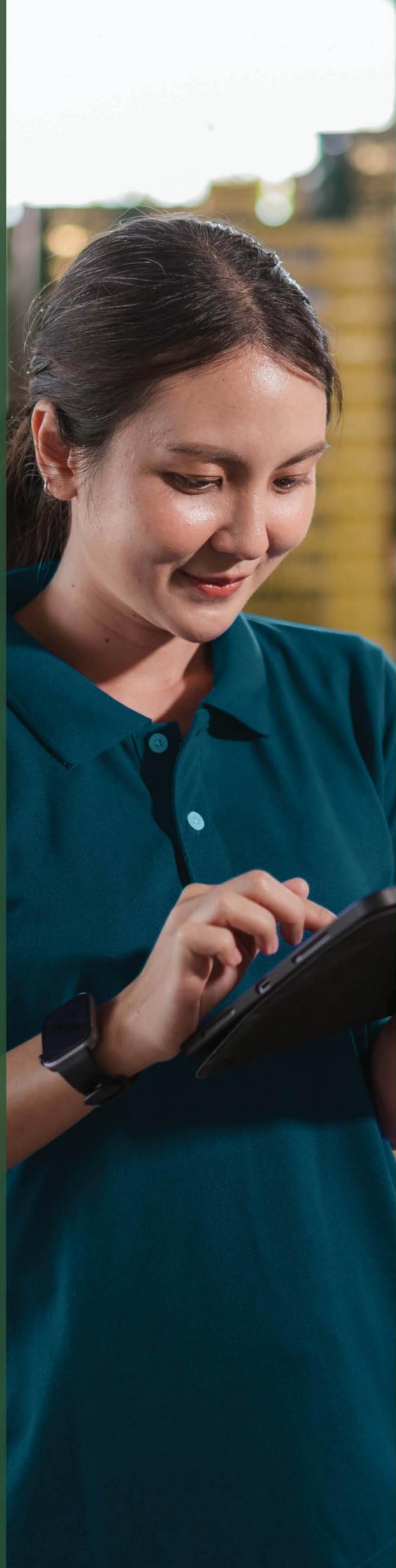


# Towards Greater Efficiency in Customs Clearance through Enhanced Time Release Study Practices

Trade Clearance  
Improvement Handbook

February 2026



# Table of Contents

|                                                                                         |           |
|-----------------------------------------------------------------------------------------|-----------|
| <b>1. Introduction and Context</b>                                                      | <b>1</b>  |
| 1.1. Background and Context                                                             | 1         |
| 1.2. Developmental Activities                                                           | 2         |
| <b>2. Current Landscape and Key Challenges</b>                                          | <b>4</b>  |
| 2.1. Overview of the Landscape of Trade Clearance and Time Release Study (TRS) in ASEAN | 4         |
| 2.2. Use of TRS Across ASEAN Member States                                              | 4         |
| 2.3. International Experience: Lessons from New Zealand and Australia                   | 7         |
| 2.4. Challenges and Pain Points (Public & Private Sectors' Perspectives)                | 7         |
| 2.4.1. Public Sector Pain Points                                                        | 7         |
| 2.4.2. Private Sector Pain Points                                                       | 8         |
| 2.4.3. Summary of Cross-Sector Challenges                                               | 10        |
| 2.5. Emerging Themes and Performance Patterns Across ASEAN                              | 10        |
| 2.5.1. Permit Processing and Upstream Documentation                                     | 10        |
| 2.5.2. Inspection-Related Delays                                                        | 10        |
| 2.5.3. Fragmented Data and System Interoperability                                      | 10        |
| 2.5.4. Post-Clearance and Port Operational Challenges                                   | 10        |
| 2.5.5. Private-Sector Behaviour                                                         | 10        |
| <b>3. Best Practices Guidance in Trade Clearance</b>                                    | <b>11</b> |
| 3.1. Best Practices from ASEAN and Regional Case Studies                                | 11        |
| 3.1.1. Import Lodgement and Documentary Assessment                                      | 11        |
| 3.1.2. Inspection and examination procedures                                            | 12        |
| 3.1.3. Release processes                                                                | 13        |
| 3.1.4. Data collection: manual, automated, hybrid (examples included)                   | 13        |
| 3.2. The WCO Time Release Study (TRS) as a Foundation                                   | 16        |
| 3.2.1. Institutionalisation and Frequency of TRS                                        | 17        |
| 3.3. Advance Cargo Information and Pre-Arrival Processing                               | 17        |
| 3.4. Risk-Based Selectivity and Post-Clearance Audit                                    | 17        |
| 3.5. Automation, Single Window Systems, and Data Quality                                | 17        |
| 3.6. Port and Terminal Operations                                                       | 18        |
| 3.7. Coordinated Border Management and Multi-Agency Cooperation                         | 18        |
| 3.8. Data Integrity, Documentation Standards, and Capacity Building                     | 19        |
| <b>4. Improvement Strategies and Practical Measures</b>                                 | <b>20</b> |
| 4.1. Strengthening Import Lodgement and Documentary Assessment                          | 20        |
| 4.2. Improving Inspection and Examination Procedures                                    | 21        |
| 4.3. Accelerating the Release Process                                                   | 21        |
| 4.4. Strengthening Inter-Agency Coordination and Governance                             | 22        |
| 4.5. Engaging and Supporting the Private Sector                                         | 23        |
| 4.6. Digitalisation and Data Integration                                                | 23        |
| 4.7. Business Process Simplification and Regulatory Measures                            | 23        |
| 4.8. Coordinated Border Management and Stakeholder Collaboration                        | 24        |
| 4.9. Logistics, Gate and Payment Infrastructure                                         | 24        |

|                                                                                             |           |
|---------------------------------------------------------------------------------------------|-----------|
| 4.10. Using TRS as a Continuous Improvement Tool .....                                      | 25        |
| <b>5. Stakeholder Roles and Inter-agency Coordination .....</b>                             | <b>26</b> |
| 5.1. Key stakeholders and roles .....                                                       | 26        |
| 5.1.1. Public Sector .....                                                                  | 26        |
| 5.1.2. Private sector .....                                                                 | 27        |
| 5.2. Inter-agency and Public-Private Coordination .....                                     | 28        |
| 5.2.1. Legal and institutional enablers .....                                               | 29        |
| 5.2.2. Digital enablers for coordination .....                                              | 29        |
| <b>6. Gender Equality, Disability and Social Inclusion (GEDSI) in Trade Clearance .....</b> | <b>31</b> |
| 6.1. Incorporating GEDSI Principles in Trade Clearance .....                                | 31        |
| 6.2. GEDSI Dimensions in Observed Challenges .....                                          | 32        |
| 6.2.1. Uneven Participation and Information Access .....                                    | 32        |
| 6.2.2. Physical and Procedural Accessibility Constraints .....                              | 32        |
| 6.2.3. Behavioural and Operational Patterns Influencing Clearance Outcomes .....            | 32        |
| 6.2.4. Institutional Gaps in Mainstreaming GEDSI in Customs and CBM Practices .....         | 33        |
| 6.3. GEDSI Considerations Across Key Stages of Trade Clearance .....                        | 33        |
| 6.4. Private Sector Observations: GEDSI-Linked Challenges .....                             | 34        |
| 6.5. Approaches for Greater Inclusiveness .....                                             | 34        |
| 6.5.1. Integrating Structured Assessment Through the WCO GEOAT .....                        | 35        |
| 6.5.2. Strengthening GEDSI-Sensitive TRS Methodology .....                                  | 35        |
| 6.5.3. Advancing Digital Accessibility and Inclusive System Design .....                    | 35        |
| 6.5.4. Broadening Stakeholder Engagement and Inclusive Participation .....                  | 35        |
| 6.5.5. Institutional Mainstreaming of GEDSI Across Customs and OGAs .....                   | 36        |
| 6.5.6. Enhancing Inter-Agency Coordination for Inclusive Service Delivery .....             | 36        |
| 6.5.7. Continuous Monitoring and Impact Evaluation .....                                    | 36        |
| 6.6. Conclusion .....                                                                       | 37        |
| <b>7. Implementation Guidelines .....</b>                                                   | <b>38</b> |
| 7.1. Objectives and scope .....                                                             | 38        |
| 7.2. Steps for adopting process improvements .....                                          | 38        |
| 7.2.1. Step 1: Establish governance and mandate .....                                       | 38        |
| 7.2.2. Step 2: Consolidate diagnostics and map current processes .....                      | 39        |
| 7.2.3. Step 3: Identify and prioritise bottlenecks .....                                    | 39        |
| 7.2.4. Step 4: Define target (“to-be”) processes .....                                      | 39        |
| 7.2.5. Step 5: Formulate SMART objectives .....                                             | 39        |
| 7.2.6. Step 6: Define actions, responsibilities and resources .....                         | 40        |
| 7.2.7. Step 7: Develop and endorse the National Trade Clearance Action Plan .....           | 41        |
| 7.2.8. Step 8: Implement, monitor and adjust .....                                          | 41        |
| 7.2.9. Step 9: Review impact and feed into the next improvement cycle .....                 | 41        |
| 7.3. Using the WCO Model National Action Plan .....                                         | 42        |
| 7.4. Suggested Action Plan .....                                                            | 46        |
| 7.4.1. Months 0-3: Governance and consolidation of diagnostics .....                        | 46        |
| 7.4.2. Months 3-6: Design of the Trade Clearance Action Plan .....                          | 46        |
| 7.4.3. Months 6-12: Implementation of quick-win measures and enabling arrangements .....    | 46        |

|                                                                                                |           |
|------------------------------------------------------------------------------------------------|-----------|
| 7.4.4. Months 12-18: Roll-out of core process and system reforms .....                         | 46        |
| 7.4.5. Months 18-24: Performance review, consolidation and preparation of the next cycle ..... | 47        |
| <b>8. Monitoring, Evaluation and Sustainability .....</b>                                      | <b>48</b> |
| 8.1. Comprehensive Monitoring and Evaluation Framework .....                                   | 48        |
| 8.2. Key Performance Indicators and Measurement Tools .....                                    | 49        |
| 8.3. Feedback Mechanisms and Learning .....                                                    | 49        |
| <b>9. References .....</b>                                                                     | <b>52</b> |

## List of Figures

|                                                                                  |    |
|----------------------------------------------------------------------------------|----|
| Figure 1 - Location of Indonesia TRS 2024 .....                                  | 5  |
| Figure 2 - Process Flow for Import and Export - Indonesia Customs TRS 2024 ..... | 5  |
| Figure 3 - Stakeholders in the New Zealand trade clearance chain .....           | 28 |
| Figure 4 - Setting SMART Objectives .....                                        | 40 |
| Figure 5 - TRS as a Continuous Improvement Cycle .....                           | 42 |
| Figure 6 - TRS Operational Model of the Guatemalan Customs Administration .....  | 47 |

## List of Tables

|                                                                     |    |
|---------------------------------------------------------------------|----|
| Table 1 - Manual data observed in AMS .....                         | 14 |
| Table 2 - Sample Model National Action Plan .....                   | 44 |
| Table 3 - Structures and Mechanisms for Feedback and Learning ..... | 50 |

## List of Abbreviations and Acronyms

| Abbreviation | Full term                                            |
|--------------|------------------------------------------------------|
| AANZFTA      | ASEAN-Australia-New Zealand Free Trade Area          |
| ACTS         | ASEAN Customs Transit System                         |
| AEC          | ASEAN Economic Community                             |
| ALFI         | Indonesian Forwarders Association                    |
| AMS          | ASEAN Member States                                  |
| API          | Application Programming Interface                    |
| ASEAN        | Association of Southeast Asian Nations               |
| ASW          | ASEAN Single Window                                  |
| BPOM         | National Agency of Drug and Food Control (Indonesia) |
| CBM          | Coordinated Border Management                        |
| CEISA        | Customs-Excise Information System and Automation     |

| <b>Abbreviation</b> | <b>Full term</b>                                                                          |
|---------------------|-------------------------------------------------------------------------------------------|
| DGCE                | Directorate General of Customs and Excise (Indonesia)                                     |
| EDI                 | Electronic Data Interchange                                                               |
| e-DO                | Electronic Delivery Order                                                                 |
| FCL                 | Full Container Load                                                                       |
| GEDSI               | Gender Equality, Disability, and Social Inclusion                                         |
| GEOAT               | Gender Equality Organisational Assessment Tool                                            |
| INSW                | Indonesia National Single Window                                                          |
| IT                  | Information Technology                                                                    |
| MRAs                | Mutual Recognition Arrangements                                                           |
| MSMEs               | Micro, Small, and Medium Enterprises                                                      |
| NII                 | Non-Intrusive Inspection                                                                  |
| NLE                 | National Logistics Ecosystem                                                              |
| NTFC                | National Trade Facilitation Committee                                                     |
| NSW                 | National Single Window                                                                    |
| OGA / OGAs          | Other Government Agency / Agencies                                                        |
| Pelindo             | Indonesian Port Corporation (PT Pelabuhan Indonesia)                                      |
| RACI                | Responsible, Accountable, Consulted, Informed                                             |
| RCEP                | Regional Comprehensive Economic Partnership                                               |
| RISP                | RCEP Implementation Support Program                                                       |
| RT4D                | Regional Trade for Development                                                            |
| SLA                 | Service-Level Agreement                                                                   |
| SMART               | Specific, Measurable, Achievable, Relevant, Time-bound                                    |
| SP2                 | Surat Perintah Pengeluaran Petikemas (Delivery Order to Container Delivery Order Release) |
| SSM                 | Single Submission Module (Licensing/Quarantine System)                                    |
| TFA                 | Trade Facilitation Agreement                                                              |
| TRS                 | Time Release Study                                                                        |
| UNCTAD              | United Nations Conference on Trade and Development                                        |
| WCO                 | World Customs Organization                                                                |
| WTO                 | World Trade Organization                                                                  |

# Acknowledgements

This Handbook was prepared as a practical reference for the Directorate General of Customs of Excise (DGCE) Indonesia, other agencies, ports and private operators. The Handbook covers the full clearance continuum (from lodgement and permits through inspection, release, post-clearance and logistics), sets out concrete good practices and measures on process improvement, risk-based control, joint inspections, port operations and behavioural change, and prioritises digital reforms such as National Single Window (NSW) / Indonesia National Single Window (INSW) and ASEAN Single Window (ASW) use, Application Programming Interfaces (API)-based data exchange, e-delivery orders and performance dashboards.

Development of the Handbook was supported by the Regional Trade for Development (RT4D) program. RT4D supports ASEAN Member States in maximising benefits from the Agreement Establishing the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) and the Regional Comprehensive Economic Partnership (RCEP).

Development of this handbook was led by Trade Facilitation Pte Ltd in collaboration with Officials of Customs Authority of ASEAN Member States, Indonesian port authority, Indonesian Logistics and Forwarders Association, Indonesian Food and Drug Administration, and Indonesia National Single Window Agency (INSW).

# 1. Introduction and Context

The Trade Clearance Improvement Handbook has been developed as a core deliverable under the project “Towards Greater Efficiency in Customs Clearance through Enhanced Time Release Study Practices,” implemented as part of the RCEP Implementation Support Program (RISP), a program under the Regional Trade for Development (RT4D) program. RT4D is an initiative supported by the Governments of Australia and New Zealand to support ASEAN Member States (AMS) in fully realising the benefits of regional trade agreements, including the Agreement Establishing the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) and the Regional Comprehensive Economic Partnership (RCEP).

Through the RISP, RT4D delivers technical assistance to national agencies in the form of knowledge products, capacity-building programs, and diagnostics aimed at strengthening institutional and operational capacity in line with regional trade facilitation priorities. It responds to the growing imperative among AMS, including Indonesia, to enhance the efficiency, transparency, and coordination of border clearance processes, in alignment with global and regional trade facilitation commitments.

This Handbook serves as a practical reference for Customs authorities, other government agencies (OGAs), port operators, and private sector stakeholders involved in the trade clearance ecosystem. It aims to guide the institutionalisation of Time Release Studies (TRS) as a performance measurement tool, promote Coordinated Border Management (CBM) as a mechanism for inter-agency collaboration, and support the digital transformation of clearance systems through the adoption of international standards and good practices. The scope of the Handbook encompasses the full trade clearance continuum - covering pre-arrival processing, permit issuance, inspection and release, as well as post-clearance activities - drawing from lessons learned across Indonesia, ASEAN, Australia, and New Zealand.

The objectives of the Handbook are as follows:

1. To enhance institutional understanding and application of TRS and CBM among border management actors.
2. To provide structured guidance on improving trade clearance efficiency, including through process redesign, digital integration, and stakeholder engagement.
3. To align these efforts with regional frameworks such as the RCEP, the ASEAN Trade Facilitation Framework, and the WTO Trade Facilitation Agreement (TFA), thereby contributing to broader regional economic integration and regulatory convergence.

## 1.1. Background and Context

Efficient trade clearance processes are essential for reducing the cost and time of cross-border trade, enhancing logistics performance, and improving the predictability and transparency of supply chains. In the context of ASEAN and the broader RCEP region, where intra-regional trade continues to expand, the ability of border authorities to process goods swiftly and with minimal administrative burden is a critical enabler of economic integration. Trade clearance functions - including documentary processing, inspection, risk assessment, release authorisation, and inter-agency coordination - directly influence clearance times and, by extension, the competitiveness of firms operating in international supply chains.

Time Release Studies (TRS) and Coordinated Border Management (CBM) are two interdependent tools recognised globally as effective mechanisms to diagnose, monitor, and improve clearance performance. TRS provides a systematic, evidence-based methodology to measure the average time taken for goods to be released at the border, identify bottlenecks, and prioritise reform actions. CBM, meanwhile, offers a governance framework for aligning the activities of Customs, OGAs, port authorities, and private sector stakeholders, enabling synchronised decision-making, joint inspections, and data-driven coordination.

In the ASEAN context, many Member States are implementing trade facilitation measures aligned with the ASEAN Economic Community Blueprint 2025 and the ASEAN Trade Facilitation Framework. These include initiatives such as the ASEAN Single Window (ASW), ASEAN Customs Transit System (ACTS), and Mutual Recognition Arrangements (MRAs). However, persistent challenges remain, including duplication of documentary requirements, siloed decision-making by different agencies, and delays due to limited adoption

of digital systems. TRS and CBM offer practical tools to address these challenges by introducing empirical performance measurement and coordinated operational practices.

Within the framework of the RCEP, these tools acquire additional importance. Article 4.17 of RCEP encourages parties to regularly measure and publish average release times, while Article 4.19 mandates coordination among border agencies. These obligations are not aspirational, instead they are binding instruments that not only require institutionalising TRS and CBM, but also to realise the full benefits of regional market access, connectivity corridors, and trade-driven development.

The latest edition of the World Customs Organization (WCO) TRS Guide Version 4 released in Oct 2025<sup>1</sup> introduces important updates that are particularly relevant to the context of Indonesia and ASEAN. First, the guide strengthens the linkage between TRS and CBM, advocating for multi-agency TRS implementation and the establishment of joint TRS Working Groups. This reflects the increasing complexity of clearance ecosystems, where the performance of Customs alone cannot explain release times - rather, the actions of Quarantine, Food Safety, Transport, and Port authorities are equally consequential.

This latest version of WCO TRS Guide introduces stronger provisions for the use of digital data collection, including system-to-system or API-based data extraction from electronic systems such as Single Windows and Port Community Systems. The guide outlines new procedures for joint or corridor-based TRS, enabling the assessment of performance not only at single border points but also across trade corridors and transit routes. For countries participating in RCEP and ASEAN transport agreements, this allows for deeper regional collaboration in measuring and improving end-to-end supply chain performance. The guide also promotes the integration of TRS results into national policy frameworks through SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) action plans, backed by RACI (Responsible, Accountable, Consulted, Informed) matrices that clarify roles and accountability.

Additionally, the guide recommends the use of disaggregated TRS data to identify and address regulatory burdens that disproportionately affect certain trader groups, including Micro, Small, and Medium Enterprises (MSMEs). It also calls for gender-sensitive analysis and the inclusion of GEDSI (Gender Equality, Disability, and Social Inclusion) metrics in TRS design, echoing the project's commitment to inclusive trade facilitation. These enhancements reflect a more holistic understanding of border performance and its socio-economic impacts.

