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Feasibility Studies on Cross-Border Electronic Exchange of Trade Data and Documents

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Agenda

1. Importance and Methodology of the Feasibility Study
2. Key Findings of Recent Studies

Importance and Methodology of the Feasibility Study

CPTA Article 13

Pilot projects and sharing of lessons learned

1

The Parties shall endeavour **to initiate and launch pilot projects** on cross-border exchange of trade-related data and documents in electronic form, among customs and other regulatory agencies. The Parties **shall collaborate on such pilot projects through the institutional arrangement**s established under the present Framework Agreement.

2

The Parties shall report to the Standing Committee on the progress of pilot projects **to facilitate the sharing of experience and lessons learned and to establish a collection of best practices for interoperability** of cross-border exchange of trade-related data and documents in electronic form. The exchange of experience and lessons learned **would extend beyond the Parties to the present Framework Agreement**, to the extent possible and as appropriate**, in an effort to promote paperless trade implementation throughout the region and beyond.**

The Role of a Feasibility Study

Purpose:

- To systematically evaluate potential areas for pilot project(s) based on detailed criteria.
- To assess the readiness and suitability of each area for implementing electronic LPCO exchanges.

Components

Legal and regulatory framework assessment

Technical infrastructure and system readiness

Stakeholder engagement and readiness

Economic impact and cost-benefit analysis

Feasibility studies allow us to identify the following:

1. What specific data/documents should be prioritized for cross-border electronic exchange with partner countries?
2. Which partner countries should be prioritized for this electronic exchange of trade data/documents?
3. Build a TO BE business model for selected cases (priority document and country group) and show opportunities to optimize business processes
4. What are the costs and benefits of doing the selected LPCO electronic exchange, and why improving/harmonizing the systems/processes would be necessary?

ESCAP developed methodology for **Conducting a National Feasibility Study on Cross-border Electronic Exchange of Trade-related Data or Documents**

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Survey templates for the Border Regulatory Agencies, Customs Authority, and the National Trade Facilitation Committee

