Update of the readiness assessment for cross-border paperless trade: Lao People's Democratic Republic

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Update of the readiness assessment for cross-border paperless trade: Lao People's Democratic Republic

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This report was prepared by Mr. Aloun Phonvisay, ESCAP consultant, under the direct supervision of Mr. Tengfei Wang, Economic Affairs Officer, Trade Policy and Facilitation Section (TPFS), Trade, Investment and Innovation Division (TIID), ESCAP, and under the overall guidance of Mr. Yann Duval, Chief of TPFS, TIID, ESCAP. Mr. Eiichiro Takinami and Ms. Kirti Christine Sharma from TPFS reviewed the document. Ms. Netima Tawmuen formatted the report.

The report benefited from valuable inputs from various government agencies and private sector stakeholders through a national consultation workshop. In particular, the draft report was presented to the National Workshop on 'Advancing Cross-border Paperless Trade in Lao PDR,' held on 5 February 2026 in Vientiane for feedback. Special appreciation is extended to Ms. Kingsadone Phetdaoheuang, Director General of the Department of Foreign Trade, Ministry of Industry and Commerce (MOIC), for her leadership in organizing the consultation and for her strategic guidance during the opening session. All speakers and participants contributed to the discussion.[1]

Following the Workshop, constructive comments were received from the Ministry of Finance (MOF), the Ministry of Agriculture and Environment (MAF), and the Bank of the Lao PDR (BOL). The Ministry of Industry and Commerce (MOIC) played an important role in coordinating with relevant stakeholders, in particular, together with the international organization ESCAP, whose inputs were carefully reviewed and incorporated into the report to enhance its accuracy, practicality, and alignment with the applicable principles, regulations, and existing legislation of the Lao PDR.

[1] The meeting programme including the speakers is available from: https://www.unescap.org/events/2026/national-workshop-advancing-cross-border-paperless-trade-lao-pdr.

Executive Summary

The Lao People's Democratic Republic (Lao PDR) is currently undertaking a macro-strategic transformation, evolving from a "land-locked" to a "land-linked" nation. This transition is a central pillar of the 9th Five-Year National Socio-Economic Development Plan (NSEDP) 2021–2025, which emphasizes the effective utilization of its geographic advantages to position the country as a regional transit hub. As the nation prepares for its scheduled graduation from Least Developed Country (LDC) status in November 2026, the systematic implementation of modern trade facilitation measures has emerged as a critical driver of economic stability and long-term competitiveness.

The National Trade and Transport Facilitation Roadmap 2025–2030 explicitly calls for a 50% reduction in the time required for formalities through the elimination of unnecessary and duplicative procedures. Complementing this target, the Roadmap establishes broader performance metrics for 2030, specifically aiming for a 40% reduction in the time required to issue permits, licenses, and certificates (PLCs) and a 40% improvement in the country's Logistics Performance Index (LPI).

Such national strategies provide overarching direction for this report, which is intended to serve as a practical reference for advancing cross-border paperless trade in Lao PDR. By providing a comprehensive analysis of current systems, identifying gaps, and outlining actionable recommendations, the report aims to support the country in achieving its ambitious objectives, as outlined earlier, including its graduation from LDC status, its transition from a "land-locked" to a "land-linked" nation, and the implementation of the National Trade and Transport Facilitation Roadmap 2025–2030.

This study updates the *Readiness Assessment for Cross-Border Paperless Trade in Lao PDR,* first conducted by ESCAP in 2022. The earlier assessment served as a baseline diagnostic, identifying key legal, technical, and institutional gaps that constrained Lao PDR's ability to engage in cross-border paperless trade.

Since 2022, Lao PDR has made measurable progress in trade facilitation reform and domestic digitalization. Legislative amendments, expanded deployment of digital trade systems, and strengthened institutional coordination have materially altered the country's readiness landscape. In recognition of these developments, this updated assessment shifts the analytical focus from foundational readiness to implementation maturity and regional interoperability.

The 2025 update therefore:

- documents progress achieved since the 2022 baseline;
- reassesses remaining legal, institutional, and technical barriers through an implementation lens; and

- evaluates the strategic benefits for Lao PDR's potential accession to the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific (CPTA).

Implementation Status of Paperless and Cross-border Paperless Trade: Progress and Gaps

Lao PDR has demonstrated a strong upward trajectory in trade facilitation, achieving an overall implementation rate of 75.27% by 2025, a significant increase driven by investments in "hard" and "soft" infrastructure. Tangible operational gains have accompanied these reform efforts. The 2024 Time Release Study (TRS) indicates that the average time required for imports has fallen to 3 hours and 19 minutes, a marked improvement from the 4 hours and 51 minutes recorded in 2022, while export processing times have been streamlined to 49 minutes. However, despite these improvements in customs speed, broader logistics challenges remain, as indicated by the 2023 LPI scores, where Lao PDR still trails regional peers in infrastructure and logistics competence.

- **Successes:** Transparency measures have reached 100% implementation. Domestic paperless trade scores have accelerated to 74.07%, reflecting the launch of the National Single Window ASYCUDA+ (NSWA+).
- **Critical Weakness:** Cross-Border Paperless Trade (CBPT) remains the weakest area at 50.00%. This lag highlights that while domestic digitalization is advancing, the complex legal and technical requirements for international interoperability and mutual recognition remain unresolved.

Technical Readiness

The technical environment underpinning paperless trade in Lao PDR is characterized by the following components:

- **Infrastructure:** A national fiber optic backbone now exceeds 101,000 km, though "last-mile" connectivity at borders remains unstable.
- **System Integration:** While ASYCUDA covers 99% of international trade, the National Single Window ASYCUDA+ (NSWA+) rollout was officially completed on 22 February 2024, expanding coverage to 29 border checkpoints, three train stations, and two Special Economic Zones. However, deep integration remains limited. Currently, aside from the Ministry of Finance, which operates the core customs functionalities, only three external permit-issuing agencies—Industry and Commerce, Transport, and Health—are fully connected. A target has been set to expand this to 15 agencies covering 85% of PLCs by 2030.
- **Digital Duplication:** A lack of Business Process Re-engineering (BPR) means many agencies have simply digitized outdated manual workflows. This results

in “digital duplication,” where electronic submissions are made, but physical paper is still required for “face-vetting” and post-clearance audits.

Legal Readiness

Lao PDR is at an intermediate level of legal readiness.

- **Legislative Progress:** The Amended Law on Electronic Transactions (No. 31/NA, December 2022) establishes the core principle of functional equivalence, granting electronic documents legal standing. However, the legal framework does not yet explicitly govern Electronic Transferable Records (ETRs), such as electronic bills of lading, which constrains the full digitalization of trade finance.
- **The Functional Equivalence Gap:** A critical barrier arises from inconsistencies between high-level laws that recognize digital documents and secondary regulations or administrative instructions that continue to mandate physical paper submissions.
- **Coordination Mechanism Improvement:** The government issued the Instruction on Coordination and Reporting Mechanism No. 001/NTTFC (January 2026), which aims to enforce unified information flows between the National Trade and Transport Facilitation Committee and border agencies.
- **Pending Issues:** The framework lacks specific implementing by-laws for ETRs, does not yet recognize foreign electronic signatures, and operates without a comprehensive data privacy law.

Key Recommendations and Action Plan

To accelerate Lao PDR’s transition from domestic paperless trade toward full cross-border interoperability, the report outlines a set of prioritized recommendations.

High-priority actions include the accession to the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific (CPTA) as a matter of urgency. The report highlights that least developed countries such as Timor-Leste and Tuvalu have already acceded to the Agreement. Given Lao PDR’s substantial progress in domestic paperless trade implementation, this suggests that the country is well-positioned to accede to the treaty and to benefit from its enabling framework.

In parallel, high-priority efforts should focus on consolidating existing domestic achievements. This includes strengthening institutional coordination mechanisms and accelerating the integration of priority regulatory agencies into the National Single Window ASYCUDA+ (NSWA+). These efforts would help build on the current momentum of national paperless trade reforms.

Medium-priority actions aim to deepen interoperability and enhance operational efficiency. These include upgrading data standards, fully digitalizing the issuance of Certificates of Origin, expanding the scope of cross-border electronic document exchange, strengthening the Authorized Economic Operator (AEO) programme, rolling out joint risk management tools, expanding electronic payment systems, and piloting the use of trusted digital signatures. In addition, efforts should begin to develop a legal framework for ETRs to support digital trade finance.

Longer-term efforts should focus on establishing a broader enabling environment for cross-border paperless trade. These include adopting a comprehensive personal data protection law, concluding mutual recognition arrangements for electronic signatures, securing sustainable financing for trade-related ICT systems, building specialized technical capacity in key areas such as data harmonization and business process re-engineering, and implementing phased cross-border paperless trade pilot projects.