As AMS deepen their participation in RCEP, the ability to measure and improve clearance performance will determine their capacity to attract investment, expand export markets, and deliver real-time logistics services. TRS and CBM offer the pathway for achieving this, and this Handbook provides the operational roadmap to support it. The relevance of TRS and CBM improvements to regional trade architecture is clear. Under RCEP, Article 4.17 encourages parties to periodically measure and publish average release times, while Article 4.19 mandates cooperation among border agencies to streamline controls and minimise regulatory burden. These obligations align closely with ASEAN's long-standing trade facilitation agenda, including initiatives such as the ASEAN Single Window (ASW), the ASEAN Customs Transit System (ACTS), and the ASEAN Trade Facilitation Framework. Furthermore, the WTO TFA, particularly Articles 7.6 and 8, enshrine the principles of clearance time measurement and border agency cooperation as binding commitments for all ratifying members, including Indonesia and the other AMS. The Handbook thus positions TRS and CBM not as isolated technical tools, but as strategic instruments for regulatory reform, digital transformation, and regional compliance.

## 1.2. Developmental Activities

For the development of this Handbook, extensive preparatory work had been undertaken under the RISP project. These include a two-day Regional Workshop convened in Surabaya in June 2025, which brought together 63 participants from Indonesia and nine other countries, including 5 other AMS, Australia, and New Zealand. The workshop featured detailed sessions on national TRS implementation experiences, CBM

---

<sup>1</sup> World Customs Organization. (2025). Time Release Study Guide (Version 4): Guide to measure the time required for the release of goods. <https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/time-release-study/wco-time-release-study-guide--version-4-2025.pdf?db=web>

practices, digital innovations, and performance measurement tools. It also included a field visit to Tanjung Perak Port, providing participants with firsthand exposure to cargo handling operations, joint inspections, and port IT systems. Real-time polling and interactive breakout sessions were used to gather participant insights on the challenges and opportunities for TRS-CBM reform.

Complementing the regional workshop were targeted stakeholder consultations conducted with Indonesian public and private sector institutions as well as with participating Customs authorities from AMS. These included structured online meetings and survey outreach with the Directorate General of Customs and Excise (DGCE), the Indonesia National Single Window Agency (INSW), the Ministry of Trade, the National Agency for Drug and Food Control (BPOM), the national port operator Pelindo, logistics service providers, and freight forwarders. These engagements yielded valuable insights into operational pain points, such as delays in permit processing, inconsistencies in data exchange, limited pre-clearance adoption, and documentation errors. They also highlighted emerging good practices such as the integration of risk-based inspection systems, joint agency coordination protocols, and the rollout of electronic delivery order platforms.

The insights generated from the workshop and stakeholder consultations were synthesised into a Background Paper, which serves as the analytical foundation for this Handbook. The Background Paper reviews the status of TRS and CBM implementation in Indonesia, benchmarks these against regional good practices, and contextualises them within the obligations set out under international frameworks such as the World Customs Organization's (WCO) 2025 TRS Guidelines, the WTO TFA, and RCEP. It also incorporates gender equality, disability, and social inclusion (GEDSI) considerations, reflecting a commitment to inclusive trade facilitation that leaves no stakeholder behind.

This Handbook, therefore, is not an academic or theoretical exercise. It is a practical instrument designed to support policy implementers, operational officers, and reform managers in enhancing clearance efficiency through proven tools and regionally adapted approaches. It seeks to enable DGCE and its partner agencies to institutionalise TRS, strengthen CBM mechanisms, and embed these within national systems such as the Indonesia National Single Window (INSW) and the National Logistics Ecosystem (NLE). In doing so, it contributes to Indonesia's competitiveness, strengthens ASEAN connectivity, and supports the broader objective of making trade more inclusive, predictable, and development-enabling across the RCEP region.

## 2. Current Landscape and Key Challenges

### 2.1. Overview of the Landscape of Trade Clearance and Time Release Study (TRS) in ASEAN

Trade clearance across ASEAN reflects a landscape of ongoing modernisation, uneven digital transformation, and increasing commitment to performance measurement. Member States are progressively adopting digital systems, strengthening coordinated border management (CBM), and exploring or expanding Time Release Studies (TRS) as a core diagnostic tool. Although the pathways differ, the regional trajectory shows a shared shift toward transparency, data-driven reform, and interoperability across customs, other government agencies (OGAs), and port and logistics operators.

Clearance processes generally follow a similar structure across AMS: pre-clearance activities (pre-arrival cargo reporting, permit issuance and risk assessment), customs and OGA clearance (documentary controls, verification and inspections), and post-clearance logistics (delivery orders, trucking, terminal handling). Discussions during the regional workshop and stakeholder consultations emphasised that bottlenecks persist mainly at inspection stages, in inconsistent permit processing, and in the fragmentation of IT systems across agencies. Compared with the more mature systems in Australia, New Zealand and Singapore, other AMS administrations continue to face challenges integrating digital and institutional reforms at the operational level.

The WCO TRS methodology - outlined during the regional workshop - provides a structured means of measuring release times from arrival to physical release and is increasingly viewed across the region as a mechanism not merely for diagnostics, but as a driver of reform in risk management, digitalisation and CBM.

### 2.2. Use of TRS Across ASEAN Member States

**Indonesia** - Indonesia undertakes TRS covering imports and exports periodically across major ports. In 2024, the TRS conducted at seven ports in Indonesia: Belawan (Medan), Tanjung Priok (Jakarta), Tanjung Perak (Surabaya), Tanjung Emas (Semarang), Soekarno-Hatta (Makassar), Bitung, and Palembang. The TRS over the past years showed a reduction in average clearance times from about 4.75 days in 2018 to around 3.0-3.3 days over 2022-2024. TRS data are collected via questionnaires and sampling, with customs offices disseminating and validating responses before analysis and reporting. Key challenges highlighted include insufficient data and coordination issues, as well as fundamental bottlenecks such as duplicate and repetitive tasks across various systems, trucking and warehouse platforms) and lack of interconnectedness, alongside common bottlenecks like delays due to missing import permits, port storage incentives, and system issues. Indonesia has expressed an interest in more regular TRS implementation, recognising its value as a continuous performance monitoring tool. <sup>2</sup>

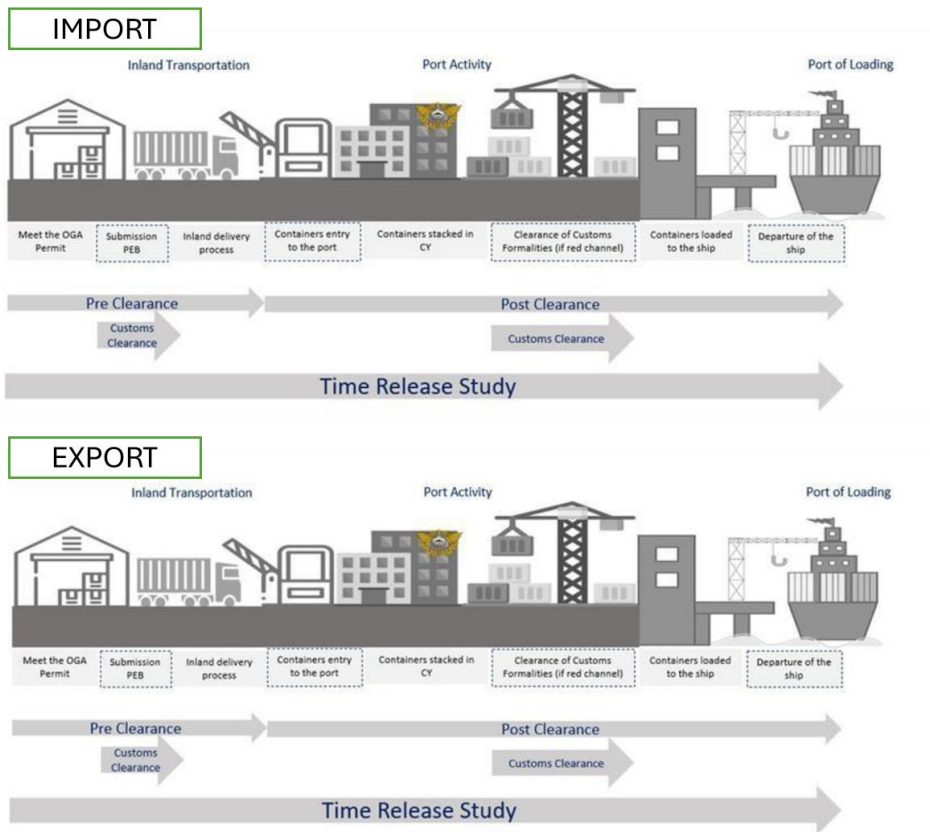
---

<sup>2</sup> Directorate General of Customs and Excise (DGCE) Indonesia - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.

Figure 1 - Location of Indonesia TRS 2024 <sup>3</sup>



Figure 2 - Process Flow for Import and Export - Indonesia Customs TRS 2024 <sup>4</sup>



<sup>3</sup> World Customs Organization. (2025). Time Release Study Guide (Version 4): Guide to measure the time required for the release of goods.

<sup>4</sup> World Customs Organization. (2025). Time Release Study Guide (Version 4): Guide to measure the time required for the release of goods.

**Malaysia** - has carried out multiple TRS exercises, covering key ports and land borders since at least 2014, including locations such as Tawau, Sandakan, Sungai Tujuh, Port Klang and ICQS Bukit Kayu Hitam. The TRS exercises use stratified random sampling, combine field data, the SMK customs system and stakeholder feedback, and have generated time-series indicators showing declining average clearance times. Major bottlenecks identified include continued reliance on hard copy documentation across customs and other government agencies, which has prompted the rollout of the MyCIED electronic document platform to centralise import-export document submission, reduce paper use, and improve processing speed and data accessibility.<sup>5</sup>

**Thailand** - has been conducting Time Release Studies (TRS) since 2012 to measure the time required for import and export clearance across air, sea, and land modes. The latest TRS, carried out over seven working days at Suvarnabhumi Airport (air), Laem Chabang Port (sea), and Nakhon Phanom Customs House (land), used electronic data collection (Google Forms linked to e-Import/e-Export systems) and large samples from major terminals to calculate average processing times. Results show detailed green-line and red-line clearance times by mode, with overall release times trending downward, but with remaining bottlenecks largely attributable to traders' actions and infrastructure constraints such as traffic congestion and the distance between warehouses and inspection sites.<sup>6</sup>

**Cambodia** - has conducted TRS four times (2013, 2019, 2021, 2023), moving from a focus on import clearance at a few entry points to a comprehensive, biennial programme covering import, export and pre-customs licensing processes. The 2023 TRS spanned 15 customs clearance units (air, sea, major land borders and the Phnom Penh SEZ (Special Economic Zone)), three central customs departments, and seven licensing ministries, using ASYCUDA World, NSW and WCO TRS software to capture and analyse time stamps from arrival to release and from licence request to approval. Results showed a marked reduction in average import processing time (from 2 days 17 hours 13 minutes in 2021 to 1 day 7 hours 55 minutes in 2023), while average export processing time increased from 3 hours 44 minutes to 11 hours 26 minutes over the same period.<sup>7</sup>

**Myanmar** - has progressively implemented Time Release Studies (TRS) since 2014, covering major seaports, the Yangon Air Cargo Terminal, and key land borders such as Muse and Myawaddy. Four national TRS (the last three aligned with ASEAN TRS cycles) have measured clearance times at these locations, showing reductions over time, for example at Yangon Air Cargo Terminal from about 4 days 20 hours in 2014 to just under 3 days in 2023. TRS is supported by the Myanmar Automated Cargo Clearance System (MACCS), which provides automated processing, risk-based selectivity (green, yellow, red channels), agency integration, and, more recently, 24/7 online payments via MOPS linked to commercial banks, all contributing to faster clearance and better coordination with other government agencies.<sup>8</sup>

**Viet Nam** - has institutionalised the TRS as a performance-measurement tool and now conducts it at multiple key border gates. The national TRS was first carried out in 2013 and later expanded to cover 11 customs entry points in seven provinces and cities, spanning sea, air and land cargo, with results used to monitor clearance times and assess the impact of trade facilitation reforms. The TRS in 2020 showed that administrative procedures were time-consuming and costly because of a lack of documentation standards and information and communication technology-driven communication instruments, and weak coordination with other agencies.<sup>9</sup>

---

<sup>5</sup> Royal Malaysian Customs Department - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.

<sup>6</sup> Thai Customs Department - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.

<sup>7</sup> General Department of Customs and Excise of Cambodia - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.

<sup>8</sup> Myanmar Customs Department - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.

<sup>9</sup> Economic Research Institute for ASEAN and East Asia. (2023). Follow-up ASEAN Seamless Trade Facilitation Indicators: Viet Nam (Chapter 11). ERIA.

**Singapore** - does not routinely conduct TRS at regular intervals; however, it has undertaken formal Time Release Studies, including published reports in 2018 and 2020. Operationally, Singapore maintains TRS-equivalent performance measurement through its digital customs and port systems. The TradeNet system supports near-instantaneous processing of declarations and enables extensive use of pre-arrival data for risk assessment. Inspection rates remain low due to mature risk-management practices, while automated port operations help maintain low and predictable dwell times.<sup>10</sup>

**Philippines** - has conducted TRS intermittently. The Bureau of Customs is transitioning toward a more integrated digital environment through the E2M system, the National Single Window, and preparations for a new customs processing system under its modernisation programme. While digitalisation at major ports (MICT, Batangas) has improved gate and terminal processes, delays persist due to licensing requirements, congestion in Metro Manila and incomplete OGA system integration. TRS is increasingly viewed as essential for identifying bottlenecks and supporting TFA compliance.<sup>11</sup>

## 2.3. International Experience: Lessons from New Zealand and Australia

**New Zealand** - New Zealand's border-management architecture - including the Joint Border Management System (JBMS) and the Trade Single Window (TSW) - provides a high-maturity model for ASEAN jurisdictions. Biennial TRS cycles are planned, demonstrating New Zealand's transition toward institutionalised, data-driven performance measurement.

The New Zealand presentation at the Regional Workshop highlighted:

- automated clearance in seconds for most consignments
- strong advance-lodgement policies
- shared intelligence and risk assessment across border agencies; and
- reliance on time-stamped electronic records to generate highly accurate TRS data.

**Australia** - Australia presented its updated TRS methodology, reintroduced after a redesign to improve clarity, relevance and value. The Australian experience underscores:

- the importance of TRS in capturing long-term structural effects such as COVID-19 impacts
- the role of digital lodgement systems in supporting accurate measurement; and
- the need to periodically recalibrate TRS approaches to remain aligned with evolving operational realities.

## 2.4. Challenges and Pain Points (Public & Private Sectors' Perspectives)

Despite substantial progress in customs modernisation, AMS continue to face significant challenges and pain points in trade clearance processes that affect both government agencies (public sector) and traders (private sector). Trade clearance across ASEAN continues to face systemic challenges arising from uneven institutional capacity, digitalisation gaps, fragmented regulatory procedures, and persistent operational bottlenecks across ports and logistics environments. These factors collectively shape both public-sector performance and private-sector user experience.

### 2.4.1. Public Sector Pain Points

A core regional challenge is the significant disparity in digital readiness and automation among AMS, where several countries continue to rely on paper-based or semi-manual processes for permits, inspections and licensing, while others have implemented more advanced digital platforms. This uneven digitalisation often

---

<sup>10</sup> Singapore Customs. (2021, March 1). Time release study for Singapore (2020). <https://www.customs.gov.sg/files/businesses/seb/2020%20time%20release%20study%20for%20singapore.pdf>

<sup>11</sup> Bureau of Customs. (2023). National Time Release Study commitment form (Philippines 6th OGP National Action Plan). [https://ogp.dbm.gov.ph/ogp-content/nap/6th/commitment/BOC\\_PH-OGP-Commitment-Form.pdf](https://ogp.dbm.gov.ph/ogp-content/nap/6th/commitment/BOC_PH-OGP-Commitment-Form.pdf)

results in duplicate submissions, sequential approvals, and procedural inconsistency, particularly in AMS where agency integration with the National Single Window remains partial.<sup>12</sup>

A strong empirical anchor is the UN Global Survey on Digital and Sustainable Trade Facilitation (ASEAN report), which reports material differences in implementation rates across AMS. It highlights that Singapore is a top performer, while Lao PDR and Myanmar lag (with overall implementation rates below the ASEAN/subregional average and <70% in that report's summary discussion).<sup>13</sup>

Relatedly, fragmented interagency processes across customs, quarantine, standards and other regulatory authorities continue to be a major pressure point. These agencies frequently do not exchange data in real time, causing steps to be carried out sequentially rather than in parallel. In this context, multi-agency risk-management practices remain limited, and several AMS continue to rely heavily on manual or physical inspections, which delays release and reduces predictability.<sup>14</sup> Workshop presentations from Cambodia, Myanmar and Thailand at the Regional Workshop further illustrated how physical inspections remain relatively high where risk-management coordination is weak or inconsistently applied.<sup>15</sup>

Another major pressure point is redundant documentation and the lack of end-to-end visibility for traders, particularly MSMEs. In AMS where NSW integration is incomplete or port community systems are not connected to border-agency platforms, traders have limited visibility on inspection status, permit approvals, or cargo availability. This reduces their ability to plan inventory movements and forces increased reliance on manual follow-up or brokerage services. Regional workshop presentations by Indonesia and Malaysia highlighted that inconsistent OGA data requirements and documentary mismatches remain major contributors to clearance delays.<sup>16</sup>

Regional survey findings indicate that many AMS have prioritised **incremental digitalisation and procedural streamlining**, reflecting a pragmatic approach to CBM reform in environments where full end-to-end integration is still evolving<sup>17</sup>

#### 2.4.2. Private Sector Pain Points

Private-sector challenges are often linked to clearance-time unpredictability and logistics bottlenecks, especially at major ASEAN maritime gateways. While most shipments clear within acceptable timeframes, the World Bank Logistics Performance Index<sup>18</sup> shows significant long-tail delays, caused by documentation discrepancies, inspection queues and misalignment between customs release and terminal operations. According to TRS presentations by Indonesia and Pelindo, even after customs release, delays frequently occur during delivery-order issuance, yard coordination and truck scheduling, highlighting weak integration between regulatory and operational systems.

Private-sector behaviour and capability also affect clearance outcomes. The Asia-Pacific Trade Facilitation Report notes that late submission of documents, incomplete applications and uneven digital literacy among traders can prolong clearance and exacerbate dwelling times. Workshop participants observed similar patterns, noting situations where importers delay cargo collection for commercial reasons, further extending port dwell time.

Unpredictability in decision-making is another major pain point. When clearance outcomes depend heavily on manual judgments or when rules change unexpectedly, businesses cannot plan shipments with confidence. Several AMS have made sudden changes to import requirements - such as licensing conditions, SPS measures or quota administration - which have caused consignments to be held at the border without

---

<sup>12</sup> Asian Development Bank & UNESCAP. Asia- Pacific Trade Facilitation Report 2024.

<sup>13</sup> 2023 UNTF ASEAN TF Report, <https://asean.org/wp-content/uploads/2023/08/UNTF-ASEAN-report-FINAL.pdf>

<sup>14</sup> United Nations ESCAP. Digital and Sustainable Trade Facilitation in ASEAN 2025.

<sup>15</sup> Presentations at RT4D Regional TRS & CBM Workshop, Surabaya, 18- 19 June 2025

<sup>16</sup> *ibid*

<sup>17</sup> United Nations ESCAP, 2023, Digital and Sustainable Trade Facilitation in ASEAN: UN Global Survey Report

<sup>18</sup> World Bank. Logistics Performance Index 2023

advance notice. For supply chains handling perishable, seasonal or time-sensitive goods, such disruptions have direct financial consequences.

High rates of physical inspection remain a major concern in several AMS. Excessive inspection frequencies significantly extend clearance timelines, heighten opportunities for rent-seeking, and divert administrative resources to low-risk consignments. Even in more developed AMS, traders report that bureaucratic steps, manual interventions and informal practices.

Port-side constraints further exacerbate private-sector challenges. At major gateways - such as Indonesia's Tanjung Priok - businesses continue to encounter bottlenecks linked to delivery-order issuance, trucking coordination, yard congestion and inconsistent terminal practices. Although many of these issues lie outside customs' regulatory mandate, they have a direct effect on total dwelling time and are reflected in TRS results. Without improved integration between port community systems, terminal platforms and customs/NSW systems, traders experience fragmented visibility over their shipments, which adds operational uncertainty and increases costs.