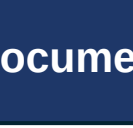
Border regulatory authorities

Customs Authority

National Trade Facilitation Council – Governance and Technical

7 Steps of the Feasibility Study Methodology

1. Analysis of trade documentation and potential partners



2. Legal and technical assessment for selected trade documents and partner countries

3. Proposed options for the use of selected instruments and partner countries

4. Economic feasibility and cost-benefit analysis

5. Operational feasibility and involvement of process participants

6. Implementation Plan

7. Cooperation and regional integration

Key Findings of Recent Studies

3 Proposed Pilot Projects in Central Asia

Electronic Exchange of Phytosanitary Certificates

Kazakhstan ——— **Uzbekistan**

Electronic Exchange of Certificates of Origin

Tajikistan ——— **Kazakhstan**

Electronic Exchange of Certificates of Origin

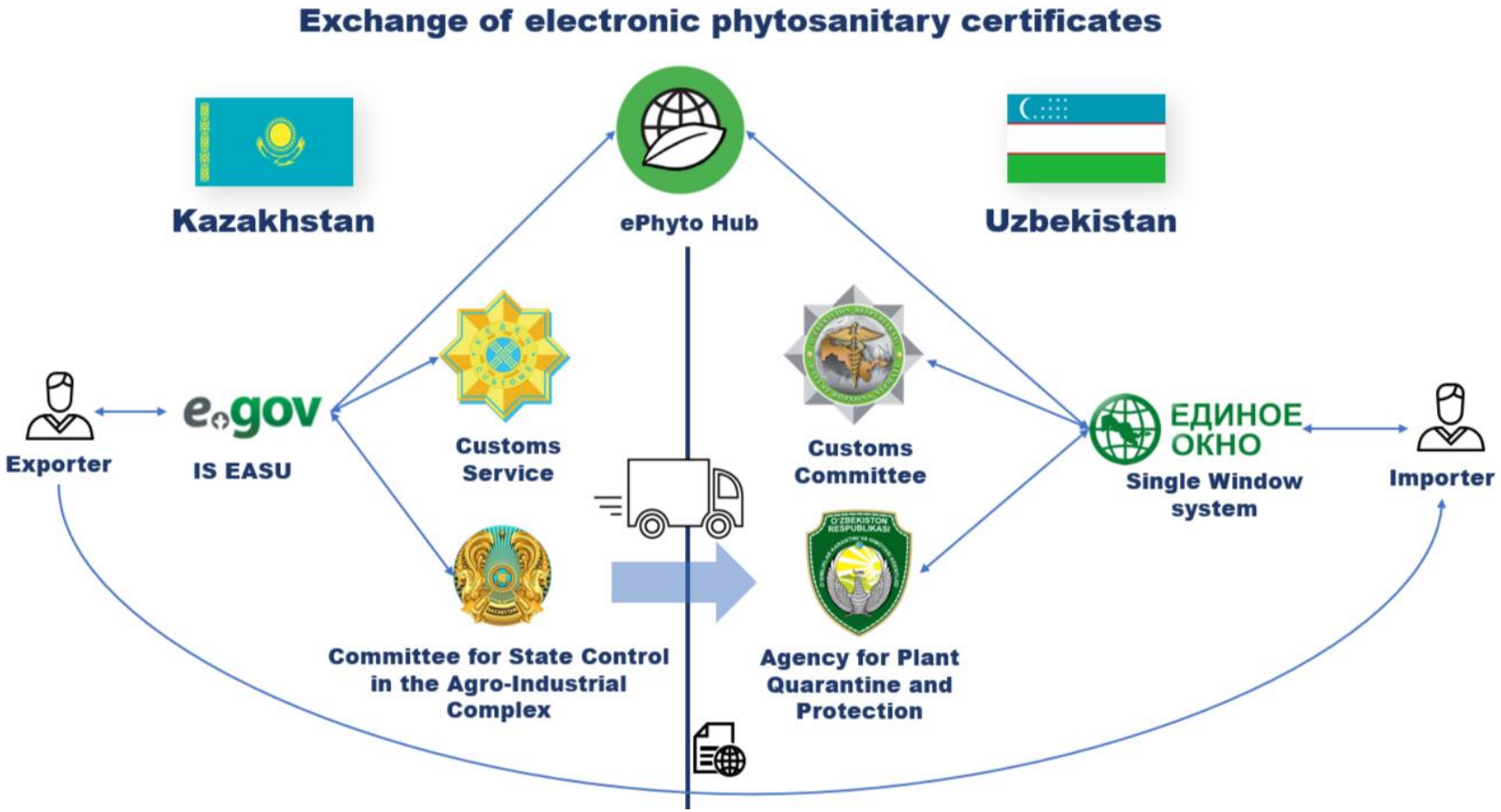
Kyrgyzstan ——— **Uzbekistan**

Bottlenecks in the Process of Obtaining and Transmitting Phytosanitary Certificates (KZ-UZ)

- The issuance of the certificate is done **on PAPER**, which leads to additional time costs for issuing and receiving the document:
  In Kazakhstan and Uzbekistan, it takes **up to 40 minutes** for government agencies and **up to 1.5 hours** for traders.
- Protecting against the counterfeiting of paper certificates requires additional equipment and special paper, and verifying their authenticity is challenging.
- Additional actions related to handing over documents to the carrier, presenting them at the border, scanning, verification, etc., also lead to costs.
- There are risks of damage, loss, and counterfeiting of paper documents during the transportation of goods.

Conclusion: The process of obtaining and transmitting phytosanitary certificates can be optimized.

Proposed schema of Electronic Exchange of Phytosanitary Certificates between Kazakhstan and Uzbekistan



Result: TO BE Business Model for the Kazakhstan-Uzbekistan Case

The issuance and exchange of electronic phytosanitary certificates optimize the entire process

- There would be no labour costs associated with printing and issuing paper phytosanitary certificates by the staff of government agencies in Kazakhstan and Uzbekistan.
- There would be no costs for obtaining the paper certificate and handing it over to the carrier for traders in Kazakhstan and Uzbekistan.
- There would be no risks of loss or counterfeiting of the paper phytosanitary certificate during the transportation of goods.
- Processes at the border crossing related to phytosanitary control would be more optimized.

