Concept Note

E-Commerce Goods Clearance Integration Strategy for CAREC Customs Administrations

A. Executive Summary

E-commerce is transforming global trade, and Central Asia is no exception. Rapid growth in digital marketplaces and cross-border parcel flows offers new opportunities for consumers and small businesses, but also poses challenges for customs systems traditionally designed for bulk cargo. Clearance delays, fragmented processes, and high transaction costs remain key barriers to competitiveness and consumer trust.

To address these gaps, the Asian Development Bank (ADB), in partnership with the Korea Customs Service (KCS), is advancing an Integrated E-Commerce Processing System under ADB's *Trade 2030* agenda. The initiative aims to modernize and harmonize cross-border e-commerce clearance by introducing digital integration, risk-based management, and regional cooperation. This approach aligns with international standards such as the WTO Trade Facilitation Agreement and the WCO Framework of Standards, while adapting to Central Asia's unique transit-based geography and evolving digital infrastructure.

The strategy is guided by five core principles: interoperability, data-driven processing, risk-based controls, regulatory compliance, and user-centricity. Enablers include electronic data exchange, paperless clearance systems, AI-assisted risk management, and regulatory sandboxes for innovation testing. Together, these create a digital-first ecosystem that ensures data moves faster than goods, enabling pre-arrival clearance, targeted inspections, and faster, more predictable delivery. A phased pilot program will operationalize the system.

- Phase 1: Design – Co-develop standards, risk management approaches, and clearance workflows with customs authorities, logistics providers, and e-commerce platforms.
- Phase 2: Pilot – Test electronic data exchange, risk-based clearance, and real-time interoperability on selected trade lanes and product categories.
- Phase 3: Scale-Up – Expand adoption regionally, harmonizing processes across corridors and embedding digital trade facilitation into routine operations.

The expected outcomes include reduced clearance times, lower compliance costs, enhanced revenue collection, and improved risk targeting. For consumers and SMEs, the system will provide faster deliveries, greater transparency, and stronger trust in cross-border trade. At the regional level, Central Asia will be positioned as a competitive and connected digital trade corridor linking East and West.

The immediate next steps focus on finalizing pilot scope and partnerships, developing technical infrastructure, conducting capacity building, and launching pilot operations within the next six to

eight months. Lessons learned will guide refinements and prepare the system for broader adoption.

By combining ADB's regional cooperation mandate with KCS's technical expertise, this initiative provides a replicable, future-ready model for digital trade facilitation that balances efficiency with regulatory control and strengthening Central Asia's role in the global e-commerce economy.

B. Background

E-commerce is reshaping trade dynamics worldwide, and Central Asia is no exception. The rapid expansion of digital marketplaces and cross-border parcel flows has created both opportunities and challenges for the region. Consumers are demanding faster delivery of goods from global and regional platforms, while governments and customs authorities face growing pressure to ensure compliance, revenue collection, and security in a landscape dominated by small, fragmented shipments.

Traditionally, customs systems in Central Asia have been oriented toward bulk cargo and conventional trade transactions. These systems are often paper-intensive, fragmented, and not optimized for the high-volume, low-value nature of e-commerce shipments. As a result, clearance delays, high transaction costs, and lack of visibility remain barriers to trade competitiveness and consumer trust.

To address these challenges, an Integrated E-Commerce Processing System is proposed as part of a broader E-Commerce Goods Clearance Integration Strategy for Central Asia. The strategy aligns with international best practices, such as the WTO Trade Facilitation Agreement and the WCO Framework of Standards[1], while adapting to the region's specific needs, including its landlocked geography, dependence on transit trade, and evolving digital infrastructure.

C. Introduction

Central Asia stands at the crossroads of global trade, linking East and West through rapidly expanding e-commerce flows. With consumers demanding faster, more reliable cross-border deliveries, the region faces the urgent task of modernizing its customs and logistics systems. Traditional clearance procedures, designed primarily for bulk shipments, are no longer sufficient for the high-volume, low-value nature of e-commerce parcels. This creates delays, increases costs, and constrains the region's trade competitiveness.

To overcome these challenges, regional cooperation is critical. A shared strategy that harmonizes clearance processes, strengthens risk management, and enables real-time data exchange can transform Central Asia into a seamless digital trade corridor. Such integration will not only streamline parcel flows within the region but also enhance connectivity with major global e-commerce hubs.