Philippines Port, private-sector feedback and government assessments note that at major Philippine ports, including Manila, cargo release can be affected by delivery-order processing practices, truck queuing, and yard congestion. While Customs clearance has been progressively digitised, port-side processes and coordination among terminal operators, shipping lines, and transport providers continue to influence overall dwell time<sup>19</sup>

Viet Nam Port at key Vietnamese gateways such as Cat Lai and Hai Phong, post-2020 studies report that yard congestion, gate management, and truck appointment practices are significant contributors to cargo dwell time. Although Viet Nam has expanded NSW coverage and Customs automation, private operators highlight that limited integration between port/terminal systems and regulatory platforms reduces end-to-end visibility and predictability<sup>20</sup>.

In Thailand, private-sector consultations and UNESCAP assessments indicate that port-side processes, particularly coordination between terminals, logistics service providers, and regulatory agencies, remain an important determinant of cargo release performance. At major ports such as Laem Chabang, variations in terminal practices and truck flows can affect dwell time, even where Customs processing is relatively streamlined<sup>21</sup>. Private stakeholders emphasise that closer alignment between the National Single Window, terminal systems, and port community arrangements would improve operational predictability.

At Port Klang and other major Malaysian gateways, post-2020 research analyses identify terminal handling capacity, yard utilisation, and trucking interface management as key factors influencing port performance. While Malaysia's NSW and Customs systems are relatively available, private operators observe that port-side digital integration and data sharing remain critical to reducing operational uncertainty and logistics costs.<sup>22</sup> World Bank assessments underline that port and terminal efficiency plays a decisive role in determining overall supply-chain performance in Malaysia.<sup>23</sup>

Behavioural factors also play a role. At Indonesian ports, some traders delay container collection to maximise free storage time, while others lodge permits or declarations late due to internal cashflow cycles, limited compliance capacity or reliance on manual submission pathways. These behaviours can distort clearance metrics and obscure the true sources of delay.

---

<sup>19</sup> Government of the Philippines, 2021-2022, Port Congestion and Trade Facilitation Assessments, <https://www.neda.gov.ph/port-congestion-mitigation/>

<sup>20</sup> Government of Viet Nam, 2022, Port Operations and Logistics Performance Reviews, <https://vietnamlpi.worldbank.org/>

<sup>21</sup> UNESCAP, 2021-2022, Thailand: Trade Facilitation and National Single Window Progress Assessments, <https://www.unescap.org/resources/thailand-national-single-window>

<sup>22</sup> UNESCAP, 2021. Malaysia National Single Window and Port Connectivity Case Study, <https://www.unescap.org/resources/national-single-window-malaysia>

<sup>23</sup> World Bank, 2023, Container Port Performance Index 2022: A Comparable Assessment of Performance, <https://www.worldbank.org/en/topic/transport/publication/container-port-performance-index>

### **2.4.3. Summary of Cross-Sector Challenges**

In summary, both public and private stakeholders face interconnected pain points within the current clearance ecosystem. The public sector contends with complex, resource-intensive procedures, fragmented digital systems, uneven adoption of risk-based practices and limited inter-agency coordination. The private sector bears the resulting burden through higher costs, longer clearance times, redundant documentation requirements, inconsistent application of rules, and limited end-to-end visibility.

These challenges collectively highlight the need for sustained reforms in ASEAN's trade-clearance regimes. Priorities include deeper integration of licensing agencies into NSW platforms, wider adoption of joint-inspection frameworks, capacity building for modern risk management, increased automation of port and terminal processes, streamlined regulatory requirements and enhanced transparency through real-time information-sharing tools. A more predictable, harmonised and interoperable trade clearance environment is essential to reducing costs, improving competitiveness and realising ASEAN's wider regional integration and trade-facilitation goals.

## **2.5. Emerging Themes and Performance Patterns Across ASEAN**

### **2.5.1. Permit Processing and Upstream Documentation**

Across AMS, incomplete or inaccurate permit applications continue to be a primary cause of delay. Licensing agencies often report rejection rates between 5 and 20 per cent, with processing times ranging from hours to several days. TRS exercises that include pre-customs stages consistently identify documentation quality as a major determinant of overall performance.

### **2.5.2. Inspection-Related Delays**

The inspection stage is consistently the slowest and least predictable component of clearance. Multi-agency inspections are seldom coordinated, despite their recognised value. Workshop discussions emphasised the need for joint inspection frameworks, unified risk management and synchronised scheduling.

### **2.5.3. Fragmented Data and System Interoperability**

Most AMS rely on hybrid TRS data-collection methods - combining electronic logs with manual reports and survey inputs - due to fragmentation across customs systems, NSWs, OGA platforms and port systems. This limits opportunities for real-time TRS and continuous monitoring.

### **2.5.4. Post-Clearance and Port Operational Challenges**

Port congestion, inconsistent terminal practices, limited trucking appointment systems and uneven last-mile processes continue to create variability in dwell times across the region. TRS findings from Indonesia, Myanmar, Malaysia, Thailand and the Philippines confirm that post-clearance delays can offset upstream improvements.

### **2.5.5. Private-Sector Behaviour**

Behavioural factors - such as importers delaying cargo collection to maximise free storage periods - affect dwell time and can distort TRS output if not properly distinguished from regulatory delays. Workshop participants emphasised the importance of categorising delays by responsibility to ensure accurate diagnosis.

## 3. Best Practices Guidance in Trade Clearance

Effective trade clearance is central to regional trade facilitation, underpinning predictable supply chains, reducing transaction costs, and strengthening the competitiveness of ASEAN and RCEP economies. Efficient clearance requires a coherent sequence of processes, beginning with accurate import lodgement and documentary assessment, followed by proportionate inspection and examination procedures, leading to timely and transparent release, and supported at all stages by reliable data collection, whether manual, automated, or hybrid.

This chapter presents the best practices that govern each of these stages, drawing directly from the observations and lessons gathered through the regional workshop, the stakeholder consultations, and the broader experiences shared by AMS and RCEP partners. These insights reflect the practical realities of Customs operations, port management, OGA coordination, and private-sector interactions across diverse regulatory and infrastructural settings in the region.

The practices outlined here are also informed by the WCO TRS Guide Version 4 (2025), which promotes end-to-end measurement of clearance processes, expanded CBM participation, and data-driven decision-making. They also reflect contemporary implementation trends seen across ASEAN, including the adoption of pre-arrival processing through advance cargo information, progressive digitisation of licensing and permit systems, increased emphasis on risk-based selectivity, expansion of trusted trader programmes, and efforts to harmonise procedures through National and ASEAN Single Windows.

### 3.1. Best Practices from ASEAN and Regional Case Studies

Across the region, the experience shared by workshop participants and consultation respondents highlights the need for disciplined documentary checks, consistent application of risk controls, improved joint inspection regimes, greater interoperability of digital systems, and the systematic use of TRS as a continuous improvement mechanism. Equally, the role of accurate and timely data - whether captured manually, drawn from automated systems, or generated through hybrid approaches - has emerged as a critical enabler of performance measurement and operational accountability.

Collectively, these practices form an integrated framework that border agencies, port authorities, and private-sector stakeholders can adapt to their national context. They aim to reduce clearance times, increase predictability, strengthen compliance, and improve the overall trading environment in ways that support both national reform agendas and the broader aspirations of ASEAN and RCEP economic integration.

The following presents practical observations and lessons drawn from AMS and RCEP partners, illustrating how administrations across the region have strengthened the core stages of the trade clearance process. These practices highlight approaches for import lodgement and documentary assessment, inspection and examination procedures, release processes, and data collection methods. Together, these regional experiences demonstrate how common operational bottlenecks are addressed, leveraging digitalisation, and coordinated border management to deliver faster, more predictable, and more reliable clearance outcomes.

#### 3.1.1. Import Lodgement and Documentary Assessment

Import lodgement and documentary assessment form the frontline of the border clearance chain. Import lodgement refers to the submission of declarations, permits, supporting documents, and cargo data into Customs or Single Window systems before or upon arrival. Documentary assessment is the verification of these submissions for completeness, accuracy, and regulatory compliance. Their performance shapes the entire clearance trajectory: incomplete documents, late lodgement, or fragmented data sharing consistently trigger inspections, re-submissions, port delays, and increased dwell times. TRS evidence across ASEAN and OECD economies confirms that efficient lodgement and documentary assessment are the strongest determinants of predictable release outcomes.

Across ASEAN, Indonesia, Malaysia, Thailand, and Cambodia present similar lessons as observed at the TRS & CBM Regional Workshop held in Surabaya, Indonesia on 18 - 19 June 2025. Indonesia identifies documentary errors as a major cause of delay and calls for stronger integration with OGAs and electronic permit systems. Malaysia's TRS results show that reliance on hardcopy documents across Customs and OGAs remains a bottleneck. Thailand demonstrates the importance of electronic import/export systems and integrated data collection.

Best practices shared during the Regional Workshop align closely with the WCO TRS Guide Version 4. The WCO TRS Guide underscores the need for efficient lodgement with clearly defined data requirements, standardised formats to ensure efficient pre-arrival processing. These principles align with operational evidence from Indonesia, where 5 to 20% of permit applications are rejected due to data errors, highlighting the importance of front-end validation and structured trader guidance.

Good practices in these areas emphasise accuracy, digitalisation, and coordinated governance. The WCO emphasises accurate data quality and advance documentary submission as prerequisites for effective risk management. In addition, WCO also recommends post-clearance audits to reduce over-reliance on checks at border entry point. Digitalisation is a consistent enabler. This is reinforced by New Zealand, where 93.9% of full container load sea cargo entries are electronically lodged and cleared before arrival.<sup>24</sup>

Risk-based documentary assessment remains a critical best practice. One such best practice advocates shifting non-essential checks to post-clearance audits, ensuring resources are concentrated on high-risk consignments while compliant operators benefit from streamlined processing. Strengthened interoperability among Customs, OGAs, and port operators supported by data exchange addresses fragmentation and improves decision-making quality.

Institutionalising annual TRS cycles that encompass pre-arrival documentation, lodgement, and permit issuance ensures continuous monitoring and targeted reforms, enabling SLAs, digital dashboards, and coordinated mechanisms to sustain measurable improvements.

### **3.1.2. Inspection and examination procedures**

Inspection and examination procedures are a critical determinant of overall trade-clearance performance. Evidence from ASEAN and RCEP partners reinforces these principles, showing that inspection delays often account for the longest stage of clearance where risk management and coordination are weak.

A best practice advocated by WCO emphasises combining advance cargo information and risk-based selectivity such that inspections should be proportionate to risk. This process begins with the receipt of advance cargo information to enable risk-based selectivity, where inspection resources focus on high-risk consignments while compliant traders are channelled through expedited pathways. An example is Japan's Advance Filing Rule (AFR). AFR mandates that shipping companies and non-vessel operating common carriers (NVOCCs) electronically submit advance cargo information 24 hours before vessel departure. This enables Japan Customs to conduct risk assessment prior to arrival, identifying high-risk shipments early and issuing targeted intervention instructions while allowing compliant, low-risk consignments to be released immediately upon arrival.<sup>25</sup>

Complementing this, Authorised Economic Operator (AEO) programmes in Thailand and Malaysia operationalise risk-based inspection by granting expedited release, fewer physical checks, and simplified procedures for trusted traders, allowing inspection resources to be focused on shipments that genuinely warrant scrutiny. These approaches reflect the WCO's guidance that trusted-trader systems strengthen compliance and reduce the need for intrusive border checks.

Best practice also requires coordinated inspections. Cambodia, Indonesia, and Thailand report delays where multiple agencies conduct sequential or overlapping checks; the WCO recommends joint inspection frameworks, shared risk engines, and harmonised SOPs to avoid duplication. Digitalisation further enhances

---

<sup>24</sup> New Zealand Customs Service, Presentation on Joint Border Management and Time Release Study, TRS & CBM Regional Workshop, Surabaya, Indonesia, 18 June 2025

<sup>25</sup> Japan Customs Advance Filing Rules on Maritime Container Cargo Information  
<https://www.customs.go.jp/english/summary/advance5/index.htm>

inspection efficiency. Electronic inspection platforms, mobile tools, NII technology, and integrated port-Customs-OGA systems improve transparency, automate time-stamping, and strengthen TRS data accuracy.

### 3.1.3. Release processes

Efficient release processes form the final, decisive stage of trade clearance and are closely linked to the performance of all preceding steps - lodgement, documentary assessment, and inspection. This stage is inseparable from the performance of all upstream steps - lodgement, documentary assessment, risk management, and inspection - because any inefficiency earlier in the chain will manifest as delays at release. Delays at this stage typically arise when release depends on fragmented approvals, or inconsistent sequencing among Customs, OGAs, ports, and terminal operators. The TRS framework measures release through two critical intervals: the time from declaration submission to Customs granting permission to release, and the time from permission to the physical removal of goods from Customs control.

The WCO describes efficient release as the process in which all regulatory, risk, and inspection decisions have already been completed - preferably before the cargo arrives - allowing release authority to be issued promptly through automated or semi-automated systems. An efficient release process is therefore characterised by: (i) digitalisation of release authorisation; (ii) synchronised decision-making between port, Customs and other government agencies; and (iii) elimination of redundant post-inspection or post-approval steps.

Across ASEAN, the Regional Workshop provides evidence of efficient release processes in practice. In Indonesia, integration across Customs, OGAs and port has enabled faster release for low-risk consignments. Malaysia's MyCIED platform addresses electronic submission and faster release confirmation. Cambodia's TRS results show that border posts with higher levels of NSW connectivity, automated approvals, and electronic permit flows achieve significantly shorter release durations compared with locations still largely dependent on manual verification. Thailand's experience further reinforces that release efficiency depends not only on digital approvals but also on port-side operational readiness. It noted that yard congestion, transport scheduling, and distance between inspection and storage areas can extend the time between release authorisation and physical removal of cargo.

Best practices therefore include real-time issuance of release from Customs and NSW platforms; harmonised release decisions across Customs and OGAs and automated time-stamping to ensure transparency. When applied cohesively, these measures transform release into predictable, efficient release processes.

### 3.1.4. Data collection: manual, automated, hybrid (examples included)

Accurate and consistent data collection is fundamental to the integrity of any TRS. The TRS Guide recognises that administrations differ widely in their levels of digital maturity and therefore allows for three primary data-collection methods: automated, manual and hybrid. Each method has implications for data reliability, coverage, and the ability to generate repeatable and comparable results over successive TRS cycles.

- Automated data collection - offers the highest precision, drawing directly from Customs management systems, National Single Windows, port-community platforms, and other integrated operational systems that capture time stamps electronically.

Singapore represents the most mature example in ASEAN of end-to-end automated data capture across Customs, NSW, and port systems. TradeNet functions as Singapore's National Single Window, enabling single submission and multi-agency processing,<sup>26</sup> while PortNet and terminal operating systems (PSA) are digitally integrated with Customs processes, allowing electronic time stamps for arrival, clearance,

---

<sup>26</sup> Singapore Customs, 2021, TradeNet as Singapore's National Single Window, <https://www.customs.gov.sg/businesses/customs-procedures/tradenet>

release, and gate movements<sup>27</sup>. These capabilities enable highly reliable, system-derived TRS measurements and minimise reliance on manual data collection.

Port Klang, Malaysia is also widely cited as one of ASEAN's most digitally advanced ports outside Singapore.

With its Malaysia's National Single Window that integrated with Customs systems and selected port and logistics platforms<sup>28</sup>, Port Klang Authority and terminal operators utilise electronic gate, yard, and vessel management systems that support automated capture of operational milestones. This digital environment supports the use of system-generated data for clearance and dwell-time analysis.<sup>29</sup>

Laem Chabang Port, Thailand's primary deep-sea port, has made sustained investments in port and border digitalisation, with its terminal operators at Laem Chabang employ modern terminal operating systems with electronic gate and yard management, while not as fully integrated as Singapore, the port provides a sufficiently digitised environment to support automated data inputs for TRS exercises.<sup>30</sup>

Cat Lai Port (Ho Chi Minh City) is Viet Nam's largest container port and among the most digitally advanced in the country. Major terminal operators at Cat Lai deploy terminal operating systems that capture electronic time stamps for cargo handling and gate movements. Although integration between port and regulatory systems continues to evolve, Cat Lai is frequently referenced in post-2020 assessments as a leading example within Viet Nam for digital port operations.<sup>31</sup>

Within the Philippines, MICT Port is the most advanced example of port digitalisation. MICT operates a modern terminal operating system with electronic gate and yard management. However, assessments note that full interoperability between port systems, shipping lines, and regulatory platforms remains a work in progress, affecting end-to-end automated data capture.<sup>32</sup>

Routinely extract TRS indicators from system logs, ensuring consistent data capture and minimising human error. Automated extraction also enables granular analysis of procedural bottlenecks, supporting more targeted process redesign.

- Manual data collection - remains in some of ASEAN Member States (see table below) , where digitalisation is partial. Examples include supporting documents submitted in non-machined readable formats (scans or image), physical inspection logs, OGA interventions recorded on paper, or gate-out events maintained in terminal spreadsheets.

**Table 1 - Manual data observed in AMS**

| Manual / Partially Digitalised Data Collection Observed                   | ASEAN Member State(s) with documented evidence | Summary of Documented Practice / Evidence                                                                                                                                                |
|---------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supporting documents submitted as scans / images (non-machine - readable) | <b>Cambodia</b>                                | Phased implementation of the NSW indicates that not all permits and supporting documents are processed through fully electronic workflows. During transitional stages, scanned documents |

<sup>27</sup> Maritime and Port Authority of Singapore, 2022, PortNet and Digital Port Ecosystem. <https://www.mpa.gov.sg/web/portal/home/port-of-singapore/portnet>

<sup>28</sup> UNESCAP, 2021, Malaysia National Single Window and Port Connectivity Case Study, <https://www.unescap.org/resources/national-single-window-malaysia>

<sup>29</sup> Port Klang Authority, 2022, Port Klang Digitalisation and Smart Port Initiatives, <https://www.pka.gov.my>

<sup>30</sup> Port Authority of Thailand, 2021–2022, Laem Chabang Port Development and Digital Systems, <https://www.port.co.th/>

<sup>31</sup> World Bank, 2023, Container Port Performance Index 2022 - Viet Nam Ports, <https://www.worldbank.org/en/topic/transport/publication/container-port-performance-index>

<sup>32</sup> Philippine Ports Authority, 2021–2022, Manila International Container Terminal Operations, <https://www.ppa.com.ph/>

| Manual / Partially Digitalised Data Collection Observed                       | ASEAN Member State(s) with documented evidence | Summary of Documented Practice / Evidence                                                                                                                                                                  |
|-------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                               |                                                | continue to be accepted and processed manually. <sup>33</sup>                                                                                                                                              |
|                                                                               | <b>Lao PDR</b>                                 | Readiness assessments for cross-border paperless trade indicate continued reliance on paper or scanned documents in regulatory exchanges. <sup>34</sup>                                                    |
| Physical inspection logs maintained outside interoperable systems             | <b>Myanmar</b>                                 | The NSW Blueprint identifies inspection agencies operating stand-alone or paper-based business systems, with interoperability and system integration planned but not yet fully operational.. <sup>35</sup> |
|                                                                               | <b>Cambodia</b>                                | NSW onboarding across agencies suggests that inspection findings and examination outcomes are still be recorded manually where agencies are not digitally connected to the NSW. <sup>36</sup>              |
| Other Government Agency (OGA) interventions recorded on paper                 | <b>Myanmar</b>                                 | World Bank materials describe limited implementation of coordinated inspections, indicating manual or semi-digital record-keeping practices. <sup>37</sup>                                                 |
|                                                                               | <b>Lao PDR</b>                                 | DTIS report highlights institutional and capacity gaps that typically correlate with paper-based OGA procedures. <sup>38</sup>                                                                             |
| Gate-out / terminal events maintained in spreadsheets or non-integrated tools | <b>Philippines</b>                             | Port and Customs modernisation assessments note that processes remain largely manual and paper based in parts of the clearance chain, particularly outside Customs core systems. <sup>39</sup>             |
|                                                                               | <b>Myanmar</b>                                 | Absence of fully integrated port-Customs-OGA platforms implies reliance on manual                                                                                                                          |

<sup>33</sup> World Trade Organization, 2022–2023, Trade Facilitation Agreement Database - Cambodia (Operation of the Single Window), <https://tfadatabase.org/information-for-traders/operation-of-the-single-window>

<sup>34</sup> UNESCAP, 2022, Readiness Assessment for Cross-Border Paperless Trade Lao PDR, <https://repository.unescap.org/bitstreams/894a821c-8459-48a4-8f5a-a015dc193ebf/download>

<sup>35</sup> World Bank, 2020, Myanmar National Single Window Blueprint for Implementation, <https://documents1.worldbank.org/curated/en/103841592925775668/pdf/Myanmar-National-Single-Window-Blueprint-for-Implementation.pdf>

<sup>36</sup> World Trade Organization, 2022–2023, Trade Facilitation Agreement Database - Cambodia (Operation of the Single Window), <https://tfadatabase.org/en/members/cambodia/article-10-4-3>

<sup>37</sup> World Bank 2020, Myanmar National Single Window Blueprint for Implementation, <https://documents1.worldbank.org/curated/en/103841592925775668/pdf/Myanmar-National-Single-Window-Blueprint-for-Implementation.pdf>

<sup>38</sup> Enhanced Integrated Framework, Lao PDR, 2022, Diagnostic Trade Integration Study (DTIS) Update, <https://enhancedif.org/system/files/uploads/Lao%20PDR%20DTIS%202022.pdf>

<sup>39</sup> World Bank, 2020, Philippines Customs Modernization Project, <https://documents1.worldbank.org/curated/en/546811604109673111/pdf/Philippines-Customs-Modernization-Project.pdf>

| Manual / Partially Digitalised Data Collection Observed        | ASEAN Member State(s) with documented evidence | Summary of Documented Practice / Evidence                                                                                                                                                 |
|----------------------------------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                |                                                | or stand-alone records for terminal events. <sup>40</sup>                                                                                                                                 |
| Need for manual TRS data capture due to partial digitalisation | <b>Cambodia, Lao PDR, Myanmar, Philippines</b> | ASEAN-wide survey confirms significant variation in digital and cross-border paperless trade implementation, implying manual data capture remains necessary in several AMS. <sup>41</sup> |

- Hybrid data collection is therefore the most common approach among AMS, combining automated extraction for digitally recorded events with manual collection for non-automated processes. Indonesia exemplifies this model: the INSW and Indonesian Customs Excise Information System and Automation (CEISA) systems enable automated capture of declaration and permit milestones, while manual collection continues for certain peripheral processes that have not yet migrated into the Single Window environment. The TRS Guide explicitly recognises hybrid systems as a practical interim solution, as long as, if data definitions, time stamps, and data-handling protocols are applied consistently to ensure comparability across locations and over time.