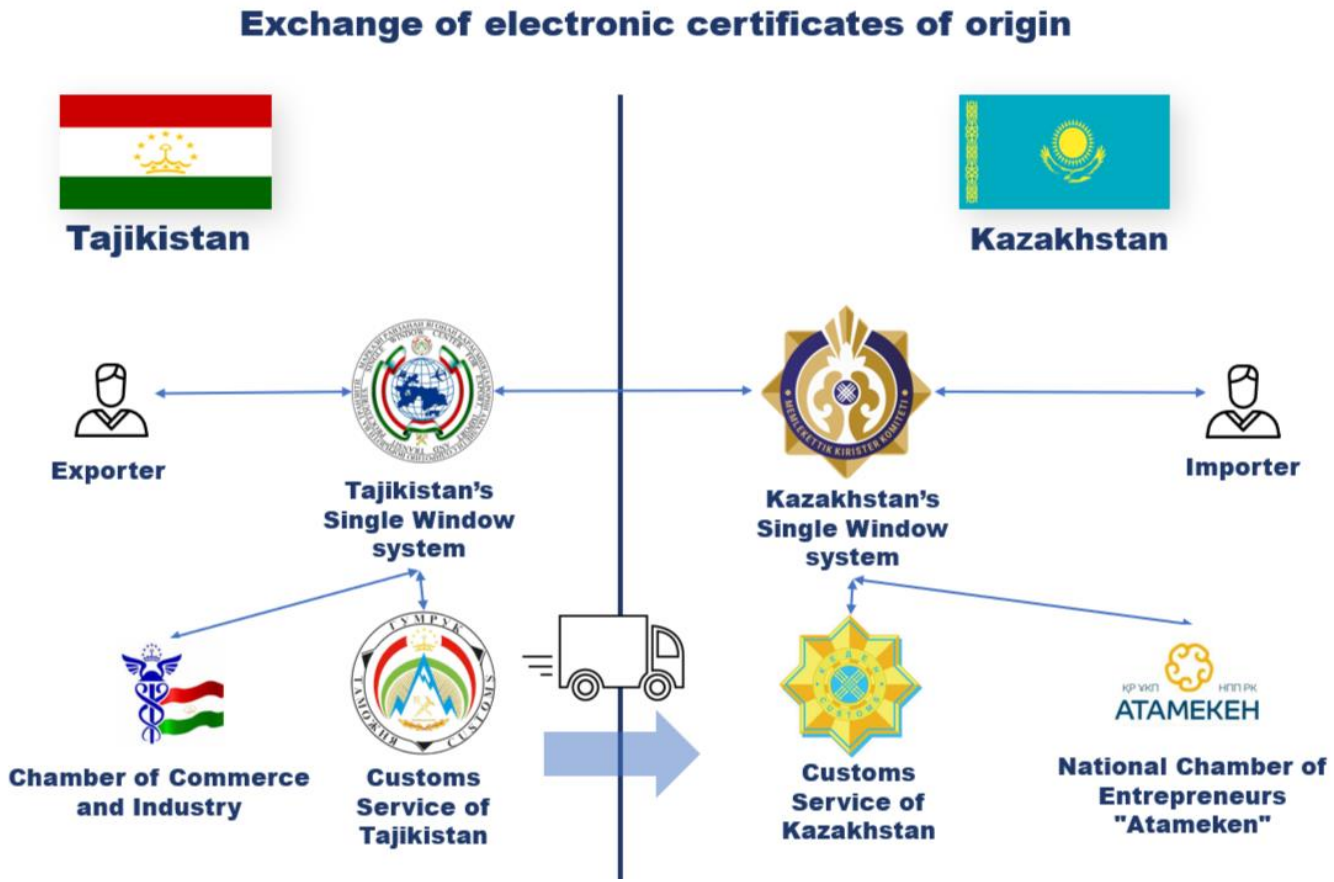
Conclusion : The number of steps, the probability of error, and the time spent on obtaining and transmitting the phytosanitary certificate are reduced.