The Korea Customs Service (KCS) plays a pivotal role in this transformation, offering its globally recognized expertise in e-commerce clearance systems, risk-based targeting, and the use of advanced technologies such as electronic data interchange and AI-powered customs analytics.

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[1] The **WCO Framework of Standards to Secure and Facilitate Global Trade (SAFE Framework of Standards)** is an international framework developed by the **World Customs Organization (WCO)** to enhance the security, efficiency, and predictability of global trade. It provides a set of best practices and guidelines for customs administrations to manage risks while facilitating legitimate trade

KCS has pioneered models that enable pre-arrival processing, paperless trade, and trusted platform collaboration, which can serve as templates for Central Asia's own integration strategy.

Complementing this, the Asian Development Bank's (ADB) Trade 2030[2] initiative provides a strategic platform for advancing regional trade facilitation and digitalization. By aligning the e-commerce clearance strategy with Trade 2030, Central Asia can access technical assistance, financing solutions, and regional dialogue mechanisms that ensure reforms are future-ready, inclusive, and interoperable with global trade systems.

Together, the partnership of KCS technical leadership and ADB's regional cooperation framework creates a unique opportunity to modernize e-commerce clearance in Central Asia. Through this collaboration, countries can move beyond isolated reforms and build a coordinated, digital-first ecosystem that balances trade facilitation with effective regulatory control—delivering faster clearance, lower costs, and greater consumer satisfaction across the region.

D. Objectives

The intent of the Integrated E-Commerce Processing System in Central Asia, under ADB's Trade 2030 agenda, is to modernize and harmonize cross-border e-commerce clearance through digital integration, risk-based management, and regional cooperation. By aligning customs processes with international standards and leveraging advanced technologies, the initiative seeks to reduce clearance times, lower trade costs, and strengthen compliance, while enabling small businesses and consumers to benefit from faster and more reliable access to global markets. Through partnerships with the Korea Customs Service and regional platforms such as CAREC, ADB aims to position Central Asia as a connected and competitive digital trade corridor linking East and West.

E. Methodology

As lead partner, the Asian Development Bank (ADB) will adopt a phased and collaborative approach to developing an Integrated E-Commerce Processing System in Central Asia. The work will begin with a diagnostic assessment of current customs procedures, ICT capacity, and private sector practices to identify gaps and opportunities for digital integration. This will be complemented by consultations with customs authorities, logistics providers, e-commerce platforms, and SMEs to ensure the strategy reflects the needs of both regulators and traders.

Building on this foundation, ADB will facilitate regional dialogue under CAREC and other cooperation platforms to build consensus on harmonized e-commerce clearance processes. Drawing on the expertise of the Korea Customs Service (KCS) and international standards such as the WCO Data Model, the team will co-design an integrated system architecture that enables pre-arrival data sharing, paperless processing, and risk-based clearance.

To ensure feasibility and scalability, ADB will support pilot projects and regulatory sandboxes[3] at selected trade corridors or border points. These pilots will test innovations such as AI-driven risk assessment, electronic invoicing, and cross-border data exchange, while generating lessons for

2 The **Asian Development Bank's (ADB) Trade 2030** is a strategic framework designed to enhance the integration of Central Asia into the global economy through comprehensive trade reforms. This initiative is part of the broader **CAREC Integrated Trade Agenda (CITA) 2030**, which aims to address key challenges such as limited market access, economic diversification, and weak trade institutions.

3 In the context of technology, regulation, and trade, a sandbox is a controlled, experimental environment where new ideas, products, or processes can be tested without the usual regulatory or operational constraints. Sandboxes allow innovators and regulators to try out innovations in a real-world setting while managing risks and minimizing potential disruptions.

regional rollout. Parallel to this, ADB will deliver capacity building and knowledge transfer programs, including technical training and study visits with KCS, to strengthen institutional capabilities across the region.

Finally, ADB will guide participating countries toward regional policy harmonization, covering areas such as de minimis thresholds and clearance procedures, to ensure consistency and interoperability. A regional monitoring and evaluation framework will be established to track progress, measure trade facilitation benefits, and continuously improve the system. This methodology ensures the initiative is practical, inclusive, and embedded in a sustainable cooperation framework for Central Asia.

F. Key Enablers

The success of an integrated e-commerce clearance system in Central Asia will rest on a set of digital enablers that connect public and private stakeholders. Electronic Data Interchange (EDI) APIs will link national customs systems and private platforms in real time, ideally through each country's national single window to streamline coordination across border agencies. This requires strong digital identity and trust frameworks to authenticate verified actors in the supply chain, ensuring accountability across jurisdictions.