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Abbreviations

AAMRA	ASEAN Authorised Economic Operator Mutual Recognition Arrangement
ACDD	ASEAN Customs Declaration Document
ACTS	ASEAN Customs Transit System
AEO	Authorized Economic Operator
AI	Artificial Intelligence
ASEAN	Association of Southeast Asian Nations
ASW	ASEAN Single Window
ASYCUDA	Automated System for Customs Data
ATIGA	ASEAN Trade in Goods Agreement
BIVAC	Bureau Inspection Valuation Assessment Control
BPR	Business Process Re-engineering
CPBT	Cross-Border Paperless Trade
CPTA	Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific
DDoS	Distributed Denial of Service
EAEU	Eurasian Economic Union
e-CO	Electronic Certificate of Origin
e-Phyto	Electronic Phytosanitary
e-SPS	Electronic Sanitary and Phytosanitary
ESCAP	Economic and Social Commission for Asia and the Pacific
ETR	Electronic Transferable Records
FIPS	Federal Information Processing Standards
G-Net	Government-wide Network
HS	Harmonized System
HTTPS	Hypertext Transfer Protocol Secure
ICT	Information and Communication Technology
ISO	International Organization for Standardization
ITU-T	International Telecommunication Union - Telecommunication Standardization Sector
KYC	Know Your Customer
LANIC	Lao National Internet Center
Lao PDR	Lao People’s Democratic Republic

LaoCERT	Lao Computer Emergency Response Team
LCD	Lao Customs Department
LDC	Least Developed Country
LNSW	Lao National Single Window
MOF	Ministry of Finance
MOIC	Ministry of Industry and Commerce
MOU	Memorandum of Understanding
MPT	Ministry of Posts and Telecommunications
MRA	Mutual Recognition Agreement/Arrangement
MTC	Ministry of Technology and Communications
NSEDP	National Socio-Economic Development Plan
NSWA+	National Single Window ASYCUDA+
NTTFC	National Trade and Transport Facilitation Committee
OGA	Other Government Agencies
PKI	Public Key Infrastructure
PPP	Public-Private Partnership
PTFC	Provincial Trade Facilitation Committee
RCEP	Regional Comprehensive Economic Partnership
SLA	Service Level Agreement
SOP	Standard Operating Procedure
TFA	Trade Facilitation Agreement
TFCS	Trade Facilitation Committee Secretariat
TFIU	Trade Facilitation Implementation Unit
UN	United Nations
UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
UNNExT	United Nations Network of Experts for Paperless Trade and Transport in Asia and the Pacific
WCO	World Customs Organization
WTO	World Trade Organization

I. Introduction

The Lao People's Democratic Republic (Lao PDR) is currently undertaking a macro-strategic transformation, evolving from a "land-locked" to a "land-linked" nation. This transition is a central pillar of the 9th Five-Year National Socio-Economic Development Plan (NSEDP) 2021–2025, which emphasizes the effective utilization of geographic advantages to position the country as a regional transit hub. As the nation prepares for its scheduled graduation from Least Developed Country (LDC) status in November 2026, the systematic implementation of modern trade facilitation measures has emerged as a critical driver of economic stability and long-term competitiveness.

Guiding this transformation is the newly implemented National Trade and Transport Facilitation Roadmap (NTTFRM) 2025–2030, which establishes a vision to make trade and transport "convenient, fast, modern, transparent and safe".[2] To realize this vision, the Roadmap sets four specific, quantifiable goals to be achieved by 2030:

1. Reduce the time for issuing permits, licenses, and certificates (PLCs) for import and export by 40%.
2. Reduce clearance time at border checkpoints by 50%.
3. Improve the Logistics Performance Index (LPI) of Lao PDR by 40%.
4. Reduce unnecessary roadside checkpoints by 50% to facilitate domestic goods movement.

The transition to cross-border paperless trade could play an important role to achieve such national strategies. While Lao PDR has demonstrated a strong upward trend in trade facilitation, reaching an overall implementation rate of 75.27% by 2025, it continues to face systemic hurdles in cross-border integration. Physical infrastructure projects, most notably the China-Laos Railway, should be complemented by high-functioning digital platforms such as the National Single Window ASYCUDA+ (NSWA+) to ensure that data moves as efficiently as physical goods.

This report provides a detailed analysis of the current status, opportunities, and challenges facing Lao PDR as it advances toward paperless trade. Crucially, it utilizes the 2022 ESCAP Readiness Assessment for Cross-Border Paperless Trade in Lao PDR as its baseline study, providing a comparative framework to evaluate progress since the initial assessment. The report also evaluates the strategic benefits of Lao

[2] Lao People's Democratic Republic, Prime Minister, National Trade and Transport Facilitation Roadmap 2025–2030 (Vientiane Capital, 28 May 2025), preface, p. i. Available at: https://www.laotradeportal.gov.la/en-gb/site/display/2956.

PDR’s potential accession to the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific. It further highlights the urgency to accede to this UN treaty.

The report serves as both a diagnostic and a practical guide, evaluating Lao PDR’s current readiness to implement the cross-border paperless trade systems necessary to fully realize its “land-linked” vision.

II. Trade Facilitation and Paperless Trade Implementation in Lao PDR

This section briefly reviews the state of play of trade facilitation and paperless trade implementation based on secondary data sources, namely the World Trade Organization (WTO) Trade Facilitation Agreement Database[3] and the UN Global Survey on Digital and Sustainable Trade Facilitation.[4]

II.A. Lao PDR and WTO TFA Implementation: A Brief Review of Notifications

Lao PDR ratified the WTO Trade Facilitation Agreement (TFA) on 29 September 2015. As of early 2026, Lao PDR has achieved full compliance regarding its notification cycles, with the rate of implementation commitments on the WTO database reaching 100% (up from 88.6% in 2025). This milestone strengthens the compliance profile of Lao PDR as it prepares for LDC graduation. The implementation of these commitments is divided into three categories based on the country's capacity and need for technical assistance.

Review of Notification Categories:

- **Category A:** These provisions were implemented immediately upon the Agreement's entry into force in February 2017. Lao PDR has notified 21.0% of its total measures under this category. Notified Category A measures include Article 1.1 (Publication), Article 10.6 (Use of Customs Brokers), and Article 10.9 (Temporary Admission of Goods).
- **Category B**: These measures require a transitional period before implementation. The implementation rate for this category has seen significant recent growth. According to the WTO TFA Database, the Category B implementation rate stood at 28.6% by the end of 2024, before increasing sharply to 67.6% in January 2025 as transition periods concluded. This successful transition paved the way for Lao PDR's overall 100% implementation status in 2026.
- **Category C**: These measures require additional time and technical assistance for implementation. Lao PDR has successfully notified the remaining 11.3% of its commitments under this category for 2026. These final measures—specifically Risk Management (Article 7.4), Authorized Operators (Article 7.7),

[3] WTO Trade Facilitation Agreement Database, Lao PDR, available from: https://tfadatabase.org/members/lao-peoples-democratic-republic.
[4] UN Global Survey on Digital and Sustainable Trade Facilitation, 2025. Data available at: https://untfsurvey.org.

Formalities (Article 10.1), and Rejected Goods (Article 10.8)—are now officially reported as implemented on the WTO dashboard, although practical operationalization and deep system integration remain ongoing priorities.

Lao PDR has achieved a high level of compliance regarding transparency notification. The Lao Trade Portal (LTP) serves as the central repository for Article 1.4 requirements, providing public access to import, export, and transit procedures. As noted in the ESCAP baseline assessment (2022), although the ASYCUDA World system provided the technical capacity to support digital trade facilitation measures, the effective implementation of provisions such as Article 7.1 (Pre-arrival processing) and Article 7.4 (Risk management) remained constrained by a persistent reliance of physical documentation and the need for updated risk profiles. However, the legal framework has recently improved to address these bottlenecks. Specifically, in July 2024, the Ministry of Finance issued Notification No. 2755 (effective October 2024), making it mandatory for transport operators and freight forwarders to file advance cargo declarations electronically through the NSWA+. Nevertheless, efforts to fully operationalize pre-arrival processing are still ongoing.

In September 2024, the government requested a notification extension for the definitive implementation date of Article 7.7 (Authorized Operators) to 31 December 2025.[5] This extension was necessary to build the capacity of validators and finalize self-assessment protocols for various business sectors. Despite these delays, Lao PDR is actively participating in regional pilots, including the ASEAN Authorized Economic Operator Mutual Recognition Arrangement (AAMRA), to bolster its international standing.[6]

II.B. Benchmarking Progress: Digital and Sustainable Trade Facilitation Scores (2021–2025)

The UN Global Survey benchmarks serve as an essential metric for quantifying Lao PDR's trajectory toward paperless trade maturity.[7] Figure 1 shows how Lao PDR has been implementing trade facilitation measures compared with other countries in the region. In addition, the most recent data from the 2025 UN Global Survey on Digital and Sustainable Trade Facilitation indicates a robust upward trajectory for Lao PDR, with the country's overall trade facilitation score rising to 75.27%, a significant increase