Bottlenecks in the Process of Obtaining and Transmitting Certificates of Origin (TJ-KZ and KG-UZ)

- The issuance of the certificate is done **on PAPER**, which leads to additional time costs for issuing and receiving the document:
  in Kazakhstan - **up to 1.5 hours** for both government agencies and traders;
  in Tajikistan - **up to 1 hour and 50 minutes** for both government agencies and traders;
  in Uzbekistan and Kyrgyzstan - **up to 40 minutes** for government agencies and **up to 1 hour** for traders.
- Additional actions related to handing over documents to the carrier, scanning at the border, verifying authenticity, etc., also lead to costs.
- A complex mechanism for verifying the authenticity of the certificate in case of doubts.
- There are risks of damage and loss of the certificate during the transportation of goods.

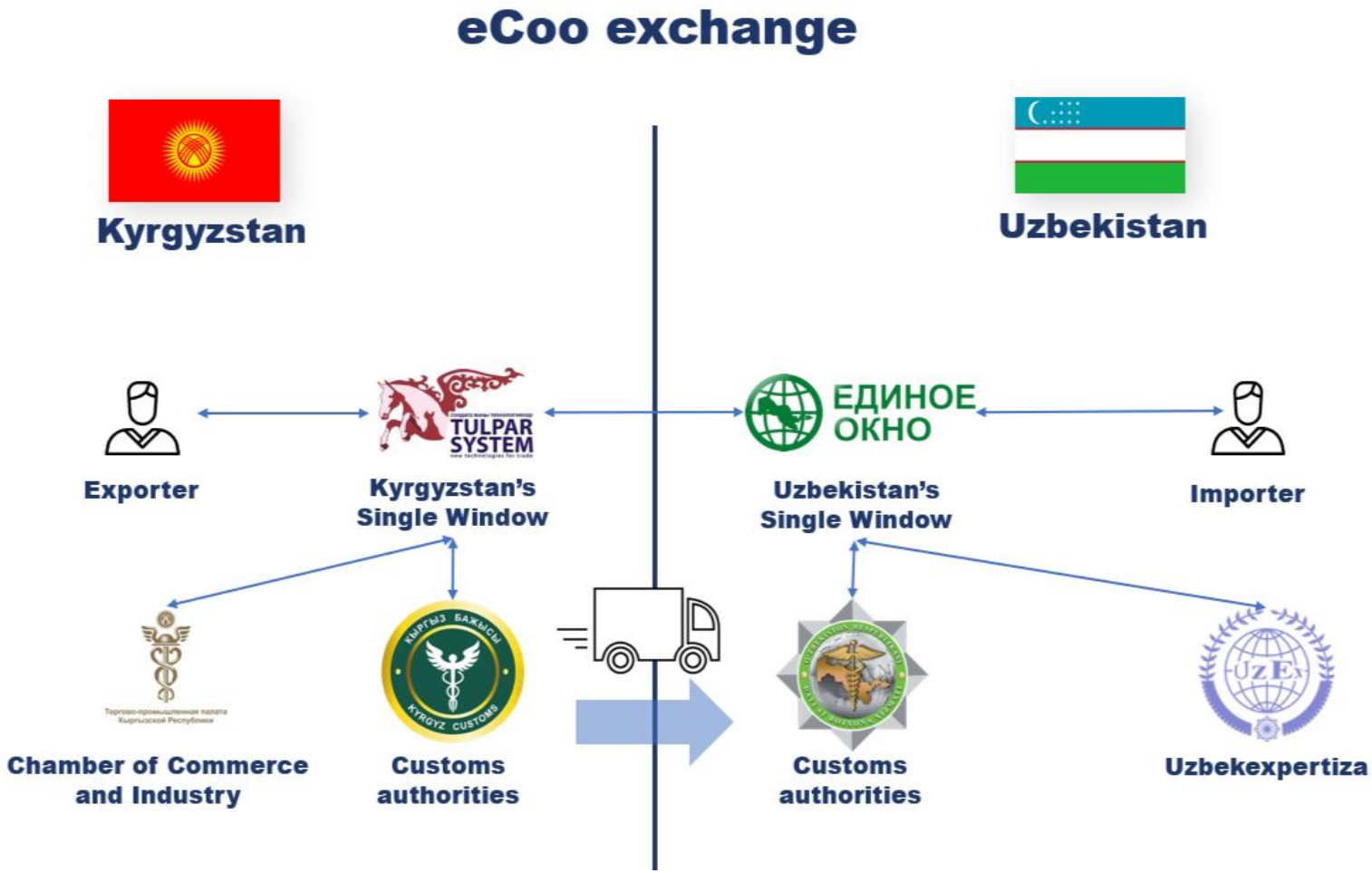
Conclusion : The process of obtaining and transmitting the certificate of origin can be optimized.