Equally important are paperless clearance systems, such as e-invoices, e-permits, and e-payments—that lower administrative burdens and improve efficiency. An integrated risk management system will provide a common approach to targeting, using shared data and AI-assisted tools to balance facilitation and enforcement. Finally, regulatory sandboxes will allow customs administrations to test these innovations in controlled settings before scaling regionally. Together, these enablers form the foundation for a secure, efficient, and trusted e-commerce ecosystem in Central Asia.

G. Core Principles of the Strategy

The Integrated E-Commerce Processing System for Central Asia is anchored on five core principles that ensure the initiative is not only technologically sound but also regionally harmonized, globally aligned, and responsive to user needs.

a. Interoperability - At the heart of the strategy is interoperability, which enables customs administrations, logistics providers, and e-commerce platforms to seamlessly exchange data across borders and systems. By adopting global data standards such as the WCO Data Model[4] and UN/EDIFACT, countries can ensure compatibility between national customs systems, national single windows, and private sector platforms. This interoperability reduces duplication, eliminates manual re-entry of data, and creates an integrated regional network where information flows smoothly from order placement to final delivery.

b. Data-Driven Processing **-** The strategy emphasizes the use of structured, advance electronic information to shift clearance from reactive to proactive. By capturing key

[4] The **WCO Data Model** is a global standard developed by the **World Customs Organization (WCO)** that provides a **common language for cross-border regulatory data exchange**. It is essentially a **structured set of data definitions and message formats** that allows customs administrations, other border agencies, and the private sector (e.g., traders, logistics providers, e-commerce platforms) to exchange information consistently and efficiently.

data points at the point of sale, such as HS codes, product descriptions, values, origins, and consignee details. Customs authorities can then assess shipments before they arrive at the border. This data-driven approach allows customs to make informed clearance decisions, optimize resource allocation, and reduce processing times, while also improving transparency for businesses and consumers.

c. Risk-Based Controls - Rather than applying uniform checks on all shipments, the strategy promotes risk-based controls to enhance both efficiency and enforcement. Using AI-assisted targeting and integrated risk management systems, customs authorities can prioritize high-risk or suspicious shipments while expediting clearance for low-value, low-risk parcels. This targeted approach not only improves compliance but also reduces unnecessary delays and congestion at border points, allowing limited inspection resources to focus where they matter most.

d. Regulatory Compliance **-** To ensure sustainability and trust, the strategy aligns with international commitments such as the WTO Trade Facilitation Agreement and the WCO Framework of Standards. Harmonizing regulations across Central Asian countries, including de minimis thresholds, electronic documentation requirements, and clearance procedures, will strengthen regional integration and create a level playing field for traders. Regulatory compliance also reinforces consumer protection and revenue collection, balancing trade facilitation with effective border management.

e. User-Centricity **-** Finally, the strategy places users, both traders and consumers, at the center of reform. Faster clearance, predictable delivery times, and real-time tracking enhance consumer trust in cross-border e-commerce. For businesses, especially SMEs, streamlined and paperless procedures lower entry barriers and reduce compliance costs. User-centricity ensures that while trade is made faster and easier, border security and regulatory enforcement remain intact, maintaining a balance between facilitation and protection.

The five principles above provide a comprehensive framework that positions Central Asia to modernize its e-commerce clearance systems in line with global best practices, while also addressing the unique needs and challenges of the region.

H. Pressing Challenges

Cross-border e-commerce in Central Asia faces several pressing challenges that hinder the efficient and predictable movement of goods. Fragmented regulatory frameworks across countries create inconsistencies in documentation requirements, customs valuation, and product classification, which increase the administrative burden for traders. Many customs administrations still rely on paper-based processes, limiting the ability to process high volumes of small parcels quickly and accurately. Limited interoperability between e-commerce platforms, logistics providers, and government systems results in delays, repeated data entry, and errors in shipment information.

Additionally, risk management capabilities are often underdeveloped, leading to either excessive inspections that slow clearance or insufficient scrutiny that increases vulnerability to fraud and under-declaration. Infrastructure gaps, such as inadequate IT systems and limited staff capacity, further exacerbate these issues, making it difficult to scale digital solutions and establish a seamless, predictable clearance process for the growing e-commerce sector.