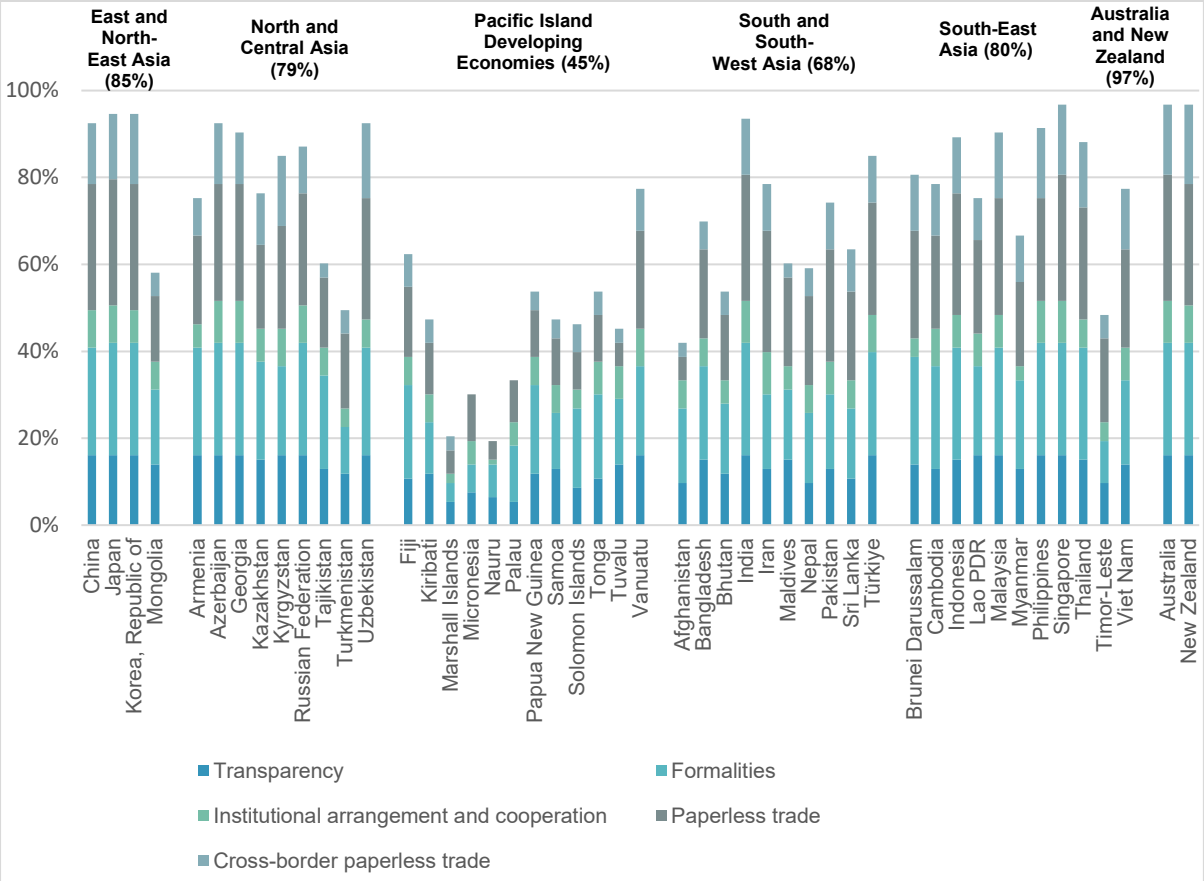
[5] Trade Facilitation Agreement Database, "Lao People's Democratic Republic: Category C Technical Assistance — Article 7.7", available at: https://tfadatabase.org/en/members/lao-peoples-democratic-republic/technical-assistance-projects/article-7-7.

[6] Patrick Errol C. Espallardo, *Session 9: Support to Mutual Recognition Arrangement (MRA) Negotiations: ASEAN AEO Mutual Recognition Arrangement (AAMRA)* (Association of Southeast Asian Nations), slide 8, available at: https://www.carecprogram.org/uploads/Session-09B_ASEAN-MRA-Negotiations.pdf.

[7] United Nations, *UN Global Survey on Digital and Sustainable Trade Facilitation*, "Trade Facilitation and Paperless Trade in Lao P.D.R.". Available at: https://www.untfsurvey.org/economy?id=LAO

from 67.74% in 2023. A breakdown of this performance reveals that while Lao PDR has achieved a perfect score of 100% in transparency measures, significant gaps remain in regional integration, with the Cross-Border Paperless Trade score standing at 50%. This disparity underscores that while domestic reforms are taking root, the technical and legal interoperability required for seamless international data exchange remains a critical work in progress.

Figure 1: Implementation of trade facilitation measures (mainly limited to WTO TF measures)



Source: derived from the survey by the United Nations (https://www.untfsurvey.org/).

Analysis of the scores between 2021 to 2025 confirms that focused government and development partner investment in specific technical areas has yielded demonstrable results, while revealing persistent structural weaknesses, particularly in cross-border cooperation (see Table 1).

Table 1: Synthesis of Lao PDR's Digital Trade Facilitation Implementation Progress (2021–2025)

Performance Area	2021 Score (Baseline)	2023 Score	2025 Score (Latest Benchmark)	Change (2021-2025)	Status of Implementation (2025)
Overall implementation of trade facilitation measures	63.44%	67.74%	75.27%	+11.83%	Strong progress; Category B rate increased to **67.6%** (Jan 2025)
Transparency	93.33%	100.0%	100.0%	+6.67%	Fully implemented
Institutional Arrangement/ Cooperation	77.78%	77.78%	77.78%	0%	Stable; governance challenges persist
Paperless Trade (Domestic)	55.56%	62.96%	74.07%	+18.51%	Accelerated modernization via NSWA+
Cross-Border Paperless Trade (CBPT)	38.89%	38.89%	50.00%	+11.11%	Remains the weakest area, despite improvement

Source: UN Global Survey on Digital and Sustainable Trade Facilitation (https://www.untfsurvey.org/economy?id=LAO).

The most significant achievement has been the acceleration in Lao PDR's domestic Paperless Trade score, moving from an equivalent of approximately 55% in core measures in 2021 to 74% in 2025. This notable improvement directly reflects the intensive efforts surrounding the launch and phased rollout of the NSWA+ system, demonstrating that high-level government commitment is successfully translating into technical deployment. In parallel, Lao PDR's implementation rate for WTO TFA commitments have rapidly improved, reaching 100% in 2026. According to the WTO TFA Database, this milestone was achieved following a significant acceleration where the Category B implementation rate rose from 28.6% at the end of 2024 to 67.6% in January 2025, alongside the successful transition of all remaining Category C (11.3%) provisions.

However, the Cross-Border Paperless Trade (CBPT) pillar, while improving, remains the least implemented area at 50.00%. This highlights that technical and legal requirements for mutual recognition, data exchange standards, and bilateral operational mechanisms are significantly more complex than purely domestic digitalization projects and require intensified engagement in regional cooperation initiatives such as the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific (CPTA).

II.C. Operational Efficiency and Logistics Performance

Tangible improvements in border efficiency have been corroborated by the 2024 Time Release Study (TRS), which tracks the actual speed of cargo clearance.[8] The study reports a significant reduction in the average time required for imports, which fell to 3 hours and 19 minutes in 2024, a marked improvement from the 4 hours and 51 minutes recorded in 2022. Improvements were also noted in export procedures, where the average time for the 'T1' phase (from goods arrival to declaration submission) was recorded at 49 minutes. These reductions suggest that the phased rollout of digital systems is beginning to alleviate physical bottlenecks at border crossings.

Despite these gains in regulatory processing, the World Bank's Logistics Performance Index (LPI) 2023 highlights that Lao PDR still faces structural logistics challenges. The assessment indicates that Lao PDR is not yet catching up to regional peers such as Thailand and Viet Nam, particularly in areas of infrastructure and logistics competence.[9] While automation is improving customs scores, broader logistics costs, and infrastructure quality remain constraints that require sustained investment to fully realize the national vision of becoming a regional transit hub.

[8] Secretariat of the National Trade and Transport Facilitation Committee, *Final Report on Time Release Study 2024: Lao PDR.* Available at: https://www.laotradeportal.gov.la/upload/files/pub_20250829024551.pdf.
[9] World Bank (2026), *Challenges and Opportunities Paperless Trade in Lao PDR*. Presentation at the Advancing Cross-border Paperless Trade in Lao PDR Workshop, Vientiane, 5 February.

III. Technical Readiness for Domestic and Cross-border Paperless Trade

III.A. Governance Bodies

The institutional architecture for governing paperless trade in Lao PDR is structured across policy, technical, and provincial levels to ensure a coordinated national approach. Governance is primarily led by the National Trade and Transport Facilitation Committee, which was established by Decree No. 145/PM in March 2023. This high-level body was formed by merging the previous Trade Facilitation Steering Committee and the National Transport Committee to create a more unified and harmonious coordination mechanism.

Key bodies within this framework include:

- National Trade and Transport Facilitation Committee (NTTFC): This is the highest political body responsible for trade facilitation policy. It is chaired by the Deputy Prime Minister, with the Minister of Industry and Commerce serving as the Deputy Chairman and Permanent Member.
- Trade Facilitation Committee Secretariat (TFCS): This technical-level body supports the NTTFC and is responsible for implementation and coordination among government agencies. Chaired by the Vice-Minister of Industry and Commerce, it brings together directors and deputy directors from ministries sharing trade facilitation competencies, such as Finance, Health, and Agriculture.
- Trade Facilitation Implementation Unit (TFIU): Located within the TFCS structure, this unit serves as the focal point for day-to-day operations and implementation tasks.
- Provincial Trade Facilitation Committees (PTFCs): These committees ensure that national trade facilitation measures and paperless trade initiatives are executed at the local level. Each is headed by a provincial Vice-Governor and includes local directors from relevant government departments.

III.B. Level of Automation

Lao PDR is currently at an intermediate level of technical readiness for cross-border paperless trade, primarily characterized by the operation of three core digital platforms: ASYCUDA World, the Lao National Single Window (LNSW/NSWA+), and the Electronic Certificate of Origin system.