Proposed schema of Electronic Exchange of Certificates of Origin between Tajikistan and Kazakhstan



Result: TO BE Business Model for the Tajikistan-Kazakhstan Case

Proposed schema of Electronic Exchange of Certificates of Origin between Kyrgyzstan and Uzbekistan



Result: TO BE Business Model for the Kyrgyzstan-Uzbekistan Case

The issuance and exchange of electronic certificates of origin optimize the entire process

- The time required to process the COO for government agency and traders would be significantly reduced
- A trader importing goods receives confirmation of the product’s origin information in advance
- The process of confirming product origin information becomes "transparent“, minimizing the risk of document forgery
- At the stage of goods arrival, the procedure is optimized, reducing the waiting time for document confirmation
- Minimization of the risk of errors by government agencies when issuing the COO.

Conclusion : Errors and the time spent on obtaining and transmitting the certificate of origin can be reduced

The Projects Have Been Assessed to be Feasible

Implementation of the proposed projects assessed through consideration of four key components:

Assessment Components

Legal readiness

Technical readiness

Organizational aspects

Economic efficiency

Legal readiness

In all four countries, there is legal readiness for the use of electronic certificates, but more needs to be done for cross-border exchange

Intergovernmental agreements:

A bilateral agreement is needed between the participating countries of the pilot projects for the electronic exchange of information on issued certificates.

Mutual recognition of electronic signatures:

To ensure effective exchange of electronic documents, it is necessary to establish the legal validity and mutual recognition of electronic signatures between the participating countries.

Conclusion : The national legislation of the countries is ready for the implementation of pilot projects, but bilateral regulation is required

Technical readiness (phyto)

National information systems are ready for the issuance and transition to electronic exchange of data on phytosanitary certificates.

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Uzbekistan has already connected to the IPPC Hub, and Kazakhstan's technological infrastructure is ready for such a connection.

Integration and modernization of existing information systems for the implementation of electronic document flow and connection to the IPPC Hub.

Establishment of a provider offering services for obtaining international standard electronic signatures.

Providing customs officials at the border checkpoint and the internal access point with information on phytosanitary certificates issued electronically.

Conclusion : Countries have the technical readiness to transition to electronic exchange of phytosanitary certificates

Technical readiness (COO)

National information systems have been established in the countries that are ready for the transition to electronic exchange of data on certificates of origin.

Enhancement of existing national information systems

Interconnection between national "single window" mechanisms

Training and professional development of personnel

Conclusion : Countries have the technical readiness to transition to the electronic exchange of certificates of origin

Organizational aspects




Ministry of Agriculture of Kazakhstan;

Customs Committee of Kazakhstan

Customs Service under the Government of Tajikistan

Ministry of Agriculture of Uzbekistan;

Customs Committee of Uzbekistan

State Customs Service under the Ministry of Finance of Kyrgyzstan

Result: Coordinating Agencies for Project Implementation Are Recommended

Economic feasibility of the projects

a. Case study on the exchange of electronic phytosanitary certificates between Kazakhstan and Uzbekistan

Financial results for the overall case:

Total project costs: $333,800
Payback period: 10 months

Indicator	5-year period
Economic benefits	$1 989 344
Net Present Value (NPV)	$1 174 435
Return on Investment (ROI)	495.97%

b. Case study on the exchange of electronic certificates of origin between Tajikistan and Kazakhstan