I. Integration Flow for e-Commerce Clearance

The integration flow for e-commerce clearance in Central Asia follows a seamless, end-to-end data chain that connects online platforms, logistics providers, customs administrations, and last-mile delivery services. Each step builds on the previous one, ensuring that information moves faster than physical goods and that clearance decisions are made with precision and efficiency.

The process begins with e-commerce platforms, which capture structured data at the point of checkout. This includes critical details such as HS codes, product descriptions, declared value, country of origin, and consignee information. Instead of remaining isolated within platform systems, this information is transmitted electronically in advance to logistics providers and customs authorities. Early visibility into transaction data allows supply chain actors to prepare for the arrival of goods, laying the foundation for pre-arrival clearance.

Next, couriers and logistics providers consolidate this order-level data into shipment-level electronic manifests. By applying global standards such as the WCO Data Model and UN/EDIFACT, data can be shared across multiple jurisdictions in a consistent format. This step transforms fragmented order information into structured manifests that customs authorities can process efficiently. Consolidation also ensures traceability of goods as they move through complex transit routes common in Central Asia.

The third stage involves customs authorities, who receive shipment data before goods arrive. With advanced information in hand, customs systems can apply automated, AI-driven risk assessment models. Low-value and low-risk shipments are granted near-instant clearance under de minimis thresholds, allowing them to move quickly through borders. High-risk or flagged shipments, by contrast, are directed for targeted inspection. This risk-based approach reduces congestion, optimizes inspection resources, and strengthens compliance without slowing down legitimate trade.

Finally, once goods are cleared, final mile delivery begins. Customs release triggers automated clearance notifications to couriers, who then update real-time tracking systems accessible to consumers. From this point, end buyers can monitor their parcels until delivery, improving transparency and trust in the system. Faster and more predictable delivery cycles not only enhance consumer satisfaction but also strengthen the credibility of cross-border e-commerce in Central Asia.

These four stages form an integrated, digital-first clearance ecosystem. By ensuring that structured data flows seamlessly from e-commerce checkout to final mile delivery, Central Asia can reduce clearance times, cut costs, and position itself as a competitive and trusted hub for cross-border e-commerce trade.

J. Benefits

The integration of e-commerce clearance across Central Asia delivers wide-ranging benefits for governments, businesses, and consumers alike. By ensuring that digital data moves faster than physical goods, clearance decisions can be made with speed and accuracy, reducing border delays and lowering transaction costs. Traders benefit from greater predictability, while logistics providers and couriers gain efficiency through streamlined processes and fewer physical inspections.

For customs administrations, the availability of structured data in advance enables more precise risk management, improved revenue collection, and stronger safeguards against fraud and under-declaration. Most importantly, harmonized data flows across the region foster a more competitive trade environment by positioning Central Asia as a connected, reliable hub for cross-border e-commerce and last-mile delivery.

K. Proposed Collaboration for a Pilot Program

Looking ahead, the Asian Development Bank, the Korea Customs Service, and a broad community of e-commerce stakeholders will deepen their collaboration in shaping a pilot program that advances seamless cross-border trade in Central Asia. This initiative will combine ADB's regional development mandate with KCS's leading expertise in digital customs systems, while drawing on the practical knowledge of e-commerce platforms, logistics providers, and traders who experience the challenges of cross-border flows every day.

Together, they will co-design a pilot that tests innovative approaches to electronic data exchange, risk management, and streamlined clearance processes, ensuring that the model reflects both global best practices and the realities of local markets. By engaging both public and private actors from the outset, the program will build trust, strengthen interoperability, and provide a replicable pathway for accelerating e-commerce growth and trade facilitation across the region.

L. Suggested Phases in Collaboration Activities for the Pilot Program

The next phase of the pilot program will focus on translating collaborative design into practical implementation. Building on the groundwork laid by ADB, the Korea Customs Service, and e-commerce stakeholders, this phase will pilot the electronic exchange of structured trade data in real shipment scenarios. E-commerce platforms will capture product-level information at checkout, logistics providers will consolidate these into electronic manifests, and customs administrations will receive data in advance for targeted risk assessment.

The pilot will also test digital interoperability across agencies and borders, ensuring that clearance decisions can be made faster and with greater accuracy. By starting with selected trade lanes and high-volume product categories, the program will generate early evidence on time savings, reduced compliance costs, and improved predictability for traders. Insights from this phase will be systematically captured and shared, providing the foundation for scaling the approach across more corridors in Central Asia and embedding it within broader digital trade facilitation strategies.