- **Customs Automation (ASYCUDA World):** This system is the most mature, covering 99% of international trade across all 29 international border crossing points. However, its utility is capped by the “face-vetting” requirement, where traders must still submit physical paper declarations and supporting documents for final validation and post-clearance audits.
- **National Single Window (NSWA+):** NSWA+, launched in February 2024, integrates the legacy single window with ASYCUDA features and enables the online submission of customs declarations, while ASYCUDA continues to serve as the core customs processing system. Moving beyond its pilot phase, the system’s coverage has expanded to include 29 border checkpoints, three train stations, and two Special Economic Zones (SEZs), establishing a robust digital foundation for trade processing across the country. While the Ministry of Finance is fundamentally integrated into the platform for customs clearances and duty collection, only three Other Government Agencies (OGAs)—Industry and Commerce, Transport, and Health—are currently integrated for issuing Permits, Licenses, and Certificates (PLCs). This means only 13.5% of total required trade permits are processed through the centralized platform. To address the current gap in agency integration, the government has set a definitive target to expand NSWA+ to 15 government agencies by 2030, covering 85% of all PLCs. The priority agencies earmarked for this expansion include those regulating agriculture (plant products), livestock and fishery, mines, CITES-related, and radio frequency equipment.[10]
    a) **Smart Customs and E-Data:** Complementing the Single Window, the ‘Smart Customs’ initiative has introduced specific automated subsystems to enhance border security and operational efficiency. The E-Data system, which links manifest data with x-ray inspections, is now operational at 8 international checkpoints, including the major Friendship Bridges (1, 2, and 4) and the Boten border crossing with China.[11]
    b) **Electronic Payment:** The modernization of payment infrastructure is being driven by the FinLink and FinPass systems, which facilitate the centralized electronic collection of fees and service charges via kiosks and mobile applications such as Lao QR. These transactions are processed through the Lao Mobile payment Switching System (LMPS) operated by the National Payment Network (LAPNet), and the Lao Payment and Settlement System (LaPASS), operated by Bank of the Lao PDR. Together, these systems ensure that all trade-related collections are settled in real-time through the national banking infrastructure. Expanding this centralized payment system to all border

[10] Soutthanilaxay, V. (2026). *Trade Facilitation Priorities in Lao PDR*. Presentation at the Advancing Cross-border Paperless Trade in Lao PDR Workshop, Vientiane, 5 February.
[11] Phouangpheth, V. (2026). *Customs Formalities and Supporting ICT system*. Presentation at the Advancing Cross-border Paperless Trade in Lao PDR Workshop, Vientiane, 5 February.

checkpoints remains a key priority over the next five years to minimize cash handling and improve revenue transparency.

- **Electronic Certificate of Origin (e-CO):** This is the only system currently supporting cross-border data exchange, specifically for the ATIGA Form D within ASEAN. However, the national issuance process remains hybrid. Although applications can be submitted online, certificates are still manually signed and stamped. The Department of Foreign Trade (DFT), Ministry of Industry and Commerce, is in the process of upgrading the e-CO system to achieve full digitalization in the near future.

Cross-Border Paperless Trade (CBPT) remains weaker for Lao PDR compared with domestic measures. At present, the e-CO system is the only national platform that supports live cross-border data exchange, specifically facilitating the ATIGA Form D with ASEAN partners via the ASEAN Single Window (ASW) since December 2019. Although the NSWA+ is technically designed to facilitate regional interoperability, full operationalization is hindered by technical gaps. The planned upgrade of the e-CO system is therefore intended to not only advance full digitalization, but also to facilitate integration with the NSWA+ and the ASW.

Progress in exchanging other high-priority documents through the ASW is varied. While a breakthrough was achieved in 2025 regarding the exchange of the ASEAN Customs Declaration Document (ACDD) with the Philippines,[12] the exchange of electronic Phytosanitary (e-Phyto) certificates remains in the planning stage. Furthermore, systematic Business Process Re-engineering (BPR) for cross-border exchange has not yet been conducted and is characterized as being in its infancy.

In the domain of international transit, Lao PDR is a participating Member State of the ASEAN Customs Transit System (ACTS), which enables a single electronic declaration across participating borders, although its volume remains modest. The China-Laos Railway has significantly enhanced Lao PDR's transit potential, utilizing dedicated data links to reduce road clearance times from more than 40 hours to just 4–5 hours.[13] However, this corridor faces operational friction due to domestic instructions that seemingly provide for duplicative customs clearance at internal railway stations. Strategically, the government is urged to accede to the CPTA Framework to provide a multilateral legal basis for mutual recognition and to expedite the Authorized Economic Operator (AEO) program as a prerequisite for concluding Mutual Recognition Agreements (MRAs) with major trading partners.

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[12] https://customs.gov.ph/boc-continues-digitalization-efforts-with-successful-exchanges-of-electronic-documents-with-asean/

[13] Lei Zhang, "China-Laos Railway: Redefining Regional Connectivity", *East Asian Policy*, vol. 17, No. 3 (September 2025), pp. 38–53, DOI: 10.1142/S1793930525000194.

Foundational Barriers to Readiness

- **The Functional Equivalence Gap:** Although high-level laws recognize digital documents as equal to paper, secondary regulations and administrative instructions continue to mandate physical submissions. For instance, despite the capabilities of ASYCUDA World, the 2017 Ministry of Finance Instruction on Electronic Customs Declaration, still mandates that electronic declarations be printed and stamped for manual "face-vetting," often halting pre-arrival processing until hard copies physically reach the border. Recent regulatory updates, such as the Ministry of Finance Notification No. 2755 (2024), which mandates electronic advance cargo declarations via NSWA+, demonstrate a positive shift toward overriding these legacy paper-based requirements, though broader alignment across all agencies is still required. Similarly, the 2016 Ministry of Industry and Commerce Decision on Certificates of Origin and the 2012 Instructions for Advance Rulings require the physical presentation of supporting documents and the issuance of final results on signed and stamped paper. Furthermore, even with the rollout of NSWA+, relevant border agencies often still demand physical permits and rely on scanned images rather than data-rich formats, necessitating the physical storage of documents for post-clearance audits. This regulatory friction is compounded by gaps in electronic payment integration, including additional charges for digital transfers and requirements to present physical evidence of payment in hard copy for reconciliation. This legal-operational conflict forces the private sector into a costly and redundant parallel paper-based system.
- **Authentication Limitations:** Trade systems rely on basic user ID and password authentication rather than secure Public Key Infrastructure (PKI) digital signatures. The reliance on basic user ID and password authentication in trade systems like ASYCUDA and NSWA+ creates security vulnerabilities for high-value transactions and prevents the realization of functional equivalence. Because these methods lack the robust integrity and non-repudiation features provided by PKI, authorities continue to mandate the persistence of physical paperwork for "face-vetting" and post-clearance audits.
- **Business Process Re-engineering:** government agencies may consider undertaking Business Process Analysis and BPR prior to automation. In this connection, the methodology prepared by United Nations Network of Experts for Paperless Trade and Transport in Asia and the Pacific (UNNExT) could serve as a useful tool.[14]

[14] United Nations Network of Experts for Paperless Trade and Transport in Asia and the Pacific (UNNExT), "Business Process Analysis To Simplify Trade Procedures: Case Studies", available at: https://unnext.unescap.org/tools/business-process-analysis-simplify-trade-procedures.

In the domain of digital transparency, the Lao PDR Trade Portal (LTP) was upgraded to Version 3 in 2024, enhancing its utility as a central repository for trade regulations. To improve accessibility for the private sector, a mobile application titled 'Trade Information Portal – TIP' has been launched, allowing traders to access legal information and procedures on the go. Future enhancements scheduled for 2026 include features that will allow the public to access draft legal documents and a dedicated mechanism for businesses to raise operational concerns directly through the platform. The DFT serves as the focal point for coordinating with relevant stakeholders to ensure the timely updating of trade-related information.[15]

III.C. ICT Infrastructure

Lao PDR has made significant investments in developing a robust digital backbone to support the transition to a "land-linked" economy. The national fiber optic transmission network has expanded to a total length of 101,360 km, providing coverage to all provinces and districts. This physical infrastructure is complemented by high mobile connectivity, with mobile signals reaching 97% of villages and 3G mobile broadband available in 85% of the country. While 4G coverage has reached 76%, the rollout of 5G technology is currently in its early stages, covering approximately 17% of the country with a focus on major urban centers and SEZs.

The technical environment is underpinned by the Lao National Internet Center (LANIC), which serves as the domestic gateway for internet traffic. To facilitate modern public administration and paperless trade, the government has introduced a Cloud system capable of supporting up to 1,400 servers. The establishment of a National Data Exchange Center and a government-wide network (G-Net) under the 9th Five-Year National Socio-Economic Development Plan aims to ensure secure information sharing between various state organizations.

To ensure the integrity of digital trade, Lao PDR has implemented several security and monitoring mechanisms:

- **Cybersecurity:** The Lao Computer Emergency Response Team (LaoCERT) coordinates national cyber safety and incident handling. The National Internet Center has also improved its security systems in accordance with the ISO27001 standard.
- **Authentication:** While core systems like ASYCUDA and NSWA+ currently rely on basic user IDs and passwords, a PKI is defined in law. Secure digital signatures are already utilized internally by the Ministry of Technology and Communications, the Ministry of Foreign Affairs, and the Bank of Lao PDR.

[15] Soutthanilaxay, V. (2026). *Trade Facilitation Priorities in Lao PDR*. Presentation at the Advancing Cross-border Paperless Trade in Lao PDR Workshop, Vientiane, 5 February.

- **Monitoring:** The Tsubame Sensor packet traffic monitoring system is in place to detect and mitigate potential cyber threats.

III.D. Security

The security framework for Lao PDR's paperless trade system is characterized by a combination of established coordination bodies, standard communication protocols, and an ongoing transition toward more advanced authentication methods. While foundational protections are in place, the system remains in a transitional phase regarding the full operationalization of secure digital identities.

LaoCERT serves as the national coordination center for cybersecurity, handling incident response and awareness-raising for both public and private sectors. To detect and mitigate potential cyber threats, the government has installed the Tsubame Sensor packet traffic monitoring system. Additionally, LANIC has improved its security systems in alignment with the ISO27001 standard.