Financial results for the overall case:

Total project costs: $314,400
Payback period: approximately 1.5 years

Indicator	5-year period
Economic benefits	$1 019 249
Net Present Value (NPV)	$458 351
Return on Investment (ROI)	224.19%

c. Case study on the exchange of electronic certificates of origin between Kyrgyzstan and Uzbekistan

Financial results for the overall case:

Total project costs: $216,710
Payback period: approximately 1 year and 9 months

Indicator	5-year period
Economic benefits	$626 163
Net Present Value (NPV)	$258 020
Return on Investment (ROI)	188.94%

Conclusion : The proposed projects are economically feasible

Proposed Action Plan

1 Phased implementation and collaboration

- Application of a phased approach, starting with the signing of a memorandum by the parties and the launch of the pilot project
- Establishment of working groups within the activities of National Committees on Trade Facilitation to ensure cooperation among stakeholders

2 Improvement of the legislative and regulatory framework

- Development and updating of regulatory legal acts to support the mutual recognition of electronic documents and to regulate the activities of trusted third parties
- Alignment of national legislation with international agreements and regional initiatives
- Conclusion of intergovernmental agreements between the participating countries for the implementation of projects on the electronic exchange of information regarding issued certificates

Proposed Action Plan

3 Resolve organisational issues

- Appointment of a government agency responsible for project implementation
- Identification of stakeholders involved in the project
- Agreement on the technical requirements for the implementation of electronic data exchange
- Establishment of a clear KPI system for project implementation and development of feedback mechanisms

4 Enhancement of national systems

- Development and modernization of national automated customs systems and Single Window
- Ensuring compatibility with international data exchange standards and connection to the IPPC Hub.

Proposed Action Plan

5 Ensuring funding and international cooperation

- Establishment of agreements with international organizations and donor organizations to support project implementation
- Participation in international cooperation for the exchange of best practices and technical know-how

6 Capacity building and raising awareness

- Conducting training and informational programs for stakeholders
- Establishment of a change management team to develop and implement a change management plan, coordinate efforts, and monitor progress

Cooperation and regional integration

a. Regional interaction

- *Organize a platform for discussing initiatives among **Kazakhstan, Kyrgyzstan, Uzbekistan, and Tajikistan***
- *Expand dialogue within the framework of regional meetings of the **National Committees on Trade Facilitation** in Central Asia*

b. International cooperation

Active engagement with international organizations

- *ESCAP*
- *UNECE*
- *ITC*
- *UNCTAD*
- *USAID*
- *GIZ*
- *SPECA*
- *OECD*

Conclusion : Active engagement with international organizations for the implementation of the proposed projects

ESCAP

Economic and Social Commission
for Asia and the Pacific

7 Steps Methodology for Feasibility Study

Step 1. Trade Documentation and Partner Countries Analysis

a. Review of Current Trade Documentation and Data Flows

1. Understand the Current Trade Environment
(Familiarize with Trade Process, Identify Key Trade Documents and participants)

2. Document Mapping and Analysis
(Catalog and Map Documents, Assess Document Flows)

3. Data Collection and Stakeholder Engagement
(Use of existing studies, Engage Stakeholders)

4. Identification of Key LPCOs
(Prioritize Documents, Identify one or two top-priority documents)

b. Criteria and Methodology for Selecting Partner Countries

1. Define Selection Criteria
(Trade Volume and Value, Existing Relationships, Digital Readiness)

2. Methodology for Selection
(Scoring and Ranking)

3. Finalize Partner Country List
(Shortlist Countries, Identify the list of Partner Countries for the selected documents)

As a result Choose 1 or 2 cases for the Pilot Project

Step 1 example. Trade Documentation and Partner Countries Analysis for Kyrgyzstan

Top-8 of accompanying documents for goods

	Document	Total score
1	**Certificate of Origin**	**11**
2	International Phytosanitary Certificate IPPC	**10**
3	Invoice	**10**
4	Certificate of Compliance	**9**
5	Preliminary Notification	**9**
6	Goods Declaration (Export) Release Authorized	**9**
7	Goods Declaration (Import) Release Authorized"	**9**
8	Waybill	**8**