The pilot program is designed to modernize cross-border trade in Central Asia through a phased approach. In the initial design phase, stakeholders jointly define data standards, risk management methods, and clearance workflows that align with both international best practices and local operational realities. Building on this foundation, the pilot phase tests these solutions in real shipment scenarios, with e-commerce platforms capturing structured product and shipment data, logistics providers consolidating it into electronic manifests, and customs authorities using the information for faster, more targeted clearance.

Insights from the pilot will inform refinements and prepare the system for broader adoption. In the scale-up phase, the approach will expand across additional trade corridors and product categories, ensuring interoperability across agencies and borders and embedding digital processes into routine operations. The program ultimately aims to create a faster, more transparent, and predictable trade environment, strengthening regional connectivity and competitiveness while providing a replicable model for e-commerce trade facilitation. The three suggested phases are the following:

a. Phase 1: Design - In the design phase, the Asian Development Bank, the Korea Customs Service, and key e-commerce stakeholders work collaboratively to define the framework for the pilot program. This phase brings together technical expertise, operational knowledge, and regulatory perspectives to ensure that the system addresses real-world trade challenges. Stakeholders co-create data standards, risk management approaches, and clearance workflows, aligning them with both international best practices and local operational realities. This inclusive process builds trust among public and private actors and establishes a solid foundation for testing the proposed digital trade facilitation solutions.

b. Phase 2: Pilot - The pilot phase translates the design into real-world application. Selected e-commerce platforms capture structured product and shipment data at checkout, while logistics providers consolidate this information into electronic manifests shared with customs administrations. Authorities use this data for targeted risk assessment and faster clearance decisions. The pilot focuses on specific trade lanes and high-volume product categories to generate measurable results in efficiency, predictability, and compliance. Insights and lessons learned from this phase will guide refinements and validate the practical feasibility of the digital system.

c. Phase 3: Scale-up - The scale-up phase leverages the lessons from the pilot to expand the program across additional trade corridors, product categories, and participating stakeholders. This phase emphasizes interoperability among multiple agencies, harmonized digital processes across borders, and broader adoption of e-commerce data standards. By embedding the system into routine operations, stakeholders aim to create a sustainable, replicable model for cross-border e-commerce trade facilitation. The result is a faster, more transparent, and predictable trade environment that strengthens regional connectivity and competitiveness.

M. Expected Outcomes

The pilot program is expected to deliver measurable improvements across multiple dimensions of cross-border e-commerce trade. For traders and logistics providers, it will reduce clearance times, lower compliance costs, and enhance predictability in shipment flows. Customs administrations will gain better visibility and control through structured data, enabling more precise risk assessment, targeted inspections, and improved revenue collection. The collaborative design and testing process will strengthen public-private trust and provide a replicable model for digital trade facilitation.

At a regional level, the pilot will demonstrate the feasibility of interoperable, paperless systems that can be scaled across multiple trade corridors, fostering faster, more transparent, and more competitive cross-border trade in Central Asia.

N. Next Steps and Timeline

Building on the design and planning phase, the next steps focus on operationalizing the pilot over the coming months:

a. Finalize Pilot Scope and Partners (Month **1)** – Confirm participating e-commerce platforms, logistics providers, and customs administrations, and select priority trade lanes and product categories.

b. Develop Technical Infrastructure (Months 1–2) – Set up secure, interoperable digital channels for structured data exchange, electronic manifests, and risk management workflows.

c. Conduct Training and Capacity-Building (Month 2**)** – Equip all stakeholders, including customs officials, platform operators, and logistics teams, with the necessary knowledge and tools.

d. Launch Pilot Operations (Months 3–5) – Test the system in real shipment scenarios, capturing performance data on clearance times, compliance efficiency, and risk assessment accuracy.

e. Monitor, Evaluate, and Refine (Months 4–6) – Continuously collect feedback and performance metrics, identify bottlenecks or gaps, and adjust processes, standards, and workflows as needed.

f. Prepare for Scale-Up (Months 6–8) – Use insights from the pilot to plan expansion across additional trade corridors, broader product categories, and more stakeholders, setting the stage for full operational adoption.

This timeline ensures a structured and phased approach, allowing stakeholders to test, learn, and refine the system while building confidence and readiness for broader implementation.