Lao PDR utilizes several technical layers to ensure the integrity of trade data:

- **Encryption and Protocols:** The NSWA+ platform employs HTTPS for data in transit, while the ASYCUDA World system utilizes asymmetric data encryption.
- **Infrastructure Security:** NSWA+ maintains firewalls and specific protection setups against DDoS attacks.
- **Secure Networks:** Private fiber-optic networks are prioritized for the exchange of information and payment data where possible to enhance confidentiality.

A critical area of ongoing development is the method used to verify the identity of system users:

- **Current Methods:** Core trade systems like ASYCUDA and NSWA+ still rely primarily on basic authentication, including user IDs, passwords, and captchas.
- **PKI:** Although a legal framework for PKI and digital signatures is established by law, it is not yet fully operationalized for external trade-related activities.
- **Institutional Adoption:** Secure Digital Signatures have been effectively implemented within key government bodies, including the Ministry of Technology and Communication, the Ministry of Foreign Affairs, and the Bank of the Lao PDR (BOL). This readiness has extended to major private enterprises, providing a robust operational foundation for expanding digital authentication toward cross-border paperless trade and secure financial transactions.

- **Identity Innovations:** To provide more accessible identity verification, the government is promoting a “Know Your Customer” (KYC) scheme based on mobile phone number registration.

III.E. Business Process Re-Engineering

Government agencies are successfully adopting phased and experimental approaches to modernization by initially implementing paperless systems within existing operational frameworks to ensure stability and continuity. This introductory stage enables departments to build essential familiarity with advanced digital platforms while also establishing a firm foundation for the gradual transition toward comprehensive process optimization in the near future. Such a strategy is thoughtfully aligned with the 9th Five-Year Plan’s focus on strengthening data center infrastructure and securing government-wide networks as prerequisites for digital transformation. By prioritizing operational continuity, the Government is establishing the conditions necessary for subsequent technical refinement and the realization of a truly “land-linked” digital economy. Furthermore, while high-level legislation such as the Customs Law No. 81/NA (2020)[16] recognizes electronic documents as legally equivalent to paper, many secondary regulations and administrative instructions continue to mandate physical submissions, acting as an impediment to change.

Despite these hurdles, there have been successful efforts at streamlining. The LTP empowered various ministries to reconcile conflicting regulations before they could be published online, effectively disrupting the status quo. Additionally, the Lao PDR-World Bank Competitiveness and Trade Project (concluded in 2024) helped reduce average trade times by 65% by removing entry barriers and automating processes.[17]

The Lao Customs Department (LCD) has been applying risk management principles in the examination of goods at border checkpoints through the use of the selectivity module in ASYCUDA. To extend risk management to other border agencies, the LCD signed a Memorandum of Understanding (MOU) with relevant agencies, including the Food and Drug Department, the Agriculture Department, and the Livestock and Forestry Department. A Dashboard and Alert System was also developed and integrated with ASYCUDA’s selectivity module to support joint risk management operations. Pilot testing was launched in February 2024 at the Thanaleng Dry Port; however, the system has not yet transitioned into full live operations. According to the pilot assessment, some technical issues still need to be addressed. At the same time, while the systems have been upgraded and further developed, the capacity and technical skills of officers involved in risk management also need to be strengthened

[16] Lao People’s Democratic Republic, National Assembly, *Law on Customs (Amended)*, No. 81/NA (Vientiane Capital, 29 June 2020), available at: https://www.laotradeportal.gov.la/upload/files/Legal_1634200031.pdf.
[17] IEG Review Team. Lao People's Democratic Republic - Lao PDR Competitiveness Trade Project (English). Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/099011626165017142.

to ensure the effective application of risk management principles and reduce the frequency of physical inspections at border checkpoints.

The National Trade and Transport Facilitation Roadmap 2025–2030 explicitly calls for a 50% reduction in the time required for formalities through the elimination of unnecessary and duplicative procedures.[18] High-priority recommendations[19] suggest that all future ICT upgrades and agency integrations into the NSWA+ must be contingent upon mandatory, stringent BPR assessments to ensure that workflows are fully optimized rather than merely digitized.

III.F. Data Harmonization and Standardization

Data harmonization and standardization in Lao PDR remain at a foundational stage, primarily focused on alignment within the customs and single window environments. While high-level frameworks exist,[20] broad adoption across all government agencies remain a significant challenge for the national paperless trade ecosystem.

The technical architecture for data standardization is anchored by the Lao Customs Department (LCD) and the Lao National Single Window (LNSW/NSWA+), both of which currently utilize the World Customs Organization (WCO) Data Model version 3.7. This model provides a standardized format for essential trade data elements, such as the consignor, consignee, transport type, and HS codes. Additionally, the legal framework for these standards is supported by the Decision on Technical Standards for E-government Systems Integration No. 531/MPT (2021), which defines national requirements for interconnection, data exchange, and storage.[21]

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[18] Goal 2 explicitly sets a target to reduce the time for clearance of import, export, and transit goods at checkpoints by 50%, aimed at bringing the 2024 average of 3 hours 19 minutes down to 1 hour 39 minutes by 2030.

[19] See UNESCAP, *Readiness Assessment for Cross-Border Paperless Trade: Lao People's Democratic Republic*, Policy Brief (Bangkok, 20 April 2022). pp. 27-32. Available at: https://www.unescap.org/kp/2022/readiness-assessment-cross-border-paperless-trade-lao-peoples-democratic-republic.

[20] These include the 20-Year and 10-Year National Digital Economy plans (2021–2040/2030), which mandate comprehensive online government management; the National Trade and Transport Facilitation Roadmap 2025–2030, which targets a 50% reduction in border formalities; and foundational Development Plans such as the 9th NSEDP and the Ministry of Finance's digitalization strategy. Legislative readiness is anchored by Core Digital Statutes, specifically the Amended Law on Electronic Transactions (2023) and the Law on Electronic Signatures (2018), which establish the principle of functional equivalence for digital documents. Technical Standards, including Decision No. 531/MPT (2021), define the national requirements for secure data exchange and system interconnection across all state organizations.

[21] The Decision serves as the primary technical mandate for ensuring interoperability across all state organizations. It categorizes e-government requirements into four distinct pillars: Interconnection Standards, Data Exchange Standards, Storage and Presentation Standards, and Security Standards. Specifically, it mandates the use of open standards and protocols to prevent system fragmentation,

Despite these efforts, data harmonization is characterized as “partially implemented” at the national level for several reasons:

- **Minimal Agency Coverage:** Harmonization is largely confined to the LCD and the LNSW operator, BIVAC; most OGAs have not yet adopted standardized data models, leading to fragmented information silos.[22]
- **Lack of Rationalization:** While data is being standardized into electronic formats, systematic data rationalization—the process of simplifying and eliminating redundant data requirements—has not yet been undertaken.
- **Awareness Deficit:** Stakeholders across both the public and private sectors reportedly lack a deep understanding of data harmonization issues, which slows the transition to more advanced cross-border data exchange.[23]
- **Technical Obsolescence:** Current systems rely on WCO version 3.7, and there is a medium-priority recommendation[24] to upgrade to the latest version to ensure regional and international interoperability.

To overcome these bottlenecks, the National Trade and Transport Facilitation Roadmap 2025–2030 emphasize the need for a National Data Exchange Center to facilitate secure information sharing. Strategic recommendations suggest that all future ICT upgrades for trade-related agencies must include mandatory data harmonization using internationally recognized standards, such as those from UN/CEFACT and the International Standardization Organization (ISO). Fulfilling these requirements is essential for Lao PDR to move beyond domestic digitalization and achieve cross-border interoperability with its regional partners.

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such as IPv6 and TCP for network connectivity, XML and SOA for data interchange, and PDF or ODF for document storage. These standards are organized into a three-tiered hierarchy—International, National, and Association Data Standards—ensuring that domestic systems can eventually integrate with regional platforms like the ASEAN Single Window.

[22] Data harmonization is currently limited to the Lao Customs Department (LCD) and the single window operator, BIVAC. While the technical architecture for standardization is anchored by these two entities through the use of the World Customs Organization (WCO) Data Model version 3.7, this adoption has not spread to the broader trade ecosystem.

[23] Lao PDR faces a significant broad knowledge gap in data harmonization across both public and private sectors, which keeps digital standardization only “partially implemented”. This deficit in expertise creates a major obstacle to advanced exchange, directly hindering the transition toward automated cross-border data flows because participants remain unfamiliar with international interoperability protocols. The knowledge gap is particularly pronounced within the public sector, where personnel and customs officers struggle with the acceptance of complex paperless trade mechanisms. Consequently, there is a persistent reliance on manual concepts where agencies automate existing paper workflows “as is” rather than redesigning them—a trend driven by the fact that Business Process Re-engineering (BPR) remains in its infancy. Addressing this critical structural deficiency has become an identified training priority, with stakeholders requesting technical assistance on data simplification to support the National Trade and Transport Facilitation Roadmap 2025–2030.

[24] UNESCAP, *Readiness Assessment,* p. 30.

