systems based on an ASEAN payments policy framework. The *Work Plan for AAEC* recommends actions to develop annual business surveys with questions on the safety, security, efficiency, and interoperability of cross-border e-payment systems.

The digital human resources base is another area; the DIFAP aims to prepare ASEAN readiness for industrial transformation towards Industry 4.0 by defining specific ICT digital skills requirements and road maps for MSMEs and strengthening cooperation between AMS in common target industries. The ACRF has broader actions and comprehensively encourages the use of ICT by more people – not only in the industrial sector but also by MSMEs.

Consumer protection is another area where different framework documents show various approaches. The DIFAP maintains a framework for cross-border cooperation in addressing consumer protection issues, with an emphasis on participation in, for example, the UN Intergovernmental Expert Consumer Protection and UN IGE Consumer Protection Meeting. ACRF activities related to consumer protection are closely linked to training, in particular e-learning modules on consumer protection and the application of good practices in consumer protection. The ADM 2025 promotes consumer protection and rights regarding e-commerce, and the *Work Plan for AAEC* is dedicated to related legislation and regulation.

The digitisation of MSMEs in ASEAN is an area where both similarities and differences exist. The DIFAP and ACRF are developing activities related to the digitalisation of MSMEs in ASEAN; the DIFAP focusses on establishing and promoting digital service hubs to encourage MSMEs to enter the global market. The ACRF outlines actions to revitalise MSMEs for post-COVID-19. The other three documents make no direct reference to the digitisation of MSMEs.

Finally, the implementation and coordination of the DIF can be seen as a development between the framework documents. Both the DIFAP and BSBR focus on the ACCEC, but the BSBR has a more advanced perspective. This can be considered an extension of the action from the DIFAP to BSBR. The DIFAP prompted a review and revision of the role of ACCEC. Two years later, after the adoption of the BSBR, ASEAN recommended that the ACCEC be strengthened so that it can monitor, effectively coordinate, and expedite the implementation of the DIFAP, *Work Plan for AAEC*, and BSBR.

The DIFAP, ACRF, and BSBR have actions focussed on DIFAP initiatives, but the perspectives between the documents differ. The DIFAP itself recommends the development of a monitoring and reporting mechanism for implementation. The ACRF articulates a more specific action to undertake a comprehensive review of the DIF and DIFAP through the reporting of the ADII. Additionally, as a pandemic recovery measure, the BSBR recommends a review of the DIFAP, including an acceleration of its schedule.