Across all methods, data quality remains the critical enabler. Inaccurate declarations, incomplete documentation, inconsistent pre-arrival data, or errors in manual logs can compromise both TRS findings and clearance performance. Best practice therefore emphasises clear data definitions, standardised recording procedures, strong front-end validation in electronic systems, and regular coordination with OGAs and logistics operators to ensure that all required data elements are captured reliably.

### 3.2. The WCO Time Release Study (TRS) as a Foundation

The WCO TRS Guide provides a globally recognised methodology for measuring the time required for the release of goods and identifying bottlenecks along the clearance chain. Its core purpose is diagnostic: to determine where delays occur and to generate evidence-based recommendations for targeted reform. It also serves broader functions, including establishing quantitative performance baselines for trade facilitation, enabling administrations to assess the impact of policy, procedural, or technological changes, and supporting structured evaluations of whether reforms are achieving intended outcomes. By breaking down clearance into measurable intervals - from cargo arrival to final release - the TRS Guide enables administrations to pinpoint inefficiencies at each intervening stage.

Version 4 of the TRS Guide encourages administrations to institutionalise the TRS as a recurring management instrument rather than a one-time exercise. The Guide's phased approach - preparation, data collection, analysis, and monitoring - supports continuous improvement by allowing repeated cycles to track performance over time, compare results across modes or locations, and sustain reform momentum based on empirical evidence. Its flexible design accommodates national differences, enabling administrations to focus on specific corridors, commodities, border posts, or full national networks. Data may be collected manually, through automated systems, or using hybrid methods, provided definitions and time stamps are consistently applied to ensure comparability.

<sup>40</sup> World Bank, 2020, Myanmar National Single Window Blueprint for Implementation, <https://documents1.worldbank.org/curated/en/103841592925775668/pdf/Myanmar-National-Single-Window-Blueprint-for-Implementation.pdf>

<sup>41</sup> UNESCAP, 2023, Digital and Sustainable Trade Facilitation in ASEAN: UN Global Survey Report, <https://www.unescap.org/publications/digital-and-sustainable-trade-facilitation-asean-un-global-survey-report-2023>

### 3.2.1. Institutionalisation and Frequency of TRS

Many AMS have established routine TRS exercises; almost annually for Malaysia and biennially for Thailand, while Vietnam and Myanmar conduct TRS at the national level on an annual or ad hoc basis. Most countries include key clearance processes (import/export, OGA permits, post-clearance), but actual stakeholder awareness and participation levels vary.

## 3.3. Advance Cargo Information and Pre-Arrival Processing

Advance Cargo Information (ACI) and Pre-Arrival Processing (PAP) constitute as best practices because they shift key verification and risk-assessment tasks upstream. By allowing advance cargo information to be lodged before the goods arrive, customs and other agencies can complete most verification tasks in advance, identify shipments that require closer attention, and prepare any necessary inspections without keeping low-risk consignments waiting after arriving at the border.

The rationale for ACI and PAP is twofold. From a facilitation perspective, early information allows agencies to finalise documentary assessment, initiate risk profiling, issue preliminary release decisions, and seek clarifications before arrival - substantially reducing border-side delays. From a control perspective, ACI and PAP provide agencies with more time to evaluate complex consignments, arrange targeted inspections, and coordinate joint interventions where required, thereby strengthening regulatory outcomes while avoiding duplication. For low-risk consignments, release can occur immediately upon arrival, ensuring predictable “green lane” treatment.

## 3.4. Risk-Based Selectivity and Post-Clearance Audit

Risk-based selectivity is a defining feature of modern customs practice and is strongly endorsed across WCO instruments and the WCO TRS framework. Instead of subjecting a high proportion of consignments to similar levels of intervention, administrations use data and intelligence to profile traders, commodities, routes, and other factors, assign risk scores, and channel consignments into different treatment lanes such as immediate release, documentary review, or physical inspection.

Risk-based selectivity is grounded in three principles. First, it allocates scarce inspection resources to high-risk consignments where interventions have the greatest value in safeguarding revenue, safety, health, and security. Second, it reduces delays and uncertainty for compliant traders, reinforcing formal-sector participation and investment. Third, it provides a structured mechanism for combining data from multiple agencies, enabling coordinated assessments of cross-cutting risks. Evidence from ASEAN TRS exercises as noted in the Regional Workshop, indicates that where risk management is effectively applied, physical inspection rates can be kept low while still preserving high levels of compliance, with clear differences in release times between low- and high-risk traffic.

Post-clearance audit (PCA) complements this approach by shifting part of the control burden away from the border. For consignments or traders not requiring immediate frontier enforcement, PCA allows verification after release, thereby easing congestion at border points and enabling deeper, more data-rich compliance checks. Trusted trader and AEO programmes extend the risk-based model by allowing expedited treatment for operators with strong compliance records, creating an incentive-based framework aligned with the WCO SAFE standards.

Trusted trader and AEO schemes represent a logical extension of the risk-based concept. By recognising traders with strong compliance histories and sound internal controls, administrations can offer more predictable and expedited treatment, while concentrating checks on less-known or higher-risk operators. These arrangements align with the WCO SAFE Framework, and, where implemented credibly, can contribute to both competitiveness and security, particularly when mutual recognition is pursued with partner economies.

## 3.5. Automation, Single Window Systems, and Data Quality

Automation and Single Window systems provide the digital backbone for the best practices outlined above. A well-designed Single Window centralises permit applications, customs declarations, payments, and status information within a unified platform that connects customs, other regulatory agencies, port and airport

operators, and the private sector. International and regional experience, including the operation of the ASEAN Single Window and economies such as Singapore and Malaysia, illustrates how such platforms can process very high volumes of transactions within minutes, support cross-border exchange of electronic documents, and reduce the need for face-to-face interactions.

Many AMS has implemented their NSWs which include several of these features, including high levels of electronic permit processing and connectivity with port. A well-designed SW consolidates permit applications, declarations, payments, and cargo-status updates in a unified environment that links Customs, OGAs, port and airport operators, and private-sector users.

For TRS purposes, the maturity of automation directly shapes how data is collected. Automated data collection, drawn from Customs management systems, port-community platforms, and Single Window databases, offers the highest reliability, reduces human error, and captures time stamps with precision. Jurisdictions with advanced systems routinely extract TRS indicators directly from system logs, producing consistent, repeatable datasets.

The effectiveness of any digital solution, however, depends critically on data quality. High rejection rates for permit applications or declarations due to errors, inconsistent pre-alert information from shippers, or incomplete supporting documentation can quickly erode the gains from automation by generating rework and delays. Best practice therefore emphasises strong front-end validation in electronic submission systems, clear guidance on documentation requirements, use of standardised data formats for key fields, and tools that reconcile manifests, declarations, and permits automatically. In parallel, trader education, particularly for MSMEs and women-led businesses, helps to address capability gaps that often lie behind recurrent documentation issues.

### **3.6. Port and Terminal Operations**

Efficient port and terminal operations are integral to trade clearance performance and are closely linked to the findings of TRS exercises. Even when documentary processes are streamlined, bottlenecks at container yards, gates, and inspection facilities can generate significant dwell times and variability in outcomes. Recent TRS data from Indonesia, for example, show average port dwell times below three days nationally but with considerable variation across ports and cargo types, and highlight peak-hour congestion as a recurrent constraint.

Internationally recognised good practice in this area focuses on closer coordination between customs, terminal operators, carriers, and logistics providers. Mechanisms such as truck appointment systems, integrated gate operations that synchronise release decisions and truck flows, improved yard planning, and extended opening hours during peak periods can substantially reduce congestion and improve asset utilisation. Port community systems, which bring together information on vessel schedules, customs status, yard availability, gate transactions, and truck bookings into a single shared platform, have proven especially valuable in ports that handle high container volumes and complex intermodal flows.

Joint inspection facilities located within or adjacent to terminals are another element of best practice where conditions allow. By enabling multiple agencies to carry out coordinated examinations at a single location, such facilities reduce duplicate handling, lower the risk of cargo damage, and promote more consistent application of compliance requirements. Their design and operation need to be adapted to local contexts, but the underlying principle - consolidating physical interventions wherever feasible - is widely applicable.

### **3.7. Coordinated Border Management and Multi-Agency Cooperation**

Coordinated Border Management (CBM) provides the overarching governance framework that connects many of the practices discussed above. It seeks to ensure that customs, immigration, agriculture, health, standards, security, and transport authorities work together rather than in isolation, guided by shared objectives, harmonised procedures, and interoperable systems. The concept is embedded in WCO instruments, the WTO TFA, and regional frameworks such as the ASEAN Trade Facilitation Framework and RCEP provisions encouraging joint efforts to measure and reduce border clearance times.

In practice, CBM encompasses both formal and operational dimensions. At the strategic level, it involves legal and institutional arrangements that clarify mandates and promote cooperation; at the operational level, it requires mechanisms for joint planning, shared risk management, and day-to-day coordination at border posts, ports, and airports. TRS exercises often reveal gaps between these levels - for example, strong policies but uneven coordination on the ground - and thus play a valuable role in shaping CBM agendas that are grounded in observed performance rather than only in institutional design.

### **3.8. Data Integrity, Documentation Standards, and Capacity Building**

Finally, data integrity and documentation quality are cross-cutting enablers of all trade clearance best practices. The WCO TRS Framework stresses the need for accurate, harmonised data both for analytical purposes and for operational decision-making, and recent experience confirms that seemingly mundane documentation problems can be a major source of delay. Incomplete invoices or packing lists, inconsistent tariff classification, gaps in origin evidence, missing licences, and payment discrepancies can each trigger interventions that extend clearance times and absorb agency resources.

Best practice responses combine clearer requirements with improved tools and targeted support. Governments can publish standard templates for core documents, promote digital signatures and time-stamping to strengthen authenticity, allow documents to be submitted in advance for preliminary checking, and configure electronic systems to return specific, actionable error messages when submissions are rejected. Capacity-building programmes for traders, brokers, and logistics providers, including online training and materials tailored to SMEs and women-led businesses, help ensure that the private sector is able to meet these standards and benefit fully from the modernised clearance environment.

## 4. Improvement Strategies and Practical Measures

Enhancing the efficiency, predictability, and transparency of trade clearance processes requires a coherent set of improvement strategies grounded in international standards and informed by operational realities across ASEAN. Drawing from the WCO TRS Guide, the findings of the 2025 Regional Workshop held in Surabaya, and the detailed insights collected through national and regional stakeholder consultations, this chapter presents practical measures that can be implemented by customs authorities, other border agencies, port operators, logistics providers, and policymakers. The measures focus on the three critical phases of the clearance continuum—import lodgement and documentary assessment, inspection and examination, and release—while also addressing cross-cutting institutional and technological requirements.

The strategies reflect a fundamental principle confirmed across all sources: TRS and CBM are mutually reinforcing. TRS provides empirical evidence of process delays and performance gaps, while CBM establishes the institutional mechanisms required to resolve these gaps through coordinated action. Together, they enable a sequenced approach to clearance reform built upon measurement, diagnosis, coordination, and continuous improvement.

### 4.1. Strengthening Import Lodgement and Documentary Assessment

A central finding from the workshop and consultations is that early-stage documentary weaknesses create cascading delays across the clearance chain. The WCO TRS Guide emphasises that improvements at this stage yield the most significant gains because they minimise the rework and inconsistencies that propagate through later procedural stages. Stakeholders across Indonesia and AMS consistently identified incomplete declarations, permit mismatches, and inconsistent supporting documents as the most common sources of preventable delay.

A key strategy is the systematic expansion of pre-arrival and pre-clearance processing. Regional experiences presented during the workshop showed that earlier submission of cargo data—particularly when combined with risk assessment prior to vessel arrival—reduces front-end congestion and enables customs and other agencies to triage consignments more effectively. New Zealand reported that pre-arrival processes contributed to faster release times and more stable TRS results, reinforcing global evidence that upstream digital readiness is critical to clearance efficiency.<sup>42</sup>

Document quality remains an area requiring targeted reform. Stakeholder consultations revealed that between 5 and 20 per cent of licensing applications in Indonesia are rejected due to inaccuracies, missing information, or inconsistent data formats, often requiring re-submission and adding several days to the overall clearance timeline.<sup>43</sup> Improvements can be achieved by embedding stronger data-validation rules within NSW or INSW systems, promoting consistent document standards, and offering targeted education programmes for freight forwarders, MSMEs, and compliance staff. Many AMS indicated that documentation errors also constrain their ability to expand the scope of TRS to upstream processes such as permit issuance and declaration preparation.

Another common challenge relates to the fragmentation of licensing and quarantine approval processes. Multiple agencies across AMS rely on distinct systems, SLAs, and verification procedures, which complicates both TRS data capture and inter-agency process synchronisation. Indonesia's experience with the Single Submission Module (SSM) and the integration of 24 ministries into the INSW demonstrates the feasibility of

---

<sup>42</sup> New Zealand Customs Service - Time Release Study (TRS) and Coordinated Border Management (CBM). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.

<sup>43</sup> Trade Facilitation Pte Ltd. (2025, November 25). Towards greater efficiency in customs clearance through enhanced Time Release Study practices: Stakeholders report and Background Paper. RCEP Implementation Support Program (RISP), Regional Trade for Development (RT4D).

consolidating licensing pathways, although stakeholders indicated that integration and standardisation are still incomplete in practice. Further expansion of API-based system integration-identified as a strategic priority by the INSW Agency-would allow permit status updates to be communicated instantly and uniformly, reducing delays caused by differing workflow structures across agencies.

Finally, TRS must be institutionalised as a regular performance monitoring tool. Indonesia conducts TRS every two to three years, and several AMS also treat TRS as a periodic exercise rather than a continuous management instrument. The WCO Guide stresses that TRS should be undertaken regularly, ideally annually at major ports, accompanied by routine data capture embedded within digital systems. Institutionalising TRS allows authorities to monitor baseline clearance times, validate reform outcomes, and identify persistent bottlenecks with greater accuracy.

## 4.2. Improving Inspection and Examination Procedures

Across all participating countries, the inspection stage emerged as the most time-consuming and operationally challenging component of the clearance process. TRS findings in Indonesia confirm that red-lane consignments require between three and seven days on average-significantly longer than green-lane consignments-due primarily to inspection-related delays and multi-agency dependencies. Workshop participants from AMS also echoed that physical inspection remains the greatest contributor to clearance time variability.

A more calibrated and coordinated approach to risk management is critical. The WCO TRS Guide highlights that inspection workloads should reflect a rational, data-driven assessment of risk, with unnecessary examinations reduced through coordinated risk-selectivity mechanisms. Stakeholders from Indonesia noted that although inspection rates are generally low (0-10 per cent), some regions still experience higher rates (11-25 per cent), and the criteria applied by different agencies are not consistently aligned.<sup>44</sup> Establishing a Joint Risk Management Committee-comprising Customs, Quarantine, Trade, and other relevant agencies-would enable harmonised risk rules and reduce duplication.

Stakeholders also stressed that joint inspections remain inconsistently applied. While Indonesia has frameworks for joint inspection, these practices differ across locations, and operational staff frequently revert to sequential rather than parallel inspections due to scheduling constraints or divergent agency mandates. The consequences are predictable: uncoordinated inspections lengthen clearance times, increase yard congestion, and complicate TRS analysis. The workshop underscored the value of operational coordination, and several AMS demonstrated that structured joint inspection regimes-supported by digital tools for scheduling and reporting-improve transparency, reduce time lags, and provide clearer TRS data for performance evaluation.

The use of technology during inspections remains an underutilised opportunity. The port visit to Tanjung Perak highlighted that although non-intrusive inspection (NII) equipment is available, its utilisation patterns do not always align with risk management objectives, partly due to manual workflows and limited analytics capability. Integrating NII equipment with automated routing algorithms, improving digital queue management, complemented by image analytics tools, would enhance both accuracy and throughput.

Inspection efficiency further depends on operational capacity planning. Yard congestion during peak periods, competing agency schedules, and limited coordination between port operators and customs officers contribute to avoidable delays. Findings from Pelindo and freight forwarders emphasised that better synchronisation of dwell-time management, truck scheduling, and inspection appointments would stabilise clearance times and reduce the unpredictable delays that TRS repeatedly exposes.

## 4.3. Accelerating the Release Process

The release stage includes both regulatory authorisation such as issuance of the customs release approval and physical gate-out operations controlled by port and terminal operators. Across stakeholder groups,

---

<sup>44</sup> Trade Facilitation Pte Ltd. (2025, November 25). Towards greater efficiency in customs clearance through enhanced Time Release Study practices: Background paper. RCEP Implementation Support Program (RISP), Regional Trade for Development (RT4D).

delays at this stage were often attributed not to customs processing, but to commercial factors such as trucking congestion, inconsistent availability of electronic delivery orders, and trader decisions shaped by free storage periods. Workshop dialogue highlighted that TRS measurements can be misinterpreted when commercial delays are conflated with regulatory ones, underscoring the need for clearer, disaggregated performance metrics.

Synchronisation between customs release and port operations remains a priority area for reform. While Indonesia's INSW and CEISA systems capture core regulatory timestamps, their integration with Terminal Operating Systems is not yet universal, resulting in gaps in TRS data, limited visibility across the supply chain, and inefficiencies in container movement. Strengthening API-level integration would enable real-time communication of release status, automated gate-in and gate-out validation, and improved sequencing of container flows.

Another critical reform relates to the uptake of electronic delivery orders (e-DOs). Although some carriers and terminals in Indonesia already employ e-DOs, others continue to rely on manual processes that introduce an additional one to five days into the clearance chain. Stakeholder testimony suggests that standardising e-DO processes, mandating their use, and harmonising data formats would significantly reduce post-clearance delays and improve TRS accuracy.

Commercial and regulatory KPIs for ports and private-sector actors would also improve transparency. Several AMS, including Malaysia and Thailand, publish differentiated KPIs that distinguish between regulatory clearance time and commercial dwell time, allowing more accurate interpretation of TRS results. Adopting similar publication practices across ASEAN would help traders identify where bottlenecks originate and incentivise port operators and logistics providers to meet defined performance commitments.

Finally, the release process should include provisions for accelerated treatment for compliant traders. TRS data from Indonesia confirms that more than 90 per cent of consignments fall within the green-lane category, yet clearance times for these consignments can still vary due to administrative delays unrelated to risk. Measures such as automated release upon duty payment, pre-authorised release for Authorised Economic Operators (AEOs), and expanded 24/7 gate-out operations at major ports would ensure that low-risk transactions are not unnecessarily delayed.