III.G. Capacity-Building

Lao PDR is navigating a transitional phase in which foundational computer literacy is assessed as "high" within the private trading community, yet a significant skills gap persists in specialized digital trade domains. Capacity-building efforts have primarily focused on the operational deployment of core trade systems, with ASYCUDA training over 2,000 users and the National Single Window (LNSW/NSWA+) training over 700 individuals from both the public and private sectors.[25]

Furthermore, to strengthen the Authorized Economic Operator (AEO) scheme, the Lao Customs Department (LCD) finalized a contract with the Korean AEO Association in May 2024 to deliver rigorous validation and approval training to customs officials and stakeholders.[26]

Despite these efforts, capacity in Business Process Re-engineering (BPR) remains in its "infancy," leading to a trend where agencies replicate inefficient paper-based workflows in digital formats instead of optimizing them for a digital-first environment. Similarly, data harmonization awareness is minimal; most government agencies have yet to adopt standardized data models, and stakeholders often lack a deep understanding of data harmonization issues. To address these structural deficiencies, the National Trade and Transport Facilitation Roadmap 2025-2030 mandates expanded training and capacity-building programs to ensure personnel can effectively implement legislation and address private sector issues in line with international commitments.

Future strategic initiatives include plans by the Ministry of Technology and Communications to establish a Digital Technology Talent Center, a Start-Up Center, and an Innovation Center to build national expertise in high-tech fields such as AI, Data Science, and Cybersecurity. However, institutional capacity remains challenged by a fragmented approach to training and personnel standards affected by the civil service "quota" hiring system, which can limit the influx of specialized talent. Consequently, high-priority recommendations suggest that capacity-building must become more systemized to overcome the leadership and technical vacuums currently slowing national digitalization.

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[25] UNESCAP, *Readiness Assessment,* pp. 11 and 15.
[26] The World Bank's 10th Implementation Support Mission Aide Memoire for the Lao PDR Competitiveness and Trade Project (LCTP), dated May 6–21, 2024.

IV. Legal Readiness for Cross-Border Paperless Trade: Key Findings

IV.A. Electronic Transactions and Signatures Law

The national legal framework for digital commerce is guided by the Amended Law on Electronic Transactions (No. 31/NA), which was adopted in December 2022 and promulgated in early 2023. This legislation establishes the core principle of functional equivalence, granting electronic data messages and electronic documents the same legal standing as their paper-based counterparts (Articles 9 and 20).

However, Lao PDR's current legal framework does not yet explicitly address or provide specific statutory mechanisms for Electronic Transferable Records (ETRs), such as electronic bills of lading or warehouse receipts. Because the law lacks explicit implementing provisions governing the control and transfer of ETRs, the banking and logistics sectors remain hindered from fully digitizing trade finance.

Despite this high-level legislative progress, full implementation remains unachieved in practice. The most critical barrier is a persistent "functional equivalence gap," where the intent of the updated law is systematically contradicted by secondary regulations and administrative instructions that continue to mandate the submission of physical paper copies for customs clearance, signing, and "face-vetting". Consequently, although the legal foundation for ETRs exists, its status remains theoretical due to a lack of specific implementing by-laws to govern operational mechanics such as control and liability.

Regarding digital trust services, the Law on Electronic Signatures (2018) is the primary governing statute, but its practical application in trade is negligible. Core systems such as ASYCUDA and NSWA+ continue to rely on basic user ID and password authentication rather than secure Public Key Infrastructure (PKI) digital signatures. Furthermore, the non-recognition of foreign electronic signatures remains a significant barrier to regional interoperability, underscoring the need for Mutual Recognition Agreements (MRAs) with international partners. Accession to the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific (CPTA) has been identified as a high-priority strategic recommendation to provide a multilateral legal basis for addressing these persistent implementation and recognition gaps.

IV.B. Laws Regarding Paperless Trade Systems

IV.B.1. Establishment of a Paperless Trade System

Lao PDR has consolidated its digital trade infrastructure around three core platforms: the National Single Window ASYCUDA+ (NSWA+), ASYCUDA World, and the electronic Certificate of Origin (e-CO) system. A major milestone achieved since 2022 was the February 2024 launch of NSWA+, which successfully integrated the customs functionality of ASYCUDA with the front-end of the National Single Window to provide a centralized digital hub. This system operates under a Public-Private Partnership (PPP) with BIVAC Lao and is governed by a framework of instruments including Official Agreement No. 2109/MOF (2015) and Customs Law No. 81/NA (2020). As discussed earlier in this report, while the Ministry of Finance is fundamentally integrated into the platform for customs clearances and duty collection, only three Other Government Agencies (OGAs)—Industry and Commerce, Transport, and Health—are currently integrated for issuing Permits, Licenses, and Certificates (PLCs). This means only 13.5% of total required trade permits are processed through the centralized platform.

IV.B.2. Quality of Information Exchanged with the Paperless Trade System

Substantive requirements for trade data are governed by the Decision on Technical Standards No. 531/MPT (2021), which establishes interconnection and storage standards for state agencies. However, a significant “functional equivalence gap” persists in practice; secondary regulations and instructions, such as the 2017 Ministry of Finance Instruction on Electronic Customs Declaration, still mandates the physical submission of signed and stamped paper declarations for “face-vetting”. This has resulted in a model of “digital duplication,” where electronic submissions are made, but parallel paper-based steps remain mandatory for final authentication and post-clearance audits. Similarly, the electronic Certificate of Origin system remains a hybrid process: applications can be submitted online, but the certificates are still manually signed and stamped.

The persistence of digital duplication suggests that the main barriers to paperless trade are no longer primarily technical, but legal and institutional. Despite the Electronic Transactions Law, the trading community continues to report that they are “paying twice”—incurring costs for both digital system use and manual paper processing—because secondary administrative instructions continue to mandate physical documents. To resolve this, the strategic focus must shift from procuring new IT systems to implementing legal reforms that explicitly override older paper-based

mandates, ensuring that electronic submissions are legally sufficient for customs clearance and audits.[27]

IV.B.3. Institutional Coordination and Agreements

Lao PDR does not currently employ formal Service Level Agreements (SLAs) to regulate system performance. Instead, the legal and technical terms for agency integration into the NSWA+ are established through Memorandums of Understanding (MOUs) concluded between the Lao Customs Department (LCD) and the respective line ministries. A persistent bottleneck is the inactivity of the Lao National Single Window (LNSW) Steering Committee, which has left a leadership vacuum and forced the LCD to absorb the committee's multi-stakeholder mandate on its own. To resolve this, the National Trade and Transport Facilitation Roadmap 2025–2030 identifies the reactivation of this committee and the development of a standardized MOU model as high-priority actions to streamline future agency interconnections.

To address long-standing coordination gaps, the government has recently strengthened the institutional framework by issuing the Instruction on Coordination and Reporting Mechanism No. 001/NTTFC, dated 09 January 2026. This new legal instrument is designed to formalize information flows between the National Trade and Transport Facilitation Committee (NTTFC) and relevant border agencies, ensuring that the high-level mandates for trade facilitation and paperless trade are effectively communicated to and implemented by operational units at the border. Effective dissemination of this instruction is now a critical priority to ensure that the different ministries involved operate under a unified command structure.[28]

IV.C. Cross-border aspects

Lao PDR maintains an intermediate level of legal readiness for cross-border paperless trade, having established foundational rules within its domestic law and joined various regional and international treaties, including the WTO Trade Facilitation Agreement (2015), the Revised Kyoto Convention (2016), and RCEP (2021). Since 2022, the nation has successfully continued the live exchange of the ATIGA e-Form D with ASEAN partners via the ASEAN Single Window (ASW). A major technical milestone was achieved in 2025 with the live exchange of the ASEAN Customs Declaration Document (ACDD) with all ASEAN Member States, using mapped ASYCUDA data fields to support regional interoperability.

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[27] World Bank. (2026). *Challenges and Opportunities: Paperless Trade in Lao PDR*. Presentation at the Advancing Cross-border Paperless Trade in Lao PDR Workshop, Vientiane, 5 February.
[28] Soutthanilaxay, V. (2026). *Trade Facilitation Priorities in Lao PDR*. Presentation at the Advancing Cross-border Paperless Trade in Lao PDR Workshop, Vientiane, 5 February.

Despite these advancements, significant implementation gaps remain in other critical domains:

- **Document Exchange Limitations:** The electronic exchange of high-priority documents beyond the e-Form D and ACDD, such as electronic Phytosanitary (e-Phyto) and sanitary (e-SPS) certificates, remains in the planning stage, placing Lao PDR behind regional peers such as Thailand and the Philippines.
- **Transit Friction:** While dedicated data links for the China-Laos Railway have reduced road clearance times from over 40 hours to just 4–5 hours, the corridor faces operational friction due to domestic instructions that seemingly provide for duplicative customs clearance at internal railway stations.
- **Trust and Recognition Barriers:** A critical legal hurdle is the non-recognition of foreign electronic signatures, which significantly limits mutual document recognition with international partners. Furthermore, while a readiness assessment for the CPTA Framework is complete, Lao PDR has not yet acceded to the treaty. Accession would provide a multilateral legal basis for mutual recognition.
- **Technical Standards:** Current systems rely on the WCO Data Model version 3.7, which is increasingly considered obsolescent. Upgrading to the latest version is a strategic priority for future regional interoperability.
- **Authentication Deficits:** For digital security, while the framework references international standards such as FIPS 140-2 Level 3 and ITU-T X.509 version 3, actual trade applications are limited as core systems primarily use basic user ID and password authentication.

V. Leverage Regional Efforts to Advance Cross-border Paperless Trade

Countries across the region, including Lao PDR, face similar challenges in advancing toward cross-border paperless trade. While many have made substantial progress in implementing domestic trade facilitation measures, cross-border paperless trade inherently involves at least two trading partners, making coordination among multiple stakeholders more complex.