4 indicators
Assessment from 1 to 3

- **Level of automation**
- **Frequency of usage**
- **Level of international interaction**
- **Level of integration with 'Tunduk' system**

As a result

The certificate of origin is the priority document for the Pilot Project

Step 1 example. Trade Documentation and Partner Countries Analysis for Kyrgyzstan

Top-8 of main partner countries

	Document	Total score
1	**Uzbekistan**	**18**
2	Kazakhstan	**17**
3	Russia	**16**
4	China	**14**
5	Turkey	**12**
6	Republic of Korea	**10**
7	Japan	**10**
8	Switzerland	**9**

4 indicators
Assessment from 1 to 5

- **Volume of foreign trade turnover**
- **Geographical proximity**
- **Level of relations, determining the closeness of ties**
- **Level of interagency interaction, demonstrating the state of exchange of cross-border documents**

As a result

Uzbekistan is the most preferable country to implement the pilot project on LPCO cross-border exchange in Kyrgyzstan

7 Steps Methodology for Feasibility Study

Step 2. Legal and Technical Assessment for Selected LPCO and Partners

a. Legal and Regulatory Framework Analysis

Examine the legal barriers and enablers for electronic document exchange and recommend legislative reforms.

- Assess Current Legal Framework
- International Agreements and Standards
- Stakeholder Consultations
- Recommend Reforms

b. Technical and System Feasibility

Assess existing IT infrastructure and capabilities for electronic document exchange and identify necessary technological upgrades and system harmonization needs.

- Map the Current State
- Conduct Surveys & Interviews
- IT system readiness for LPCO
- Identify Technological Needs

As a result

Detailed information on the current status and main consideration for switching to the new business model

Step 2 example. Legal and Technical Assessment for Selected LPCO and Partners for Kazakhstan’s ePhyto case

AS IS model

Analysis of the legal and regulatory framework

Technical and systemic feasibility

As a result Current status of Kazakhstan-Uzbekistan ePhyto case

7 Steps Methodology for Feasibility Study

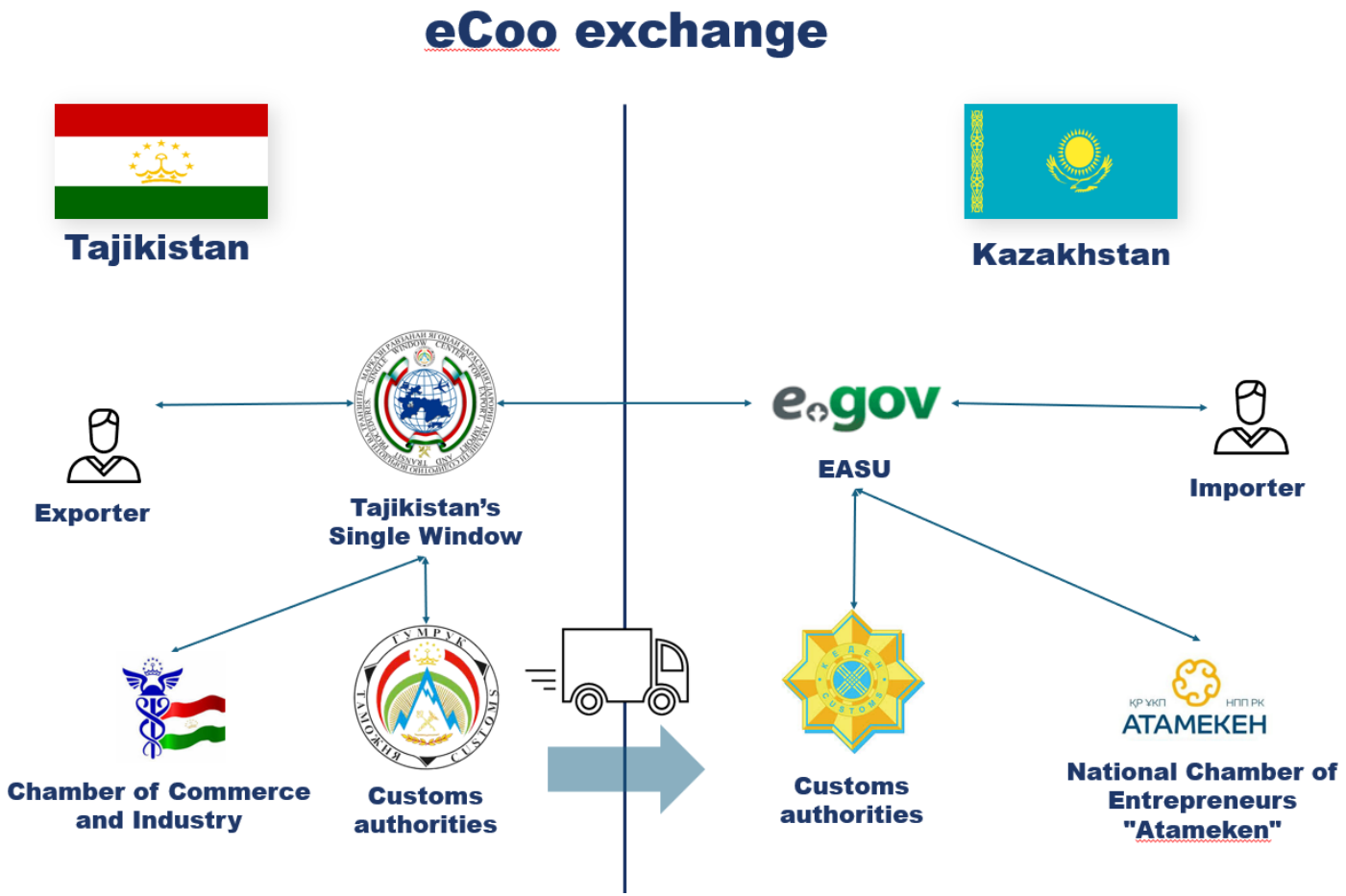
Step 3. Proposed Use-Cases for selected Documents and Partners Countries