#### **4.4. Strengthening Inter-Agency Coordination and Governance**

Effective TRS and CBM implementation requires coordinated institutional structures. While most AMS reported that strategic-level coordination is strong, operational coordination remains variable. Indonesia's customs authorities rated coordination highly, whereas private-sector stakeholders rated it considerably lower, citing inconsistent field execution, fragmented data flows, and the limited use of joint inspections. Workshop discussions also highlighted institutional sensitivities and differing mandates as significant constraints on achieving consistently coordinated border procedures.

A formal National Steering Committee would serve as a central platform for aligning roles, monitoring TRS outcomes, setting reform priorities, and resolving cross-agency bottlenecks. Such a committee should include Customs, Quarantine, the Ministry of Trade, Ministry of Transport, Port Authorities, and the INSW Agency, mirroring governance arrangements already partially present within Indonesia's National Logistics Ecosystem (NLE).

Service Level Agreements (SLAs) represent an additional mechanism for improving coordination. Consultations revealed substantial variation in permit processing times-ranging from hours to up to 14 days depending on the agency involved. Binding SLAs for permit issuance, inspection response, document validation, and post-clearance processing would ensure predictable performance and reduce delays attributable to internal agency variation.

Improved transparency in TRS findings is essential. Several AMS already share TRS results across internal units or publish them domestically, strengthening their evidence base for reform and promoting accountability. Routine reporting mechanisms-such as quarterly TRS reviews or inter-agency dashboard discussions-would cultivate a culture of continuous improvement and reinforce the link between measurement and operational change.

## 4.5. Engaging and Supporting the Private Sector

Private-sector actors repeatedly emphasised the need for predictable clearance requirements, transparent inspection criteria, and improved visibility across the logistics chain. Freight forwarders, logistics providers, and importers highlighted that inconsistent communication from agencies, limited access to status updates, and variable data quality from shippers affect their ability to plan operations and contribute to system-wide efficiency.

A stronger public-private interface would help address these challenges. Regular consultation forums, co-designed trader guidance, and more structured engagement with MSMEs would support compliance and reduce recurrent documentation errors. Ensuring private-sector access to real-time clearance and port data-facilitated by NSW or port community system integration-would improve planning and promote accountability.

## 4.6. Digitalisation and Data Integration

A central theme across workshop presentations and consultations is that digitalisation of border and logistics processes is now a core enabler of faster, more predictable clearance. Administrations increasingly recognise that without integrated, data-driven systems, it is difficult to achieve meaningful reductions in release times or to generate reliable TRS indicators. In Indonesia, survey evidence from public and private-sector stakeholders reinforces the importance of digitalisation.

Several economies are developing or enhancing National Single Window (NSW) that allow traders and intermediaries to lodge declarations and permit applications electronically through a single interface, replacing fragmented, agency-specific portals and paper processes. These platforms are increasingly linked with port community systems and other logistics platforms to capture complete time stamps relevant for TRS and operational performance monitoring. In the Indonesian context, integration between INSW, CEISA (the customs-excise system) and Pelindo's port systems enables authorities and operators to track key milestones such as manifest submission, declaration lodgement, release decisions and gate movements, even though full, real-time API-based integration is still a work in progress.

Customs and border agencies are also investing in system-to-system integration among customs management systems, port and terminal systems, quarantine and other border agency systems, and banking/payment platforms. Examples presented during the workshop and consultations include integration between customs declaration systems, port community platforms and national windows to support electronic manifests, electronic delivery orders and automated gate processes. These arrangements reduce repeated data entry, support parallel rather than sequential processing by multiple agencies, and provide more complete datasets for risk management and TRS analysis.

Automated risk-management and selectivity engines are another common feature. Several administrations reported that they now rely on electronic risk-profiling modules which allow immediate or near-immediate release of low-risk consignments while concentrating controls on higher-risk cargo. In these systems, red, yellow and green channels are managed electronically, with decisions generated based on predefined risk indicators and historical compliance records.

To maximise the benefits of automation, administrations are moving from document-based to data-based processes. Workshop discussions and the Background Paper both highlight ongoing efforts to adopt international data models and standards, including closer alignment with the WCO Data Model and the wider use of structured data formats. This supports processing and automated validation, reduces the scope for manual re-keying, and facilitates more seamless sharing of clearance information with partner agencies and logistics actors. In practical terms, it also provides a stronger foundation for analytics and business-intelligence tools that can be applied to historical TRS data, enabling more granular identification of bottlenecks across the clearance chain.

## 4.7. Business Process Simplification and Regulatory Measures

Digitalisation in the participating economies has been accompanied by systematic simplification and re-engineering of business processes. The workshop and consultation findings emphasise that technology alone does not guarantee improved release times; gains are only fully realised when procedural steps are

rationalised and regulatory frameworks are adapted accordingly. The consultations in Indonesia also reveal that incomplete or inaccurate documentation remains a leading cause of delay, particularly for permit applications, and that a notable proportion of applications require resubmission. This underlines the importance of combining simplified procedures with improved front-end validation and clearer guidance to traders so that digital systems are not merely reproducing existing bottlenecks in electronic form.

Indonesia's National Logistics Ecosystem (NLE) is a prominent example of digitalisation combined with process reform. The NLE introduces "single submission" concepts such as Single Submission of License, Single Submission of Carrier and Single Submission of Quarantine-Customs, under which previously separate submissions and sequential processes have been streamlined into integrated workflows with joint inspections and reduced hand-offs. These changes are designed to reduce duplication, align agency processes, and, ultimately, shorten the clearance and dwelling times that TRS seeks to measure.

A key measure across multiple administrations is the promotion of pre-arrival and advance processing of import and export declarations. Experience from New Zealand shows that when traders submit entries early and data quality is high, a significant portion of entries can be released prior to arrival, reducing port dwell times and facilitating just-in-time logistics.

## **4.8. Coordinated Border Management and Stakeholder Collaboration**

CBM approaches feature prominently in the workshop presentations as a means of reducing duplication and improving predictability for traders. The WCO TRS Guide stress that close inter-agency cooperation, supported by shared information systems and harmonised procedures, is essential for achieving sustained improvements in border performance.

New Zealand's Joint Border Management System (JBMS) and Trade Single Window provide a practical example of multiple border agencies sharing risk and intelligence data, relying on common IT platforms and aligning their processes. In this model, agencies responsible for customs, biosecurity, health and maritime safety access the same underlying data and coordinate their interventions, avoiding multiple, uncoordinated checks on the same consignment. The New Zealand experience demonstrates how such integrated systems make it easier to capture TRS-relevant data and to attribute delays to specific process stages.

Joint inspections at integrated physical inspection sites emerge as another concrete measure to reduce time and uncertainty. Joint inspection models are therefore both procedural and organisational reforms that directly influence TRS results by shortening inspection queues and limiting redundant handling.

While customs officials tend to rate inter-agency coordination highly, private-sector respondents report more mixed experiences, citing variability in joint inspection practices, differences in system integration between ports, and challenges in tracking container status across multiple platforms. These perspectives highlight the need for CBM to be supported not only by formal frameworks but also by consistent field-level execution and open channels for trader feedback. Active engagement with the private sector is consistently identified as critical to designing and sustaining these reforms. This collaboration ensures that TRS results reflect real operational conditions and helps identify bottlenecks that may lie outside customs' direct control, such as terminal congestion, truck slot management or documentation practices by traders or carriers.

## **4.9. Logistics, Gate and Payment Infrastructure**

Improving physical and digital logistics infrastructure around ports and border points is another recurring strategy emerging from the workshop. Congestion at gates and in container yards can contribute materially to total dwelling time, even where customs processing has been completed. Consultation responses from Indonesian logistics operators and freight forwarders confirm that dwelling time is heavily influenced by truck congestion, delivery order procedures and the availability of electronic tools for managing appointments and yard operations. They indicate that while green-lane consignments can, in principle, be cleared rapidly from a regulatory perspective, overall dwell times can still range significantly because of infrastructure and operational constraints at ports and depots.

The clearance process measured by TRS does not end with a customs release decision; it is also influenced by how quickly cargo can move through gates, yards and inland logistics networks once regulatory controls are complete.

The Workshop discussions and the Tanjung Perak port visit highlighted that replacing manual gate checks with automated validation of vehicle and cargo data, significantly reducing transaction times per truck and improving predictability for port users.

Online delivery order and terminal charge systems constitute another practical measure to reduce time and cost. Indonesia's NLE emphasises the transition from manual to online issuance of delivery orders and terminal service documents, integrated with NSW and port systems. This enables cargo owners and trucking companies to complete administrative steps remotely and more flexibly, reducing delays caused by office hours, paper circulation and manual verification. In combination with auto-gates and improved truck-slot management, these online systems help to transform the "gate-out" segment of the clearance chain, which, as stakeholders noted, is often a critical determinant of total clearance time as measured by TRS.

## **4.10. Using TRS as a Continuous Improvement Tool**

Across all economies participating in the workshop and consultations, TRS is recognised as a practical tool for continuous improvement rather than a one-off diagnostic exercise. Presentations from Indonesia, New Zealand, Myanmar and Thailand emphasise that TRS provides a structured method for identifying bottlenecks at each stage of the clearance process - from pre-arrival and documentation through customs control to port and inland movement - and for prioritising reform measures.

Several administrations have adopted a regular TRS cycle - commonly biennial or more frequent - using consistent methodologies so that performance trends can be tracked over time. In New Zealand, repeating the study with the same approach allows Customs to measure the impact of the Trade Single Window and risk-management enhancements and to communicate results to domestic stakeholders and the WCO. Thailand's experience similarly underlines the value of periodic TRS across different transport modes to capture changes in clearance times and to identify areas requiring further intervention. In Indonesia, TRS results have been used to confirm the impact of initiatives under the NLE, to better understand the relative contribution of customs and non-customs factors to dwelling time, and to shape proposals for enhancing digital integration and joint inspection practices. The stakeholder consultations show that DGCE intends to increase the frequency and institutionalisation of TRS, building on previous exercises that have been conducted at intervals of roughly two to three years.

The updated WCO TRS Guide further reinforces this approach by promoting successive TRS cycles linked to clearly defined action plans, with results feeding into national and, where relevant, regional monitoring frameworks. Some administrations envisage expanding TRS coverage to additional ports and regions and establishing local or regional committees to address issues that can be resolved closer to the point of operation.

## 5. Stakeholder Roles and Inter-agency Coordination

TRS and CBM depend on clearly defined institutional responsibilities, robust coordination mechanisms, and enabling legal and digital frameworks. This chapter describes the principal stakeholders, the structures and tools that support coordination, and practical examples from selected countries to illustrate implementation in practice.

### 5.1. Key stakeholders and roles

#### 5.1.1. Public Sector

Public sector stakeholders constitute the core of border management and are responsible for designing, implementing, and enforcing the legal and procedural framework within which cross-border movements take place. They include all national authorities with statutory mandates at the border whose decisions collectively determine the time required for release and the level of control applied. In the context of TRS and CBM, these agencies are not only service providers but also data owners and decision-makers, and effective coordination among them is essential to achieve the simultaneous objectives of trade facilitation, revenue collection, safety, and security.

Customs authority-Effective TRS and CBM require clarity on the mandates and interactions of all agencies involved in border operations. Customs is typically the lead agency, responsible for administering import and export regulations, collecting duties and taxes, and enforcing prohibitions and restrictions, while balancing trade facilitation with compliance objectives. In the TRS context, Customs usually leads working groups, coordinates data collection, manages overall study design, and often drives cross-cutting initiatives such as risk management and national single window systems.

Port authority-manages the physical gateways-seaports, airports, and land borders-where goods and people move, controlling infrastructure, cargo handling, storage, and gate operations. Even after Customs clearance, goods cannot move without port or terminal operators arranging handling and exit, making close operational coordination and data sharing with Customs essential for timely release. In CBM environments, port community systems are increasingly integrated with Customs systems to synchronise operational status and reduce dwell time.

Quarantine and Sanitary and Phytosanitary (SPS) agencies (including agricultural, veterinary, food safety, and health authorities) are responsible for enforcing biosecurity and public health controls over plants, animals, food, and related products. Their inspections, testing, or certification often lie on the critical path of clearance, meaning that cargo may require SPS release in addition to Customs clearance before being physically released from ports. Under CBM, joint inspection protocols and enhanced electronic data exchange between Customs and SPS agencies can significantly reduce delays, and TRS data help identify the time taken for these approvals and opportunities for process improvement.

Immigration authority - is responsible for controlling the movement of people, including passengers and crew, and are therefore part of the broader border management environment at airports, seaports, and land crossings. In cargo operations, immigration functions intersect with Customs for crew clearance and security, and in some countries these functions are organisationally merged, which can support more integrated CBM arrangements. Where agencies remain separate, CBM frameworks encourage coordination on trusted trader and traveller schemes and information sharing on high-risk persons, vehicles, or conveyances.

Other Government Agencies (OGAs) - also referred to as Partner Government Agencies (PGAs) in a NSW context - include standards bodies, police and narcotics agencies, environmental regulators, licensing authorities, and other specialised regulators that impose conditions on cross-border movements. Many of these agencies require permits, licenses, or technical control checks before goods may be released, and their procedures must be fully integrated into TRS work and CBM reforms to prevent bottlenecks being shifted from one agency to another. Clearly defined roles and responsibilities, often articulated through memoranda of understanding (MOUs) or joint standard operating procedures (SOPs), help avoid duplication,

close procedural gaps, and ensure that each process step has a designated lead agency with the necessary support from others.

### 5.1.2. Private sector

Private sector stakeholders are core participants in TRS and CBM alongside government agencies, as they both use and supply the services and data that determine border performance. Their inclusion in governance structures and TRS work is essential for identifying practical bottlenecks and co-designing workable reforms.

Traders (importers and exporters) - are primary users of border procedures and therefore central to TRS and CBM. They provide commercial data, prepare and submit declarations and supporting documents, arrange payments, and decide on routing and logistics options that influence clearance times. Through consultations and structured feedback (for example, via chambers of commerce and sectoral associations), traders can highlight procedural and system issues that may not be visible from the government side, helping to prioritise reforms.

Customs brokers and customs clearance agents - act as intermediaries between traders and border agencies, preparing declarations, classifying goods, and ensuring compliance with customs and OGA requirements. Their operational experience across many consignments gives them a detailed view of practical obstacles, process variations, and data quality problems that directly affect release times. In TRS exercises, brokers often support data provision, help interpret process flows, and participate in validation of findings, while in CBM they are key partners in implementing new procedures or digital tools.

Freight forwarders, logistics service providers, and transport operators - coordinate multimodal movements, including booking cargo space, consolidating shipments, and organising inland transportation. They manage the interface between regulatory processes and the physical movement of goods, including interactions with ports, terminals, and warehouses, so their planning practices and information systems strongly influence dwell times and the effectiveness of pre-arrival processing. In CBM initiatives, these actors contribute to designing practical cut-off times, sequencing inspections relative to cargo handling, and aligning logistics schedules with regulatory decision-making.

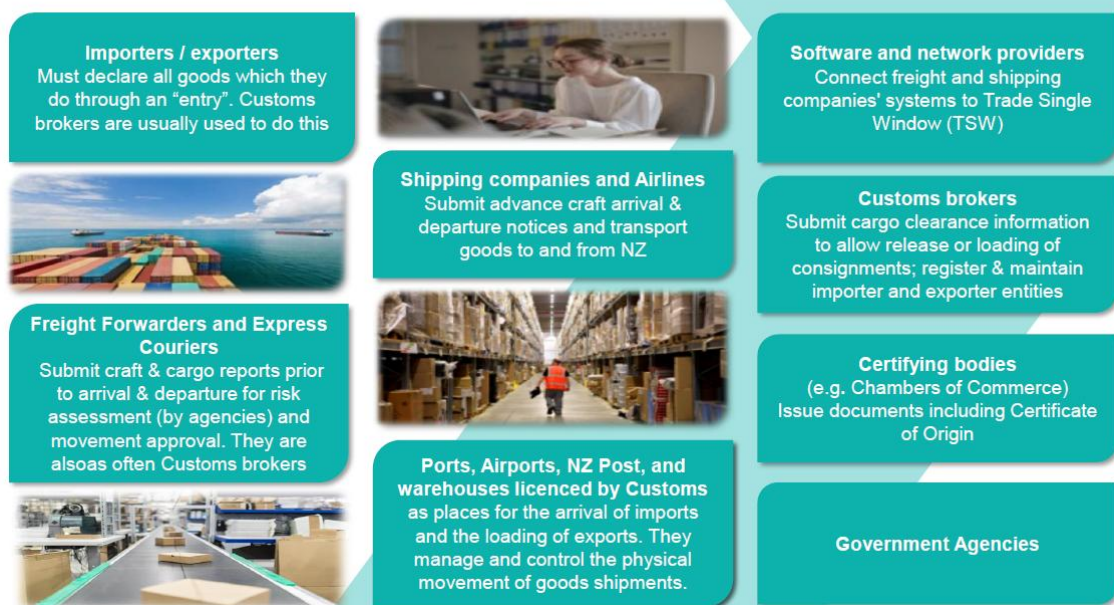
Terminal operators, port operators, and warehouse or container yard managers - provide and manage the physical infrastructure where cargo is stored, inspected, and released. They control gate operations, yard planning, and cargo handling processes that directly determine whether cleared consignments can exit promptly once regulatory requirements are satisfied. Close cooperation and system integration between these operators and border agencies are critical for end-to-end performance, and TRS often measures time segments under their control to identify opportunities for joint improvements.

Business and industry associations, including chambers of commerce - play an important representative and advisory role within national trade facilitation or CBM committees. They aggregate views from a broad range of companies, contribute to the design of TRS scopes and questionnaires, and participate in reviewing TRS results and implementation of action plans. In many countries, these associations co-lead public-private dialogue platforms on border management and support awareness-raising and training for their members on new CBM measures.

Financial institutions including banks and payment service providers - influence the timing of duty, tax, and fee payments that are often prerequisites for release. Their integration with Customs and single window payment modules reduces delays related to funds clearance and supports the move toward fully electronic, real-time settlement of border charges. Involving these actors in CBM and TRS discussions helps ensure that payment and guarantee processes do not become hidden bottlenecks in the overall clearance chain.

Figure 3 - Stakeholders in the New Zealand trade clearance chain <sup>45</sup>

## The NZ border system has many participants



## 5.2. Inter-agency and Public-Private Coordination

Inter-agency and public-private coordination rely on deliberate institutional, operational, and consultative mechanisms rather than ad hoc cooperation. Joint inter-agency committees - such as National Trade Facilitation Committees (NTFCs) or border management committees - provide a high-level forum to oversee TRS initiatives, establish shared performance targets (for example, average clearance or dwell times), and manage policy or mandate-related issues across agencies. In many countries, these bodies also include structured participation from private sector stakeholders (for example, chambers of commerce, broker and logistics associations, and sectoral industry groups), ensuring that operational reforms and TRS follow-up actions are informed by the experience of traders, customs brokers, terminal operators, and logistics service providers.

Regular meetings and agreed work programmes help maintain continuous dialogue, monitor implementation, and support follow-up on TRS findings among public authorities and private sector representatives. At the operational level, joint working groups and task forces often bring together border agencies with selected private sector participants (for example, major terminal operators or broker associations) to diagnose specific bottlenecks highlighted by TRS and co-design practical solutions.

In practice, most countries deploy a combination of mechanisms operating at three complementary levels:

- strategic (inter-agency and public-private committees, national trade facilitation strategies, and policy frameworks),
- operational (joint inspections, shared facilities, TRS working groups, and structured public-private dialogue), and
- technical (NSWs, linked Customs-port and community systems, and shared risk engines).

TRS provides the evidence base on where delays occur across agencies and along the logistics chain, while CBM and associated public-private coordination platforms provide the governance and tools for government and business to address those delays collectively.

<sup>45</sup> New Zealand Customs Service - Time Release Study (TRS) and Coordinated Border Management (CBM). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.

### 5.2.1. Legal and institutional enablers

High-level political support, through government programmes, signals that improved clearance performance, inter-agency cooperation, and constructive engagement with the private sector are national priorities, giving CBM initiatives the authority needed to overcome institutional resistance. Such mandates often appear in trade facilitation roadmaps, customs modernisation plans, or broader border management reform strategies, and increasingly emphasise formal mechanisms for consulting traders, logistics providers, and business associations on proposed measures. They create the environment in which agencies can share data and responsibilities, and in which public authorities can engage with the private sector without perceiving collaboration as a loss of control.