In this context, countries in Asia and the Pacific negotiated the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific (CPTA), a multilateral treaty deposited with the Secretary General of the United Nations that entered into force in 2021.[29] The Agreement was adopted by the United Nations Economic and Social Commission for Asia and the Pacific on 19 May 2016, following negotiations among more than 25 countries between 2012 and 2016.[30] It is designed as an inclusive and enabling platform that will benefit all participating economies regardless of where they stand in terms of trade facilitation or single window/ paperless trade implementation. Achieving cross-border paperless trade in Asia and the Pacific is expected to cut trade costs of economies in the region by about 25%, greatly enhancing the trade competitiveness of collaborating countries while increasing government revenue.

The CPTA complements the WTO Agreement on Trade Facilitation (TFA) by supporting its full implementation in an electronic environment. Participation in the CPTA can assist governments in fulfilling key provisions of the TFA, including those relating to import, export, and transit formalities (Article 10), release and clearance of goods (Article 7), and border agency cooperation (Article 8).

The treaty also builds upon and supports bilateral and regional initiatives. It provides a platform for members to promote the solutions they have developed bilaterally and (sub-)regionally for adoption by other trade partners; and/or to develop better solutions they can use to implement related bilateral or (sub-)regional commitments.

CPTA contains the following key provisions:

Article 1 makes it clear that CPTA aims to promote and facilitate the development of paperless trade but does not bind the treaty parties to exchange data and documents

[29] United Nations Economic and Social Commission for Asia and the Pacific, Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific. The text of the Framework Agreement and related documents are available at: https://www.unescap.org/resources/framework-agreement-facilitation-cross-border-paperless-trade-asia-and-pacific-0.

[30] For the list of countries that have officially nominated focal points (i.e., which means they were actively involved), see: https://www.unescap.org/event-series/cross-border-paperless-trade-facilitation.

with any other party. Rather, it provides the framework that enables those exchanges among the parties. In this sense, CPTA is an enabling treaty rather than a prescriptive one.

Article 5 lists general principles that should inspire the activities of the parties to CPTA. These are: (a) functional equivalence; (b) non-discrimination of the use of electronic communications; (c) technological neutrality; (d) promotion of interoperability; (e) improved trade facilitation and regulatory compliance; (f) cooperation between the public and private sectors; and (g) improving transboundary trust environment.

Article 8, one of the most far-reaching articles in CPTA, sets the goal of achieving mutual recognition of trade-related data and documents in electronic form. Parties interested in exchanging data and documents among themselves need to agree on a substantially equivalent level of reliability for the data or documents to be exchanged. The operationalization of mutual recognition and exchange will likely require additional bilateral agreements, whose models and guidelines are being developed.

Article 12 encourages each party to make an individual action plan including its implementation timeline based on its own readiness assessment and national priorities, as well as resource availability.

One prominent feature of CPTA is the mechanism for capacity-building and technical assistance. Article 13 highlights the importance of the deployment of pilot and other projects on cross-border paperless trade. Article 14 covers technical assistance and cooperation arrangements, with special consideration for least developed and landlocked developing countries.

As of February 2026, 15 countries have ratified the treaty, including Azerbaijan, Bangladesh, China, Islamic Republic of Iran, Kyrgyzstan, Mongolia, Philippines, Republic of Korea, Russian Federation, Tajikistan, Thailand, Timor-Leste, Turkmenistan, Tuvalu and Uzbekistan. Armenia and Cambodia also signed the treaty. The number of parties to the treaty has tripled since CPTA entered into force in 2021. Some countries in the region are at a very advanced stage of accession. This rapid expansion confirms that the treaty's flexible design is well-suited to economies at varying levels of development, reinforcing that LDC status is not a barrier to accession.

Benefits of acceding to the Framework Agreement include the following:

- Accelerated progress towards a digital and paperless trade environment.
- Opportunity to integrate emerging cross-border paperless trade considerations and best practices in the development of national single window and other paperless trade systems.

- Opportunity to share its existing cross-border paperless trade experiences—such as its successful live exchange of the ATIGA e-Form D and the ASEAN Customs Declaration Document (ACDD) through the ASEAN Single Window—with other key trade partners in the broader Asia-Pacific region, promoting further harmonization of trade facilitation measures.
- Reduction in overall investment costs and maximization of return from investments in paperless trade systems.
- Increased opportunities for capacity building through trainings, workshops, and knowledge-sharing platforms.
- Easier access to information, knowledge, and resources to achieve full digital implementation of measures included in the TFA.
- Compliance with commitments the party may have made through bilateral and plurilateral trade agreements to collaborate on exchanging electronic data and documents.
- Ready access to potential counterpart countries interested in negotiating and achieving cross border electronic data exchange.
- Direct participation in the development of pragmatic solutions for the cross-border exchange of trade documents.

Consequently, accession to the CPTA is identified not merely as a legal obligation, but as a ‘High Priority’ strategic accelerator essential for the 2026 LDC graduation and the national vision of transforming from a “land-locked” to a “land-linked” economy. Rather than imposing an additional burden, membership offers a streamlined mechanism to implement the National Trade and Transport Facilitation Roadmap 2025–2030, particularly for achieving the targeted reductions in formality times through the mutual recognition of trade data.

VI. Recommendations for Moving Towards Cross-border Paperless Trade

Based on the findings in sections III and IV, this section outlines a series of technical and legal recommendations to accelerate Lao PDR's progress toward cross-border paperless trade, as summarized in table.

High-priority actions include the accession to the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific (CPTA) as a matter of urgency. The report highlights that least developed countries such as Timor-Leste and Tuvalu have already acceded to the Agreement. Given Lao PDR's substantial progress in domestic paperless trade implementation, this suggests that the country is well positioned to accede to the treaty and to benefit from its enabling framework.

In parallel, high-priority efforts should focus on consolidating existing domestic achievements. This includes strengthening institutional coordination mechanisms and accelerating the integration of priority regulatory agencies into the National Single Window ASYCUDA+ (NSWA+), thereby building on the current momentum of national paperless trade reforms.

Medium-priority actions aim to deepen interoperability and enhance operational efficiency. These include upgrading data standards, fully digitalizing the issuance of Certificates of Origin, expanding the scope of cross-border electronic document exchange, strengthening the Authorized Economic Operator (AEO) programme, rolling out joint risk management tools, expanding electronic payment systems, and piloting the use of trusted digital signatures. In addition, efforts should begin to develop a legal framework for Electronic Transferable Records (ETRs) to support digital trade finance.

Longer-term efforts should focus on establishing the broader enabling environment for cross-border paperless trade. These include adopting a comprehensive personal data protection law, concluding mutual recognition arrangements for electronic signatures, securing sustainable financing for trade-related ICT systems, building specialized technical capacity in key areas such as data harmonization and business process re-engineering, and implementing phased cross-border paperless trade pilot projects.

Table 2: Summary of key recommendations to advance paperless trade

Priority Level	Strategic Objective	Key Actions
High Priority	Build upon the existing work and momentum	- Accede to CPTA as a matter of urgency - Strengthen institutional coordination mechanisms - Accelerate integration of priority agencies into NSWA+
Medium Priority	Deepen interoperability and improve efficiency	- Upgrade data standards (e.g. WCO Data Model) - Fully digitalize Certificates of Origin - Expand cross-border e-document exchange - Strengthen AEO programme - Roll out joint risk management systems - Expand e-payment systems - Pilot trusted digital signatures - Develop legal framework for ETRs
Longer-Term Efforts	Build a trusted and sustainable digital trade ecosystem	- Adopt personal data protection law - Conclude MRAs for electronic signatures - Establish sustainable ICT financing - Build specialized technical capacity (BPR, data harmonization) - Launch cross-border paperless trade pilot projects

Source: prepared by the authors of the report.

VI.A. Recommendations Emerging from the Technical Readiness Assessment

Institutional and Governance Bodies

To achieve the targets set in the National Digital Economy Development Strategy 2021–2030, the Government may build upon the existing momentum in institutional coordination. In this regard, the Ministry of Technology and Communications (MTC) and private sector representatives (LNCCI) are already members of the National Trade and Transport Facilitation Committee (NTTFC). Moving forward, efforts should focus on strengthening coordination between existing mechanisms, for example by enhancing collaboration between the NTTFC and the National Committee on Digital Transformation on cross-border paperless trade initiatives.

Level of Automation and ICT Infrastructure

Authorities should prioritize the ICT enablement of regulatory agencies, as many departments intended for Single Window connection remain entirely paper-based. This alignment supports the National Digital Economy Development Plan (Work Plan 2) to expand digital technology infrastructure. Furthermore, Lao PDR should develop a strategic plan to secure a dedicated national budget for trade-related ICT systems to reduce unsustainable reliance on project-based donor funding. For the sake of predictability, a clear timeline for connecting border posts to the NSWA+ should be established, in line with Roadmap Output 6 (Utilizing Modern Systems). To sustain the momentum of digitalization, the government has established concrete targets for the next five years. A primary objective is to expand the National Single Window ASYCUDA+ (NSWA+) to include 15 additional government agencies, thereby covering 85% of all Permits, Licenses, and Certificates (PLCs) by 2030. Simultaneously, financial infrastructure must be modernized by rolling out the FinPass centralized payment system to all border checkpoints to ensure revenue transparency and streamline fee collection. To support these initiatives, it is recommended to establish a mechanism to centralize the development of ICT systems, preventing fragmentation across different ministries.