Legislative and policy frameworks provide the legal basis for electronic processes, data sharing, and coordinated border interventions, and can also formalise channels for public-private dialogue. Reforms may include amendments to customs laws to recognise electronic documents and data from other agencies, or specific trade facilitation statutes codifying single window arrangements, authorised economic operator (AEO) programmes, and multi-stakeholder trade facilitation bodies with private sector representation. International instruments such as the WCO Revised Kyoto Convention (RKC) and the WTO Trade Facilitation Agreement (TFA), particularly Article 2 on stakeholder consultations, Article 8 on border agency cooperation, and Article 7.6 on TRS, inform these domestic reforms and create shared standards.

Formal coordination bodies, including NTFCs and specialised inter-agency working groups or TRS task forces, are most effective when supported by clear terms of reference, regular meeting schedules, and agreed outputs such as annual TRS reports and time-bound action plans. Good practice is to designate seats or consultation mechanisms for private sector organisations within these bodies or in associated sub-groups, enabling business stakeholders to contribute to the design of TRS scopes, validation of results, and prioritisation of remedial actions. Memoranda of Understanding (MOU), both domestic (for example, between Customs and port authorities) and international (for example, customs-to-customs agreements on information exchange), complement primary legislation by setting out operational protocols where the law is general or silent, and similar MOUs can be used with private sector entities (for example, terminal operators or trusted traders) to clarify roles in joint initiatives or data exchange.

MOUs and other legal agreements are widely used to formalise cooperation modalities, including information sharing, coordinated or joint operations, and mutual recognition of inspection results. Where underpinned by laws or regulations mandating data exchange or coordinated inspections, these arrangements provide the legal certainty needed for agencies to cooperate while respecting their statutory mandates. Clarity in primary legislation designating a lead border coordination authority, typically Customs, can reduce resistance to collaboration by providing a clear chain of responsibility and a focal point for structured engagement with private sector stakeholders on CBM and TRS issues.

Capacity building and change management are critical to translating legal and structural reforms into sustained behavioural change across both public and private actors. Joint training, cross-postings, liaison officer schemes, and regular inter-agency workshops build mutual understanding among border agencies, while combined public-private training and awareness sessions help traders, brokers, and logistics providers to understand and adapt to new systems and procedures such as NSWs, risk-based controls, and revised SOPs.

### 5.2.2. Digital enablers for coordination

Digitalisation is a key driver of both TRS and CBM, enabling standardised data capture, real-time information flows, and shared performance monitoring among border agencies and with the private sector. NSWs, as the central digital platform, allow traders and intermediaries to submit data once and track clearance status across all border agencies, while providing authorities with consistent datasets for risk assessment and TRS measurement. Multiple ASEAN economies have implemented or upgraded NSWs connected to the ASEAN Single Window (ASW), demonstrating measurable reductions in clearance times and transaction costs for both government and business users.

Electronic documentation tackle delays associated with paper forms and fragmented portals, reducing administrative burdens for traders and brokers. NSW systems are a cornerstone digital mechanism for CBM, providing a single electronic entry point through which traders and logistics service providers submit

standardised data and documents that are then distributed to all relevant government agencies. By integrating Customs declarations, SPS permits, port manifests, and other regulatory requirements, NSWs reduce duplicative submissions and provide a common platform for agencies to sequence or synchronise their decisions, while also giving the private sector visibility on the status of each regulatory step. Integrated risk management arrangements, joint inspections, one-stop border posts, and interoperable IT systems further support CBM by reducing multiple holds on the same consignment and enabling coordinated, rather than sequential, interventions that can be planned and communicated with traders and logistics operators.

Integration between Customs systems and port or airport community systems is essential to linking regulatory decisions with logistics operations and private sector planning. When port systems receive real-time confirmation of regulatory clearance, they can automatically trigger gate passes or release orders, reducing port dwell times, whereas Customs benefits from early visibility of vessel or cargo arrival data from carriers and terminal operators to schedule inspections and staff deployment. Some countries have gone further by developing joint border management platforms used by multiple agencies and interfaced with trader and logistics systems, creating a single source of data for risk assessment, pre-arrival processing, and coordinated interventions along the supply chain.

Emerging technologies such as RFID, IoT tracking, blockchain, and AI-enabled document processing are increasingly explored to enhance traceability, security, and efficiency, and their design and rollout benefit from early involvement of private sector users to ensure interoperability and usability.

## 6. Gender Equality, Disability and Social Inclusion (GEDSI) in Trade Clearance

Gender Equality, Disability and Social Inclusion (GEDSI) considerations are increasingly recognised as essential to effective trade facilitation. Although border procedures are often perceived as technically neutral, the experiences of traders differ markedly depending on their resources, physical capabilities, digital literacy, and access to information. Evidence from the Regional Workshop, Stakeholders Consultation Report and Background Paper shows that MSMEs, women-led enterprises and persons with disabilities face distinct challenges throughout the trade clearance process. These challenges influence compliance, clearance times and the predictability of trade flows.

The WCO Gender Equality and Diversity in Customs Compendium<sup>46</sup> highlights that customs administrations can improve efficiency and fairness by integrating GEDSI principles into procedures, workforce development, service delivery and stakeholder engagement. In Indonesia, embedding these principles into TRS, CBM and digital transformation efforts will support both operational performance and equitable access to trade.

This chapter outlines three dimensions: (1) incorporating GEDSI principles in trade clearance, (2) identifying GEDSI-related dimensions in observed challenges, and (3) defining approaches to enhance inclusiveness in future reforms.

**“Trade is a master class in empowerment”.**

**Ms. Anoush der Boghossian,  
Head of Trade and Gender, WTO**

### 6.1. Incorporating GEDSI Principles in Trade Clearance

Integrating GEDSI into Indonesia's trade clearance framework requires a holistic approach that connects institutional policies, procedural design, and operational realities. GEDSI principles emphasise equitable access to information, accessibility of procedures, non-discrimination, and meaningful participation of under-represented groups. These principles align with the WCO's recommendations that customs administrations mainstream gender and diversity considerations into performance management, risk analysis, outreach, and digital transformation.

Within Indonesia's environment, GEDSI-aligned trade clearance begins with recognising that procedures must be designed for a diverse user base. Many MSMEs - often women-owned or family-run - operate with limited administrative resources, lower digital readiness, and less familiarity with regulatory processes. Ensuring that documentation requirements are clear, accessible and consistently applied is therefore a foundational GEDSI measure. The Background Paper notes that permit applications face rejection rates between 5 and 20 per cent due to incomplete information or format discrepancies, disproportionately affecting smaller traders who lack compliance specialists. Increasing the clarity and accessibility of guidance materials, offering support channels tailored to different user profiles, and strengthening front-end data validation can significantly reduce these gaps.

---

<sup>46</sup> World Customs Organization. (2023). Compendium on Gender Equality and Diversity in Customs (2nd ed.). <https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/capacity-building/activities-and-programmes/gender-equality/gender-equality-compendium-edition2-en.pdf>

Digitalisation efforts must also reflect GEDSI principles. Platforms such as INSW, CEISA and port community systems provide opportunities to reduce physical barriers and facilitate remote engagement, but only when designed with accessibility in mind. Traders with disabilities may require assistive technologies, while MSMEs often rely on mobile devices rather than desktops. The Regional Workshop highlighted inconsistent digital uptake across private-sector actors and uneven usability in system interfaces, underscoring the need for platforms built around universal design principles.

Institutional structures within Customs and OGAs also shape the environment in which GEDSI outcomes are produced. The WCO calls for inclusive workforce policies, training on unconscious bias, and customer-centric service delivery - all relevant for Indonesia as it strengthens TRS and CBM. Embedding GEDSI into internal governance enhances the consistency and fairness of interactions with the private sector and reinforces a culture of accessibility across agencies.

## **6.2. GEDSI Dimensions in Observed Challenges**

The consultation findings reveal that many systemic challenges in the clearance process have clear GEDSI dimensions, even when not explicitly framed that way. These challenges relate to differences in financial capacity, digital literacy, mobility constraints, and availability of time or staff - factors strongly correlated with firm size, gender dynamics and disability.

Findings from the workshops and consultations highlight four key areas where clearance challenges intersect with GEDSI considerations.

### **6.2.1. Uneven Participation and Information Access**

Participation in the trade clearance ecosystem remains uneven, with larger firms significantly better equipped to navigate documentation, risk channels and permit processes. MSMEs - often women-led or family-operated - face structural disadvantages due to limited administrative capacity, lower familiarity with regulatory requirements and restricted access to compliance support networks. Stakeholder survey data confirms that incomplete and inaccurate documentation is one of the main contributors to clearance delays, with OGAs reporting rejection rates of between 5 and 20 percent. Smaller traders lack specialised staff to interpret requirements or monitor procedural updates and therefore rely heavily on intermediaries, often at higher cost. Women-led firms additionally highlighted the difficulty of keeping pace with procedural timelines while managing domestic and caregiving responsibilities. These constraints limit their ability to participate effectively in clearance processes and increase vulnerability to delays and penalties. Uneven access to reliable information and procedural guidance also means that TRS outcomes reflect not only system performance but also underlying disparities in trader capability.

### **6.2.2. Physical and Procedural Accessibility Constraints**

The physical environment of ports and inspection premises creates barriers for persons with disabilities and for small operators that cannot allocate staff to prolonged on-site engagement. Ports and inspection facilities frequently lack accessible pathways, seating areas or customer service points, and in-person verification requirements persist despite expanded digitalisation. Consultations revealed that the inspection stage is often the most time-consuming, particularly for red-lane consignments that require multi-agency coordination. For persons with mobility impairments, the need to navigate multiple locations introduces added hardship. Procedural accessibility also extends to digital systems. Although INSW and CEISA provide electronic functionality, not all traders are equally able to use them. Older traders, especially those with limited digital literacy face difficulties navigating inconsistent interfaces or resolving system errors. These constraints prevent full utilisation of digital channels and place vulnerable users to slower, more burdensome manual procedures.

### **6.2.3. Behavioural and Operational Patterns Influencing Clearance Outcomes**

Behavioural patterns within the private sector further amplify inequalities in clearance outcomes. Larger importers sometimes intentionally delay the collection of containers to take advantage of free storage periods offered by terminals. As noted in the Regional Workshop discussion, this behaviour inflates dwell-time figures even when Customs and OGAs have completed clearance, adding interpretative complications to TRS findings. Smaller firms, however, may not have the financial flexibility to exploit such practices. For

MSMEs, any additional day of storage, demurrage or detention represents a significant portion of operating costs. Similarly, smaller traders often depend on freight forwarders to manage clearance, but the quality and responsiveness of intermediaries can vary. Errors by brokers - whether in document submission, permit sequencing or timing - have greater proportional impact on vulnerable firms. Women-led businesses shared that sudden requests for clarification or additional documentation create logistical tensions, especially when balancing work and caregiving. These behavioural and operational asymmetries shape how different trader segments experience both delays and compliance risks, and they highlight the need for TRS and CBM frameworks to integrate qualitative understanding of trader behaviour.

#### **6.2.4. Institutional Gaps in Mainstreaming GEDSI in Customs and CBM Practices**

Across Indonesia and AMS, while national-level gender mainstreaming policies are in place (e.g. Indonesia's Presidential Instruction No. 9/2000 on Gender Mainstreaming in National Development), survey responses and consultation findings indicate that GEDSI considerations may not have been systematically embedded within Customs institutional frameworks. In particular, most administrations, including Indonesia, have not formally integrated a GEDSI perspective into TRS design, CBM coordination mechanisms, clearance or inspection protocols. Despite national mandates, such gap lies more in the limited translation of those mandates into Customs operational guidelines. While some GEDSI initiatives have been implemented, these have not yet been institutionalised into Customs-wide procedural frameworks.

Feedback from the Stakeholders Consultation further demonstrates that clearance and inspection procedures can have uneven effects. Documentation complexity, inspection requirements, physical presence obligations and multi-agency requirements may impose disproportionately higher burdens on MSMEs, women-led enterprises and persons with disabilities. Without internal guidelines, training or service standards that recognise and address these impacts, agencies may unintentionally reinforce some inequities.

The WCO Gender Equality and Diversity Compendium emphasises the importance of adopting diversity strategies, inclusive customer service and gender analysis within Customs administrations. In the absence of institutional mechanisms such as GEDSI-sensitive SOPs, disproportionate impacts remain. Consequently, reform initiatives risk overlooking the lived experiences of vulnerable groups, thereby limiting the inclusiveness, effectiveness and sustainability of TRS and CBM improvements.

### **6.3. GEDSI Considerations Across Key Stages of Trade Clearance**

Embedding GEDSI into the operational stages of trade clearance requires recognising how procedural design, physical environments, and documentary requirements affect different groups of traders. Inclusive trade clearance is not achieved through high-level policy statements alone; it must be reflected in the routine steps of import lodgement, inspection, release, and data collection. Findings across the workshop, stakeholder consultations and the Background Paper show that the impacts on MSMEs, women-led firms and persons with disabilities vary across each stage.

- In the area of import lodgement and documentary assessment, the central challenge relates to complexity and documentation errors, which continue to be a major source of delays. Smaller traders, many of whom operate with limited administrative capacity, face a higher likelihood of submitting incomplete or inaccurate information. The Background Paper shows that permit rejection rates from OGAs range between 5 and 20 per cent due to data inconsistencies. These errors disproportionately affect MSMEs and women-led businesses that lack dedicated compliance personnel. Strengthening plain-language guidance, providing more accessible online instructions, and improving front-end data validation would therefore greatly reduce unnecessary interactions with OGAs and shorten the documentary assessment stage. These measures would support groups that are currently more dependent on brokers and intermediaries and therefore more sensitive to documentary complexity.
- The inspection and examination stage presents another set of constraints with clear GEDSI implications. This phase often involves physical presence, mobility within port areas, and compliance with safety protocols that may be challenging for persons with disabilities and smaller operators who cannot assign staff solely to clearance tasks. Stakeholder feedback from Indonesia identified this stage as the most time-consuming for red-lane consignments, particularly when multi-agency coordination is required. Long waiting periods, limited shelter or seating, and unclear communication exacerbate the burden on vulnerable groups. Reducing the

need for physical presence, expanding appointment-based inspections, and ensuring accessible inspection sites would not only improve operational efficiency but also enhance inclusiveness.

- In the release processes and port operations, challenges relate to congestion, inconsistent workflows, and reliance on manual interactions, all of which create unpredictable delays. These delays have a disproportionate impact on MSMEs, which operate with thinner margins and are more sensitive to storage and demurrage costs. Women-led firms also highlighted difficulties balancing operational continuity with caregiving responsibilities when release procedures require in-person follow-up. Although digitalisation through INSW and CEISA has made progress, many traders still face manual steps in accessing delivery orders or coordinating gate movements. Ensuring reliable end-to-end digital workflows, improving the usability of mobile interfaces, and making customer support more accessible - including for users with disabilities - would help reduce inequities embedded in the release process.
- A final operational area is data collection and TRS implementation, which currently does not systematically disaggregate user experiences by gender, disability or enterprise type. The WCO TRS methodology already accommodates both quantitative and qualitative analysis, enabling the inclusion of GEDSI-sensitive indicators without modifying the core framework. Indonesia can therefore broaden future TRS cycles to assess how procedural delays, documentation challenges, or inspection requirements affect different business groups. Integrating such metrics would generate evidence that supports more inclusive policy responses and helps agencies identify where reforms would have the greatest equity impact.

## 6.4. Private Sector Observations: GEDSI-Linked Challenges

The consultations revealed several underlying behavioural and structural factors within the private sector that shape clearance outcomes and carry GEDSI implications. MSMEs consistently reported greater vulnerability to procedural delays because they lack both financial buffers and staff dedicated to monitoring clearance progress. When delays occur - whether due to incomplete documentation, permit processing backlogs or logistical bottlenecks - smaller businesses experience proportionally higher costs relative to their turnover. Women-led enterprises noted additional pressures associated with balancing family responsibilities with procedural timelines, especially when agencies require rapid responses or in-person attendance. These intersecting burdens translate into slower clearance outcomes for certain categories of traders.

Persons with disabilities face a distinct set of constraints, particularly when interacting with physical port environments that may not be equipped with ramps, safe pedestrian pathways, or accessible counters. Digital platforms, while improving efficiency, are still not consistently designed with accessibility features such as adjustable text size or screen-reader compatibility. As noted in the Stakeholders Consultation Report, private sector actors also pointed out that inconsistent clarity in procedures leaves smaller firms more exposed to risk, as they rely more heavily on informal networks and intermediaries for updates. These challenges reinforce the need for greater predictability, inclusive communication, and digital systems that accommodate diverse user capabilities.

Behavioural patterns within the private sector also influence the accuracy of TRS measurement. Larger traders may intentionally delay clearance to take advantage of free storage periods provided by terminal operators. Although this behaviour is commercially rational for some firms, it distorts the apparent release-time profile and complicates the interpretation of TRS results. Smaller firms, however, are rarely able to exploit such incentives because financial pressures require rapid turnover of inventory. This divergence underscores the need to contextualise dwell-time data through qualitative insights, ensuring that clearance reform strategies account for real-world behaviours across different trader groups.

## 6.5. Approaches for Greater Inclusiveness

Building an inclusive trade clearance environment requires Customs and border agencies to integrate GEDSI principles across organisational systems, operational procedures, digital platforms and stakeholder engagements. The following subsections outline the key approaches that can strengthen inclusiveness within Indonesia's TRS and CBM frameworks.

### 6.5.1. Integrating Structured Assessment Through the WCO GEOAT

A foundational step in promoting inclusiveness is the adoption of structured diagnostic tools that help agencies identify institutional and procedural barriers. The WCO Gender Equality Organisational Assessment Tool (GEOAT) <sup>47</sup> provides a comprehensive framework for analysing how gender equality and diversity are embedded across leadership, human resource management, organisational culture and external service delivery. The tool offers Customs administrations a structured method to assess current practices, monitor progress and prioritise improvements. For Indonesia, GEOAT serves as a practical instrument to reveal gaps - such as uneven access to training, limited leadership pathways for women, inadequate accommodation for persons with disabilities or inconsistent inclusiveness in public-facing procedures. Integrating GEOAT findings into TRS and CBM planning ensures that reforms are evidence-based and aligned with international standards for organisational inclusiveness.

### 6.5.2. Strengthening GEDSI-Sensitive TRS Methodology

Enhancing inclusiveness within TRS begins with improving the quality and granularity of data. Incorporating GEDSI-sensitive indicators - such as differences in documentation error rates, inspection wait times or digital system usage across MSMEs, women-led firms and traders with disabilities - will provide a more accurate picture of how various groups experience clearance procedures. The WCO TRS framework already accommodates qualitative analysis and segmentation of user experiences, making it feasible for Indonesia to systematically capture and analyse these differentiations. Such data enables policymakers to identify where the burdens are highest and to tailor reforms that address specific vulnerabilities. Integrating GEDSI considerations into TRS design also improves the credibility and policy relevance of TRS findings.

Enhancing inclusiveness within TRS begins with improving the quality, granularity and structure of data collection. Incorporating GEDSI-sensitive indicators - such as documentation error rates, inspection wait times, physical inspection frequency, or digital usage across MSMEs, women-led firms and traders with disabilities - can provide a more accurate understanding of how various groups experience clearance procedures. This can include systematic collection of gender- and disability-disaggregated data, this would allow policymakers to identify structural patterns that may otherwise remain invisible. The WCO TRS framework recommends Customs administrations to systematically capture and analyse differentiated user experiences such that qualitative assessment, stakeholder segmentation and contextual analysis can be effectively done. Customs administrations can consider developing databases that integrate gender- and disability-disaggregated variables within TRS data regime.

### 6.5.3. Advancing Digital Accessibility and Inclusive System Design

Digitalisation has reduced administrative burdens for many traders, but uneven digital literacy levels and accessibility limitations mean that benefits are not evenly distributed. To address this, digital platforms - INSW, CEISA, port community systems - should adopt universal design principles, ensuring compatibility with screen readers, simplified navigation, mobile-friendly interfaces and multilingual or plain-language guidance. These enhancements support traders with visual impairments, older users, and MSMEs lacking dedicated IT capability. Providing multi-channel customer support, including voice-assisted services and chat-based helpdesks, will further reduce digital barriers. Inclusive digital transformation also reduces reliance on manual procedures, which disproportionately affect vulnerable groups facing mobility or time constraints.

### 6.5.4. Broadening Stakeholder Engagement and Inclusive Participation

Effective TRS and CBM reforms require meaningful participation from the full spectrum of stakeholders, including groups historically underrepresented in formal consultations. Broadening stakeholder engagement to include MSMEs, women entrepreneurs, disability advocacy organisations and smaller logistics operators ensures that policy design reflects diverse operational realities. Engagement formats should include hybrid participation options, flexible scheduling and accessible materials to accommodate participants with varying availability, digital literacy and language proficiency. Encouraging participatory approaches - such as

---

<sup>47</sup> World Customs Organization. (2023). Gender Equality Organizational Assessment Tool (GEOAT): In Gender Equality and Diversity in Customs Compendium (2nd ed.). WCO.

targeted focus groups, user-journeys mapping or problem-solving workshops - allows agencies to surface structural obstacles that may not be visible in high-level consultations.

#### **6.5.5. Institutional Mainstreaming of GEDSI Across Customs and OGAs**

Embedding GEDSI within organisational culture is essential to sustaining inclusiveness efforts. Customs and OGAs can strengthen GEDSI integration by aligning internal policies with principles emphasised in the GEOAT - such as inclusive recruitment, equitable training access, harassment-free workplaces, gender-responsive budgeting and leadership development programmes. Institutionalising these practices helps ensure that officers at all levels understand the differentiated needs of traders, enabling more empathetic and predictable service delivery. Moreover, coordinated border management structures can harmonise GEDSI practices across agencies, reducing fragmentation and ensuring consistent treatment throughout the clearance process.

#### **6.5.6. Enhancing Inter-Agency Coordination for Inclusive Service Delivery**

Coordinated Border Management (CBM) provides a powerful platform to improve inclusiveness by reducing procedural fragmentation. When agencies synchronise documentation requirements, inspection protocols and digital interfaces, traders face fewer access barriers and less confusion - benefiting those with limited resources, low literacy or mobility constraints. Integrating GEDSI principles into CBM frameworks ensures that inclusiveness is considered not only within each agency but across the full clearance chain. Joint training, shared guidelines and consolidated service standards can further reinforce consistent treatment and reduce the burden placed on vulnerable trader groups.

#### **6.5.7. Continuous Monitoring and Impact Evaluation**

Finally, inclusiveness must be monitored through regular evaluation. Agencies should establish indicators aligned with GEDSI objectives - such as improvements in accessibility, uptake of digital platforms among MSMEs, participation of women-led enterprises in consultations or reductions in physical visits required for traders with disabilities. Continuous monitoring allows agencies to assess whether inclusiveness measures are effective, to identify persistent barriers and to refine strategies based on evidence. Embedding GEDSI into annual reporting and TRS review cycles ensures sustained attention and institutional accountability.

## Case Study: Indonesia's GEDSI Innovations in Customs Administration

*Extracted from the WCO Gender Equality and Diversity in Customs Compendium*

Indonesia's Customs administration demonstrates how GEDSI principles can be embedded into both front-line service delivery and internal organisational processes. Several initiatives featured in the WCO Gender Equality and Diversity in Customs Compendium illustrate practical approaches that respond directly to the needs of vulnerable groups and operational realities.

The Migrant Partner Programme at Juanda Customs provides targeted support for returning migrant workers - predominantly women with limited formal education - by offering simplified services, mobile-phone-based assistance and priority information channels. This model reduces procedural barriers for groups that typically face documentation challenges, reinforcing the importance of accessible communication in trade-related procedures.

At the Surabaya Customs Laboratory, gender-responsive budgeting enables operational adjustments such as mobile laboratory services for users with physical constraints, safer working arrangements for pregnant employees and transport support for staff working overtime. These measures show how workplace inclusivity can coexist with efficiency and service continuity.

Further, leadership development initiatives at Tanjung Priok Customs and Excise explicitly strengthen women's opportunities for career progression through coaching and mentoring. Similarly, the Yogyakarta online declaration system improves accessibility for all passengers by digitising and simplifying customs declarations.

Denpasar Customs complements these operational measures with inclusive engagement, supporting SMEs - including many women-led businesses - through dialogue forums and export clinics.

Collectively, these practices demonstrate how GEDSI mainstreaming can enhance user experience, strengthen institutional culture and expand equitable access to customs services - offering a relevant reference point for Indonesia's ongoing TRS and CBM reforms.

## 6.6. Conclusion

GEDSI is not a peripheral consideration in trade clearance - it is central to achieving fair, efficient and predictable outcomes. The findings from Indonesia and the broader AMS region confirm that current clearance practices produce uneven impacts across different categories of traders. MSMEs, women-led enterprises and persons with disabilities face distinct barriers in documentation, inspection, release processes and system accessibility. By incorporating GEDSI principles into procedural design, recognising the GEDSI dimensions of observed challenges, and adopting targeted approaches for greater inclusiveness, Indonesia can ensure that trade facilitation reforms deliver widespread benefits and strengthen the legitimacy and effectiveness of TRS and CBM initiatives.

## 7. Implementation Guidelines

This chapter provides a structured pathway for translating good-practice lessons into concrete reforms that improve trade clearance performance at the national level. It builds directly on the best practices outlined in Chapter 3 and the strategies and measures presented in Chapter 4 and aligns with the implementation planning principles in the WCO TRS Guide, including its Model National Action Plan<sup>48</sup>, SMART objectives<sup>49</sup> and maturity indicators. The focus is on process improvement across the clearance continuum - from import lodgement and documentary assessment, through inspection and examination, to release and post-clearance logistics - rather than on the technical conduct of TRS or the establishment of Coordinated Border Management (CBM) per se.

### 7.1. Objectives and scope

The objective of this suggested implementation framework is to guide Customs and partner agencies can adopt, sequence and monitor process improvements that reduce clearance times, lower transaction costs and increase predictability for traders. The framework draws on the WCO TRS Guide Version 4, which emphasises results-oriented implementation planning, SMART objectives and a Model National Action Plan with clearly assigned responsibilities and maturity indicators.

In practical terms, this chapter:

- Defines step-by-step guidance for adopting process improvements, anchored in the best practices and strategies already described in the Handbook.
- Explains how to use the WCO Model National Action Plan and SMART objective framework to structure a national trade clearance reform plan.
- Presents indicative action plan tables, including suggested time frames and milestones, that can be adapted to national circumstances.

### 7.2. Steps for adopting process improvements

Improving trade clearance at national level should follow a deliberate and repeatable sequence, ensuring that reforms are evidence-based, coherent and supported across agencies and with the private sector. The following nine steps provide a structured roadmap.

#### 7.2.1. Step 1: Establish governance and mandate

The starting point is to put in place a formal governance mechanism for trade clearance reforms, typically a multi-agency working group or sub-committee under the National Trade Facilitation Committee (NTFC) or equivalent body, chaired by Customs as lead border agency. The mandate of this body should cover: (i) reviewing diagnostic evidence (including TRS, where available) and the findings of Chapters 2-4; (ii) prioritising clearance-related bottlenecks; (iii) preparing and updating a National Trade Clearance Action Plan; and (iv) coordinating implementation and monitoring results.

Terms of reference should clearly define membership (Customs, key OGAs, port and terminal authorities, Single Window operator, private sector), decision-making procedures and reporting lines to senior decision-makers.

---

<sup>48</sup> The “WCO Model National Action Plan” refers to the standard implementation matrix in Appendix 7 of the WCO TRS Guide (Version 4), which sets out TRS recommendations as concrete activities, links them to relevant WTO TFA provisions, specifies expected outputs, assigns responsible agencies, indicates indicative time frames and uses a maturity indicator to track the implementation status of each measure.

<sup>49</sup> The “SMART” framework, meaning that each objective should be Specific (clearly defined and focused), Measurable (supported by quantitative indicators), Achievable (realistic given available resources and capacity), Relevant (to the broader goals of trade clearance) and Time-bound (linked to a defined implementation period).

### 7.2.2. Step 2: Consolidate diagnostics and map current processes

The second step is to consolidate available diagnostics into a single, shared understanding of how trade clearance currently operates and where delays arise. This should draw on:

- TRS results and other time-measurement exercises, broken down into key time segments (arrival to lodgement, lodgement to assessment, assessment to release, release to removal, and - where available - permit issuance and inspection intervals).
- Qualitative evidence from the national on public and private sector stakeholder consultations and pain points.

Using this evidence, the working group should develop “as-is” business process maps for imports, exports and (where relevant) transit, per mode of transport, using flowcharts and swimlane diagrams to show the roles and interactions of Customs, OGAs, port/terminal operators, brokers and traders. This mapping should explicitly identify where processes are sequential rather than parallel, where data are re-entered or re-checked, and which steps are manual or digital, building directly on the best-practice process descriptions in Chapter 3.

### 7.2.3. Step 3: Identify and prioritize bottlenecks

The third step is to translate diagnostic evidence into a prioritised list of bottlenecks and reform opportunities. Based on Chapters 2-4 and TRS/other measurements, common pressure points include: incomplete or late lodgement and permit applications; fragmented licensing and quarantine procedures; high and inconsistent physical inspection rates; weak joint inspections; limited real-time integration between Customs, OGAs and port systems; manual or delayed payment and delivery order processes; and post-clearance port congestion and gate bottlenecks.

These issues should be grouped into a small number of thematic reform areas that covers, for example:

- Import lodgement and documentary assessment (including advance cargo information, pre-arrival processing, documentation quality and front-end validation).
- Inspection and examination (risk-based selectivity, joint inspections, use of NII, queue management).
- Release and post-clearance logistics (electronic release, e-delivery orders, gate and yard processes, truck appointment systems).
- Cross-cutting enablers (automation and Single Window integration, CBM governance, SLAs, data quality and TRS institutionalisation).

These themes should then be prioritised by impact (potential reduction in time and variability), feasibility (legal, technical and institutional), and alignment with national trade facilitation strategies and international commitments (WTO TFA, RCEP, ASEAN frameworks).

### 7.2.4. Step 4: Define target (“to-be”) processes

The fourth step is to design the desired end-state for each priority area, expressed as “to-be” processes. These should reflect the best practices identified in Chapter 3 and the improvement strategies in Chapter 4 and be consistent with WCO and WTO TFA standards.

For example, the to-be model for import lodgement and documentary assessment should envisage widespread pre-arrival data submission, robust front-end validation and standardised data requirements across agencies, enabling risk assessment and preliminary decision-making before cargo arrival. The to-be model for inspection should foresee coordinated risk management, calibrated inspection frequencies, joint inspections where appropriate, and optimised use of NII and digital tools. The to-be model for release should align digital approvals, port operations and gate-out, ensuring that once regulatory conditions are met, cargo can exit with minimal additional delay.

These redesigned processes will form the substantive basis for defining the objectives and actions in the National Action Plan.

### 7.2.5. Step 5: Formulate SMART objectives

The fifth step is to convert target processes into SMART objectives, in line with the WCO TRS Guide’s implementation planning guidance. Each objective should be:

- **Specific:** clearly focused on a defined segment or problem (for example, “arrival to lodgement” for sea imports, “permit issuance” for specific OGAs, or “payment to release”).
- **Measurable:** supported by quantitative indicators (average clearance time, rejection rates, percentage of electronic submissions, inspection rates, share of joint inspections).
- **Achievable:** calibrated to national capacity, available resources and existing legal frameworks.
- **Relevant:** aligned with national strategies and international obligations (WTO TFA Articles 7 and 8, RCEP Chapter 4, ASEAN trade facilitation instruments).
- **Time-bound:** associated with realistic implementation periods and review points (short-, medium- or long-term).

For example, an objective might aim to reduce the average “assessment to release” time for low-risk consignments by a specified proportion, through risk-based selectivity, expanded post-clearance audit and automation of release decisions, as recommended in Chapter 4. Another could target a reduction in permit rejection rates through improved data standards and trader guidance, drawing on evidence of upstream documentation errors.

Figure 4 - Setting SMART Objectives <sup>50</sup>



#### 7.2.6. Step 6: Define actions, responsibilities and resources

The sixth step is to identify the key actions required to achieve each SMART objective and to allocate clear responsibilities and resources. Typical actions include:

- Legal and regulatory measures (amending laws or regulations to recognise electronic documents, enable pre-arrival processing, or formalise joint inspections and SLAs).
- Procedural changes (revising standard operating procedures, introducing joint inspection protocols, rationalising documentary requirements).

<sup>50</sup> Diagram from [https://trdsf.com/blogs/news/how-to-write-smart-goals?srltid=AfmBOorehQU3yYCWKFgHMCfxBek4ybliEe5d2nOK\\_oZhjH9SgOXO772z](https://trdsf.com/blogs/news/how-to-write-smart-goals?srltid=AfmBOorehQU3yYCWKFgHMCfxBek4ybliEe5d2nOK_oZhjH9SgOXO772z)

- System enhancements (upgrading Customs and Single Window platforms, implementing APIs between Customs, OGAs and port systems, deploying e-delivery order solutions and gate automation).
- Capacity building and change management (training for officers and traders, guidance materials, communication campaigns).

The WCO TRS Guide recommends the use of a RACI-type approach<sup>51</sup> to clarify who is **responsible, accountable, consulted and informed** for each action, even where the action plan table only shows a single “lead agency” column. Customs will often be lead for regulatory and Customs-system changes, while OGAs, port authorities, terminal operators, Single Window agencies, banks/payment providers and private sector organisations will be key partners for other actions.

Resource needs, including staff time, IT development, training budgets and potential external technical assistance, should be briefly noted in the comments section of the action plan, providing inputs to budget and project planning.

### 7.2.7. Step 7: Develop and endorse the National Trade Clearance Action Plan

The seventh step is to consolidate objectives and actions into a single National Trade Clearance Action Plan using the WCO Model National Action Plan structure in Appendix 7 of the TRS Guide, adapted for the broader clearance reform agenda. The plan should include, for each action: a reference, a SMART objective, a concise description of the action, linkages to WTO TFA and WCO instruments, lead and supporting entities, indicative time frame (short/medium/long term), key performance indicator(s), and a maturity indicator.

Once drafted, the plan should be submitted to the appropriate higher-level authority (for example, the head of Customs and the NTFC) for endorsement. Following approval, the plan should be communicated throughout Customs, partner agencies and relevant private-sector stakeholders, ensuring that roles, timelines and performance expectations are clearly understood.

### 7.2.8. Step 8: Implement, monitor and adjust

The eighth step is to implement the plan and monitor progress against time frames, milestones and performance indicators. The governance body established under Step 1 should review progress at regular intervals, using the maturity indicator system described in Appendix 5 of the WCO TRS Guide to classify each action as “not initiated”, “in preparation”, “under implementation”, or “fully implemented and functioning”.

Monitoring should be grounded in operational data (system time stamps, TRS findings, permit processing statistics, inspection rates, port dwell times) and supplemented by qualitative feedback from operational units and private-sector users. Where delays or obstacles are identified, the working group should adjust time frames, re-sequence actions, or modify activities, ensuring that the plan remains realistic while preserving overall reform momentum.

### 7.2.9. Step 9: Review impact and feed into the next improvement cycle

The final step is to evaluate the impact of the implemented measures on trade clearance performance and feed lessons into the next cycle of improvements. This review should compare current performance indicators with baseline values (for example, TRS outcomes before reforms, or data compiled at the time the plan was developed), disaggregated by mode, port and commodity where possible.

Step 9 should explicitly link the review stage to the TRS “continuous improvement cycle” concept set out in the WCO TRS Guide, which frames TRS not as a one-off measurement but as a recurring loop of measuring, analysing, implementing and re-measuring. After assessing the impact of implemented measures against baseline indicators (including TRS results), administrations are encouraged to plan and conduct

---

<sup>51</sup> The WCO TRS Guide highlights the RACI model as a tool for clarifying implementation roles, whereby for each action one or more parties are designated as Responsible (those who carry out the work), Accountable (the person ultimately answerable for the result), Consulted (stakeholders or experts whose input is sought) and Informed (those who are kept updated on progress and decisions).

subsequent TRS exercises, refine their National Action Plan based on new evidence, and repeat the cycle so that trade clearance performance is progressively improved over time in a structured, data-driven manner.

Findings should be used to update the National Action Plan, closing actions that are fully embedded, revising objectives where necessary, and identifying new priority areas (for example, emerging bottlenecks in digital processes or logistics chains). Where feasible, a new TRS or similar time-measurement exercise should be conducted to provide independent confirmation of improvements and to identify remaining bottlenecks, maintaining the continuous improvement loop envisaged in the WCO TRS Guide.

Figure 5 - TRS as a Continuous Improvement Cycle <sup>52</sup>



### 7.3. Using the WCO Model National Action Plan

The WCO TRS Guide includes a Model National Action Plan (Appendix 7) that provides a structured way to organise and implement recommendations arising from a TRS. Although it was developed for TRS follow-up, the same structure is well suited for broader trade-clearance reforms, because it helps administrations translate high-level recommendations into concrete, sequenced actions that are easy to track over time. The model promotes clarity (each action is clearly described), accountability (a lead agency is identified) and comparability (progress can be monitored consistently across actions and review cycles).

For the purposes of this Handbook, the Model National Action Plan can be adapted to capture the priority actions identified in Chapters 3 (Best Practices Guidance in Trade Clearance) and 4 (Improvement Strategies and Practical Measures). The adapted template would normally contain the following columns:

- A reference number, which allows each activity to be uniquely identified and tracked in reports, dashboards or meeting minutes.
- An objective formulated using the SMART framework so that it clearly states the intended outcome (for example, a targeted reduction in processing time or error rates within a defined period).

<sup>52</sup> World Customs Organization, 2021, Time Release Study Guide, Version 4, [https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/time-release-study/trs-guide-version-4\\_en.pdf](https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/time-release-study/trs-guide-version-4_en.pdf)

- A brief description of the action, summarising what can be done to achieve the objective (such as revising procedures, upgrading IT systems or introducing joint inspections).
- A link to WTO TFA provisions, indicating how the action supports compliance with international commitments and standards.
- The lead agency and supporting entities, specifying who is responsible for implementation and which other bodies need to be involved.
- An indicative time frame, usually categorised as short, medium or long term, signalling when the action is expected to be completed and allowing sequencing and prioritisation across the plan.
- One or more key performance indicators (KPIs), which provide measurable evidence of progress.

Using SMART objectives is central to making this model effective. Instead of listing generic intentions (such as “improve lodgement” or “enhance inspections”), each row of the plan is anchored in a clearly defined outcome. For example, under the theme of import lodgement and documentary assessment, a SMART objective might be to reduce the proportion of permit applications rejected due to documentation errors to an agreed percentage within a specified timeframe, by introducing front-end data validation in the Single Window and publishing clearer trader guidance. Under inspection and examination, an objective could be to reduce the average time taken for red-lane inspections at major ports by a defined margin, through recalibrated risk rules, expanded joint inspections and more systematic use of non-intrusive inspection equipment.

Embedding SMART objectives into the WCO Model National Action Plan ensures that the implementation of best practices and improvement strategies is measurable, time-bound and directly linked to observed performance gaps identified in TRS and other diagnostics. It also facilitates more meaningful monitoring and evaluation, because progress can be assessed not only in terms of whether actions have been completed, but also in terms of whether they have delivered the intended, quantifiable improvements in trade-clearance performance.