Business Process Re-engineering (BPR) and Data Standards

Lao PDR should encourage Business Process Re-engineering (BPR) assessments during all future system integrations to ensure that workflows are optimized for a “digital-first” environment rather than merely duplicating manual procedures. This is critical for achieving the Roadmap target of a 50% reduction in formality time. Additionally, upgrading the World Customs Organization (WCO) Data Model from version 3.7 to the latest version is a priority for ensuring regional interoperability with ASEAN partners. Operational efficiency at the border requires the standardization of procedures to eliminate discretionary delays. It is recommended to develop and enforce Standard Operating Procedures (SOPs) to ensure uniformity across all border checkpoints. Furthermore, authorities should prioritize the rollout of the Dashboard and Alert System for joint risk management, aiming to significantly increase the percentage of consignments released through the Green Channel while strengthening the Authorized Economic Operator (AEO) program.

Facilitation of Cross-Border Data Exchange

Lao PDR should enable domestic and cross-border exchange capabilities simultaneously when upgrading automation systems to improve regional readiness without duplicating efforts. Following Roadmap Output 10, the government should expedite the AEO program to establish the trust necessary for concluding Mutual Recognition Agreements (MRAs). Finally, to maximize the Lao-China Railway

infrastructure, authorities must avoid duplicative customs clearance procedures at internal stations by implementing unified transit disciplines.

VI.B. Recommendations Emerging from the Legal Readiness Assessment

Electronic Transactions and Signatures Law

The government should devote attention to resolving the "functional equivalence gap" by amending secondary legislation—such as the 2017 Ministry of Finance (MOF) Instructions and 2016 Ministry of Industry and Commerce (MOIC) Decisions—that continues to mandate physical paper submissions for clearances and e-CO issuance. This alignment is a prerequisite for achieving the Roadmap Strategic Measure. For instance, the Department of Foreign Trade (DFT) under MOIC, as the agency responsible for issuing Certificates of Origin and for administering the 2016 MOIC Decision on Certificates of Origin, should lead the legislative review process to enable fully electronic e-CO issuance, eliminate the requirement for physical signatures and stamps on the final certificate, and align with regional ASEAN Single Window e-CO data exchange standards.

Critically, the government should also develop a legal framework for Electronic Transferable Records (ETRs), such as electronic bills of lading, to unlock digital trade finance opportunities currently excluded from the law.

In the area of regulatory reform, the proliferation of Non-Tariff Measures (NTMs) requires a systematic review mechanism. The government should establish a formal framework for conducting both ex-ante and ex-post impact assessments, targeting the review of at least 50% of existing NTMs to eliminate barriers that lack scientific or economic justification. This must be accompanied by a commitment to publicize all NTMs widely to ensure predictability for the private sector. Given its central mandate over trade policy and its administration of the Lao Trade Portal, the DFT is well positioned to coordinate with relevant government agencies to ensure that all measures are systematically published online for public access.

Furthermore, regulatory reforms should also ensure that digital trade systems are aligned with compliance requirements under relevant sectoral laws and regulations to prevent illegal trade and support sustainable development.

Digital Trust and Data Privacy

To facilitate regional interoperability under RCEP and the ASEAN E-commerce Agreement, Lao PDR should adopt a dedicated privacy law focused on the protection of individual personal data. Additionally, the government should expedite the conclusion of MRAs for electronic signatures to overcome the non-recognition of

foreign digital IDs, which currently constrains the mutual recognition of electronic documents. This supports the Digital Economy Strategy's focus on security (Strategy 6) and provides a more accessible identity infrastructure via the national "Know Your Customer" (KYC) scheme.

Paperless Trade and Single Window Laws

To streamline the integration of regulatory bodies into the NSWA+, the government should develop a standardized model MOU that can be customized for each agency interconnection, reducing administrative delays. This supports Roadmap Output 7 (Improving Organizational Structure and SOPs). Authorities should also upgrade user authentication methods within paperless systems, moving from basic ID/password logins to certified digital signatures to ensure system integrity and build the high-trust environment required for cross-border exchange.

Other Considerations

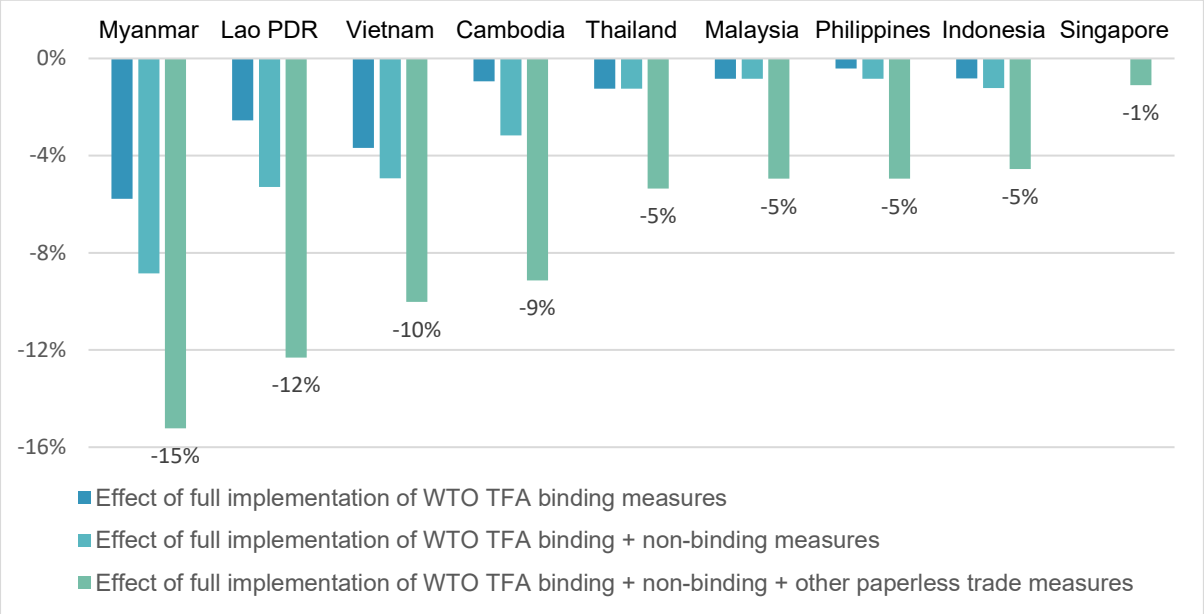
Laws could be adjusted to allow electronic payments for all trade purposes, specifically broadening the Smart Tax system to cover all Single Window fees without discriminatory charges. This fulfills the requirements of WTO TFA Article 7.2 and Roadmap Strategic Measure 8 (Study of Fees and Charges). Finally, the government should establish clear criteria for liability and exemptions for the Single Window operator to protect traders from economic loss due to system errors, ensuring a secure and predictable legal environment for all stakeholders.

VI.C. Cross-Cutting Recommendations

Acceding to the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific (CPTA) is identified as a high-priority strategic action that will not be an additional burden, but rather a strategic accelerator for Lao PDR's national development goals. Joining the CPTA directly supports the 9th NSEDP (Outcome 5) by providing the formal multilateral framework required to transform from a "land-locked" to a "land-linked" economy.

A study by the United Nations reveals that full implementation of the three different sets of trade facilitation measures across all Member States results in trade cost reductions for every economy in the region. Predictably, the greatest trade cost benefits emerge when 'cross-border paperless trade' measures are fully realized. Full implementation of binding and non-binding WTO TFA provisions, together with additional paperless trade measures, is projected to reduce the trade costs of Lao PDR by 12%, as shown in Figure 2. Nevertheless, unlocking these substantial cost reductions demands enhanced cooperation among member countries to establish interoperable paperless trade systems, as outlined in the CPTA.

Figure 2: Impact of trade facilitation implementation on trade costs of ASEAN economies



Source: Digital and sustainable trade facilitation in the Association of Southeast Asian Nations (ASEAN) 2025, https://www.unescap.org/kp/2025/digital-and-sustainable-trade-facilitation-association-southeast-asian-nations-asean-2025?ref=untfsurvey.org.

Lao PDR is fully ready to accede to CPTA. The accession of least developed countries such as Timor Leste and Tuvalu demonstrates the inclusive nature of CPTA. Indeed, almost all provisions of CPTA are “best endeavor” in nature. A party may choose to join any projects or activities according to its readiness and willingness.

From an institutional perspective, Article 6.3 encourages each party to establish a national committee, comprising relevant representatives of government and private sector parties, in accordance with their domestic environment. It also points out that the Parties may alternatively rely on a similar body already functioning domestically in lieu of establishing a separate committee and may designate that body, or an appropriate organizational unit or working group within it, as the national committee for the purpose of the present Framework Agreement. In this connection, the Trade and Transport Facilitation Committee in Lao PDR may designate a sub-committee to work on issues related to CPTA once Lao PDR becomes a party.

There is also an urgency for Lao PDR to join CPTA. Implementation of CPTA has gained momentum. During the most recent meetings of the Standing Committee and the Paperless Trade Council, the Parties adopted the Guides on origin certification, electronic phytosanitary certificates, and e-invoicing, and identified common international standards for potential adoption. These initiatives align closely with Lao PDR’s ongoing efforts to expand the exchange of certificates of origin and strengthen technical standards. Participation would also help ensure that domestic reforms are undertaken with the support from development partners and other CPTA Parties.

Finally, accession to the CPTA should be viewed as a strategic accelerator for implementing the National Trade and Transport Facilitation Roadmap 2025–2030, specifically to achieve the goal of reducing clearance times by 50%. Rather than being an additional administrative burden, CPTA membership provides the necessary multilateral legal basis to operationalize the “land-linked” vision, allowing Lao PDR to leverage regional standards for mutual recognition without negotiating piecemeal bilateral agreements.