**Table 2 - Sample Model National Action Plan**

| Ref. | SMART objective                                                                                                             | Action description                                                                                                                                                                      | Lead agency                   | Supporting entities                                     | Indicative time frame* | Key performance indicator(s)                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1  | Reduce average “arrival to lodgement” time for sea imports at main ports by a defined percentage within a set period.       | Enable and promote pre-arrival submission of cargo and declarations; upgrade Customs/NSW systems for pre-arrival validation and risk assessment; issue clear guidance to traders.       | Customs                       | NSW operator, port authorities, shipping lines, brokers | Short-medium           | Average “arrival to lodgement” time; share of declarations lodged before arrival; share of consignments risk-assessed pre-arrival.        |
| 2.1  | Reduce average “assessment to release” time for low-risk consignments by a defined percentage while maintaining compliance. | Recalibrate selectivity criteria; expand post-clearance audit; streamline inspection SOPs for low-risk channels; automate release for green-lane entries.                               | Customs (risk management/PCA) | OGAs, port authorities                                  | Medium                 | Average “assessment to release” time by risk channel; percentage of consignments in green/yellow/red channels; number of PCA cases.       |
| 4.1  | Reduce “payment to release” time for eligible consignments to a defined target.                                             | Implement real-time electronic payment interfaces; remove unnecessary manual signatures; legally recognise electronic payment confirmation and release; inform users of new procedures. | Customs (revenue/IT)          | Central bank, commercial banks, NSW operator, terminals | Short-medium           | Average “payment to release” time; share of duties/taxes paid electronically; share of consignments released automatically after payment. |
| 5.1  | Reduce average inspection-related delays at main ports by an agreed percentage.                                             | Introduce joint inspection SOPs and scheduling; align risk rules across agencies; use shared inspection facilities and NII; track inspection times systematically.                      | Customs                       | OGAs, port authorities, terminal operators              | Medium                 | Average time for inspected consignments; share of joint inspections; inspection frequency by agency.                                      |

| Ref. | SMART objective                                                                | Action description                                                                                                                                                                                   | Lead agency                                             | Supporting entities                                     | Indicative time frame*    | Key performance indicator(s)                                                                                                                            |
|------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1  | Reduce average “release to removal” time at key ports by a defined percentage. | Integrate Customs/NSW with port and terminal systems; roll out e-delivery orders; support truck appointment and gate automation; publish separate regulatory and commercial dwell-time indicators.   | Port authority / terminal operators (with Customs, NSW) | Shipping lines, trucking companies, logistics providers | Medium-long               | Average “release to removal” time; share of e-delivery orders; average gate transaction time; share of consignments using appointment systems.          |
| 7.1  | Institutionalise TRS as part of a recurring clearance-improvement cycle.       | Establish a multi-agency TRS Working Group; agree periodic TRS cycles; use TRS results to update this Action Plan and target reforms; track changes in key clearance-time indicators between cycles. | Customs (TRS lead)                                      | OGAs, port authorities, private sector                  | Medium term and recurring | Frequency and coverage of TRS; number of action-plan measures derived from TRS; change in average clearance-time indicators over successive TRS cycles. |

## 7.4. Suggested Action Plan

This section presents an illustrative National Trade Clearance Action Plan for a 24-month horizon. Countries can adapt this template to their specific contexts, legal frameworks and institutional arrangements.

### 7.4.1. Months 0-3: Governance and consolidation of diagnostics

In the initial phase, the government should formalise a multi-agency Trade Clearance Reform Working Group under the National Trade Facilitation Committee or an equivalent body, with Customs as lead. This Working Group should consolidate all available diagnostics on clearance performance, including previous TRS results, where available, system time-stamp data, and stakeholder feedback on bottlenecks across lodgement, permits, inspections, payments and post-clearance logistics.

Indicative milestones: Trade Clearance Reform Working Group established and endorsed; key diagnostics compiled and validated; priority problem areas broadly agreed.

### 7.4.2. Months 3-6: Design of the Trade Clearance Action Plan

In the second phase, the Working Group should translate the identified bottlenecks and good practices from Chapters 3 and 4 into a structured Trade Clearance Action Plan, using the adapted WCO Model National Action Plan format with SMART objectives, concise actions, lead and supporting entities, indicative time frames and KPIs. The plan should cover core themes such as import lodgement and documentary assessment, inspection and examination, permits and OGAs, payment and release, and port/post-clearance processes.

Indicative milestones: Draft Trade Clearance Action Plan prepared; SMART objectives and indicators agreed for each theme; plan endorsed by the National Trade Facilitation Committee or equivalent.

### 7.4.3. Months 6-12: Implementation of quick-win measures and enabling arrangements

The third phase focuses on early, high-impact reforms that can be implemented within existing legal and system frameworks. Quick-win measures may include aligning working hours of border agencies at key locations, introducing or expanding joint inspections at major ports, simplifying low-risk documentation requirements, accepting electronic copies of supporting documents, or improving front-end data validation in existing systems to reduce permit or declaration errors. In parallel, the Working Group should put in place enabling arrangements for longer-term reforms, such as establishing specialised sub-groups (for example, ICT integration, legal and regulatory alignment, inspection coordination) and agreeing basic service-level expectations across agencies.

Indicative milestones: At least one or two quick-win reforms operational (for example, joint inspection pilot, harmonised agency hours, enhanced document acceptance); thematic sub-groups established and workplans defined.

### 7.4.4. Months 12-18: Roll-out of core process and system reforms

The fourth phase concentrates on the more substantial reforms in the Action Plan. This may include integrating additional permit-issuing agencies into the NSW; strengthening risk-management and selectivity to reduce unnecessary inspections; refining inspection procedures (including wider and more predictable joint inspections); deploying or upgrading electronic payment and automated release functions; and strengthening links between Customs/NSW systems and port or terminal platforms to improve “release to removal” performance. Where required, legal and regulatory amendments (for example, recognition of electronic documents and signatures, elimination of duplicate forms, clarification of data-sharing rules) should be advanced and brought into force. The Working Group should monitor implementation regularly, address inter-agency issues and oversee training and communication to front-line officers and traders.

Indicative milestones: Core medium-term reforms operational at main gateways (for example, additional OGAs onboarded to NSW, revised risk and inspection procedures in use, improved payment and release workflows functioning); key legal and regulatory changes adopted and applied.

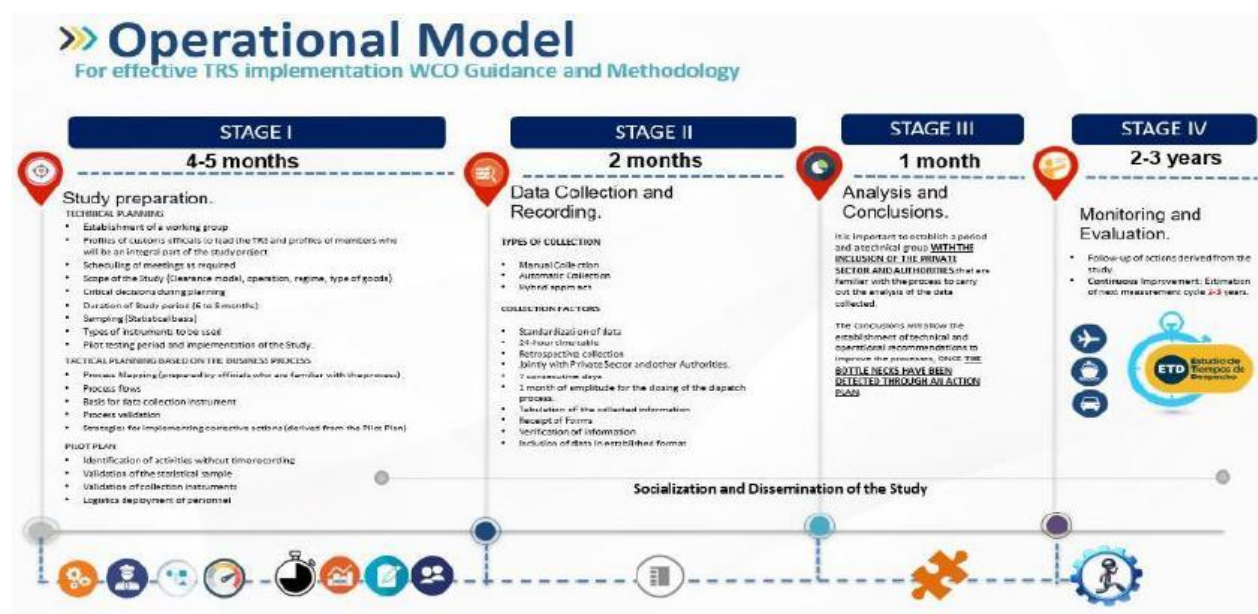
#### 7.4.5. Months 18-24: Performance review, consolidation and preparation of the next cycle

In the final phase of the two-year horizon, the administration should assess the impact of the Trade Clearance Action Plan against the SMART objectives and KPIs defined earlier, using updated system data, TRS or mini-TRS measurements where available, and feedback from public and private stakeholders. The review should identify which objectives have been met, which require additional attention, and what unintended effects have emerged, and should document lessons for future reforms. Effective practices - such as successful joint inspection regimes, streamlined lodgement procedures or improved port-side coordination - should be formalised through standard operating procedures, institutional mandates or long-term cooperation agreements.

At the same time, the Working Group should update the Trade Clearance Action Plan for the next period, closing completed actions, revising ongoing measures and introducing new ones to address remaining bottlenecks or newly identified challenges. As part of the TRS continuous improvement cycle, administrations may decide to schedule a new TRS or equivalent measurement exercise around or after the 24-month mark, using it primarily to validate trade-clearance improvements and refine the next round of reforms.

Indicative milestones: Trade clearance performance review completed and endorsed; successful practices embedded in SOPs and institutional arrangements; updated Trade Clearance Action Plan prepared for the next cycle, with any planned TRS or measurement exercises aligned to support ongoing, data-driven improvement.

Figure 6 - TRS Operational Model of the Guatemalan Customs Administration <sup>53</sup>



Source: Guatemalan Customs Administration

<sup>53</sup> World Customs Organization. (2025). Time Release Study Guide (Version 4): Guide to measure the time required for the release of goods.

## 8. Monitoring, Evaluation and Sustainability

Effective monitoring, evaluation and sustainability mechanisms are essential to ensure that trade-clearance reforms deliver lasting improvements rather than one-off gains. A structured framework is needed to connect measurement (including TRS and system-based indicators), implementation of the Trade Clearance Action Plan, and planning for subsequent reform cycles, so that clearance performance is continuously improved and firmly embedded within the broader national trade-facilitation agenda. This chapter sets out how such a framework can be organised, the types of performance indicators most relevant to border clearance, and the structures and tools that support feedback and sustained change over time.

### 8.1. Comprehensive Monitoring and Evaluation Framework

A comprehensive monitoring and evaluation (M&E) framework for trade clearance should build directly on the Trade Clearance Action Plan agreed by stakeholders and endorsed at national level. Responsibilities for follow-up should be clearly allocated, preferably through an institutional mechanism such as a National Trade Facilitation Committee (NTFC) or an equivalent multi-agency body that brings together Customs, other government agencies (OGAs), logistics and port authorities, and private-sector representatives.

The WCO TRS Guide notes different options for organising monitoring and evaluation but highlights that, given the national priority attached to implementing the WTO TFA on a “**whole-of-government**” basis and the multi-stakeholder nature of NTFCs, using the NTFC is generally the preferred option. In many countries, NTFCs are legally constituted with a firm mandate to coordinate national efforts on trade facilitation, which makes them well placed to oversee TRS follow-up and broader clearance reforms. Customs is expected to play an important role within the Committee, including in monitoring and evaluating TRS results and associated actions.

Within this arrangement, the Committee can conduct monitoring and evaluation through regular feedback from all relevant government agencies and private-sector stakeholders. For example, each stakeholder can be requested to report on progress in implementing its respective recommendations and activities derived from TRS findings and the Trade Clearance Action Plan, including status against agreed indicators and any challenges or support needs. The NTFC (or equivalent body) can then review these reports, coordinate responses where several entities share responsibility, and decide on adjustments to priorities or sequencing as necessary.

In environments where an NTFC has not yet been established or is still evolving, Customs may temporarily assume a coordinating role by convening a Trade Clearance Reform Working Group with participation from key OGAs and private-sector representatives. This group should maintain a consolidated version of the Action Plan, organise periodic review meetings, and prepare summary reports that can later be integrated into a formal NTFC structure as it becomes operational.

Monitoring should occur at two complementary levels. At the national and operational level, agencies track implementation of the Trade Clearance Action Plan, verify whether planned procedural and system changes are being executed, and assess whether these changes are improving clearance times, predictability and trader experience. At the analytical and periodic level, more detailed time-measurement tools - including full TRS cycles or “TRS-equivalent” exercises based on system time stamps - are used to validate results and identify new or persistent bottlenecks, in line with the TRS continuous improvement cycle described in the WCO Guide.

To link implementation and measurement in a practical way, the Action Plan should explicitly reference the indicators and data sources that will be used for monitoring each objective, and the NTFC or Working Group should ensure that these are routinely produced and reviewed.

## 8.2. Key Performance Indicators and Measurement Tools

Key performance indicators (KPIs) lie at the heart of the M&E framework because they provide objective evidence of whether trade-clearance reforms are improving performance and user experience. In line with the WCO TRS Guide, time-based indicators are the core of any clearance measurement system. These include average and median release times from arrival to physical release, disaggregated by mode of transport (sea, air, land), procedure type (for example, imports, exports, transit), selectivity channel (green, yellow, red) and, where relevant, by border point or terminal.

To understand where delays occur and how reforms affect specific stages of the clearance chain, these overall figures should be complemented by interval-based indicators, such as:

- Time from arrival or manifest submission to lodgement of the customs declaration.
- Time from lodgement to assessment and/or risk-channel allocation.
- Time from assessment to release, including inspection and examination where applicable.
- Time for issuance of permits or approvals by OGAs for selected regimes.
- Time from payment to release, and from release to physical removal from the terminal.

Together, these metrics make it possible to determine not only whether overall performance is improving, but also which specific process segments are driving change in either direction.

Beyond time, a broader set of KPIs is needed to assess the quality, effectiveness and sustainability of reforms. The WCO TRS Guide and regional experience suggest tracking, among others:

- Inspection and intervention rates by selectivity channel, agency and mode, to assess how effectively risk-management is applied.
- Rejection or resubmission rates for customs declarations and permit applications, as a proxy for data quality, clarity of requirements and effectiveness of front-end validation.
- Utilisation of facilitation tools, such as pre-arrival processing, electronic payments, electronic delivery orders, trusted trader or AEO programmes, and joint inspection arrangements.
- System-usage metrics, such as the share of transactions processed through the National Single Window, the proportion of permits issued electronically, or the frequency of manual overrides to automated decisions.

Over successive measurement cycles and in routine operational reporting, these indicators enable administrations to judge whether risk management is becoming more targeted, whether documentation quality is improving, and whether digital systems and CBM arrangements are being used to their full potential. They also support communication with the private sector by providing concrete, transparent evidence of progress and remaining gaps.

A range of tools can be used to generate and manage these indicators. The TRS remains the most comprehensive, combining structured data collection and analysis with a nationally endorsed set of recommendations. Between full TRS cycles, administrations can use simplified time-measurement exercises and “dashboard” tools drawing on routinely available data from Customs, Single Window and port systems. These dashboards can monitor a core set of KPIs (for example, average release times, interval metrics, inspection rates, rejection rates) by location and over time, helping to flag emerging bottlenecks and to assess the impact of specific reforms. To ensure comparability across locations and over time, indicator definitions should be standardised and documented, and, where possible, based on templates or models consistent with WCO guidance.

## 8.3. Feedback Mechanisms and Learning

Continuous improvement depends not only on data but also on effective feedback and learning mechanisms that connect indicators, operational experience and decision-making. Regular progress reports from implementing agencies to the NTFC or Trade Clearance Reform Working Group should summarise status against Action Plan objectives, discuss KPI trends, highlight issues requiring high-level decisions, and document any corrective measures taken. These reports can be supported by periodic multi-stakeholder meetings where Customs, OGAs, port authorities and private-sector representatives jointly review performance data, share operational perspectives and agree on follow-up actions.

The table below provides a list of relevant structures and mechanisms to be put in place. Depending on national priorities and operating context, administrations can consider these as part of their implementation programme.

**Table 3 - Structures and Mechanisms for Feedback and Learning**

| Component                              | Purpose                                                                                  | Examples                                                                                                                                                                                                                                                  |
|----------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Governance and responsibilities</b> | Provide a clear structure for following up TRS recommendations and coordinating agencies | National Trade Facilitation Committee or equivalent coordination body; designated TRS monitoring team in Customs; agency focal points responsible for specific actions.                                                                                   |
| <b>Core outcome KPIs</b>               | Track overall clearance performance and its evolution over time                          | Average and median release time from arrival to physical release, by mode, procedure type, selectivity lane and location; total dwell time from gate-in to gate-out at major ports.                                                                       |
| <b>Process KPIs</b>                    | Identify where in the clearance chain delays occur                                       | Time from lodgement to acceptance; acceptance to risk decision; decision to inspection or permit issuance; payment to final release; separate intervals for OGA permits and joint inspections.                                                            |
| <b>Quality and risk KPIs</b>           | Assess effectiveness of risk management and documentation quality                        | Inspection rates by lane; proportion of inspections with significant findings; rejection and re-submission rates for declarations and permits; share of consignments using pre-arrival processing or e-DO; utilisation of AEO or trusted trader channels. |
| <b>Systems and reliability KPIs</b>    | Monitor the robustness of digital platforms that enable facilitation                     | System availability for customs and Single Window platforms; average response times for key transactions; frequency and duration of outages; consistency and completeness of time-stamp data needed for TRS analysis.                                     |
| <b>Monitoring tools</b>                | Provide practical mechanisms for collecting and reviewing data                           | Periodic full TRS; simplified “TRS-lite” dashboards; standardised indicator templates; regular progress reports on the national action plan; stakeholder                                                                                                  |

Transparent communication with the trading community is an important part of sustaining reform momentum. Administrations are encouraged to publish periodic summaries of key clearance indicators and reform progress, for example through annual trade-facilitation reports, press releases, stakeholder briefings or online dashboards. Such transparency builds trust, demonstrates accountability and creates incentives for all parties - including traders and intermediaries - to adjust their behaviour in support of shared performance goals.

Institutional learning is another critical dimension. The WCO TRS Guide encourages administrations to document lessons learned from each TRS or major measurement exercise, including methodological challenges, data issues, stakeholder engagement experiences and examples of what worked well. These lessons should be captured in internal guidance or “playbooks” and incorporated into the design of subsequent TRS cycles and clearance-reform initiatives, so that institutional knowledge is retained even when personnel or organisational structures change.

In this way, monitoring and evaluation are not separate from the trade-clearance reform process or from the TRS methodology; they constitute its final phase and the bridge to the next cycle. By closing the loop between measurement, implementation and redesign - and by anchoring this loop in robust institutions, clear indicators and open feedback channels - administrations can ensure that improvements in border-clearance performance are not only achieved but sustained and scaled over the long term.

## 9. References

1. Directorate General of Customs and Excise (DGCE) Indonesia - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
2. DGCE Indonesia - National Logistics Ecosystem (NLE). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
3. Royal Malaysian Customs Department - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
4. Myanmar Customs Department - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
5. New Zealand Customs Service - Time Release Study (TRS) and Coordinated Border Management (CBM). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
6. Thai Customs Department - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
7. Australian Border Force / Australian Customs - Time Release Study (TRS) and Coordinated Border Management (CBM). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
8. General Department of Customs and Excise of Cambodia - Time Release Study (TRS). (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
9. DGCE Indonesia - Advance Cargo Information and Pre-Arrival Processing: Influence on Time Release Study. (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
10. World Customs Organization - Challenges in conducting Time Release Studies. (2025, June 18). Presentation at the TRS & CBM Regional Workshop, Surabaya, Indonesia.
11. World Customs Organization - Time Release Study Guide (Version 4): Guide to measure the time required for the release of goods. (2025).
12. World Customs Organization - Gender Equality Organizational Assessment Tool (GEOAT): In Gender Equality and Diversity in Customs Compendium (2nd ed.). (2023).

## About RT4D

Regional Trade for Development (RT4D) is an AUD53.3 million, 6-year initiative funded by the governments of Australia and New Zealand to support the effective implementation of ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) and the Regional Comprehensive Economic Partnership (RCEP) agreements.

RT4D is delivered through 3 programs: the AANZFTA Implementation Support Program, the RCEP Implementation Support Program and the Australia-funded Trade and Gender Equality Incubator. Through these programs, RT4D provides targeted technical expertise, supports planning and coordination with ASEAN partners, focuses on less developed ASEAN economies, and facilitates selected FTA implementation in ways that support inclusive development outcomes.

 Visit our website: <https://regional-trade4dev.org>

 Connect with us on X: [@RegTrade4Dev](https://twitter.com/RegTrade4Dev)

 Connect with us on Facebook: [@regionaltrade4dev](https://www.facebook.com/regionaltrade4dev)

 Connect with us on LinkedIn: [@regionaltrade4dev](https://www.linkedin.com/company/regionaltrade4dev)

 Connect with us on YouTube: [@RegionalTrade4Development](https://www.youtube.com/RegionalTrade4Development)

### Disclaimer

This research was funded by the Australian Department of Foreign Affairs and Trade. The views expressed in this report are the author's alone and do not necessarily reflect the views of the Australian Government. For further enquiries, please contact: [risp@regionaltrade4dev.org](mailto:risp@regionaltrade4dev.org)