- Description of the goals and objectives of the pilot project use-case, scope, participants, and document flow
- Description of the Recommended Model for Electronic Data Exchange

As a result

Description of the Pilot Project scope and **TO BE** business model

Step 3 example. Proposed Use-Case for the eCoO between Tajikistan and Kazakhstan



As a result Comprehensible **TO BE** business model for the Tajikistan-Kazakhstan case

7 Steps Methodology for Feasibility Study

Step 4. Economic Feasibility and Cost-Benefit Analysis

Provide a detailed analysis of the costs of implementing electronic data exchange systems and the potential economic benefits for selected LPCO

Identify Costs

- Development Costs
- Implementation Costs
- Training Costs
- Maintenance and Operational Costs
- Change Management Costs

Quantify Benefits

- Efficiency Gains
- Cost Reduction
- Error Reduction
- Improved Compliance and Security

Conduct Impact Assessment on Trade Efficiency

- Time to Trade
- Trade Volume Impact
- Competitiveness

Perform a Cost-Benefit Analysis

- Net Present Value (NPV)
- Return on Investment (ROI)
- Break-even Analysis

Additional Considerations

- Sensitivity Analysis
- Risk Assessment
- Data Accuracy

As a result

Understanding how much the Pilot Project and its scaling cost and what economic benefits it brings

Step 4 example. Economic Feasibility and Cost-Benefit Analysis for the Electronic Certificates of Origin Exchange Project for Uzbekistan's eCoO case

Initial Costs – **48 850$** for project management, software development, system implementation, and staff training over 6-9 months.

Operational Costs – **37 000$** for maintenance, technical support, and change management over 5 months.

Financial Outcomes:

Total Project Costs: 85 850$.
Payback Period: About 1 year.

Indicator	1-year period	5-year period
Economic Benefits	84 224$	421 121$
Net Present Value (NPV) (10% discount rate)	-9 282$	233 425$
Return on Investment (ROI)	1.89%	390.53%

As a result

Based on the above data, it can be concluded that the implementation of the eCoO is economically feasible for Uzbekistan in the context of trade with Kyrgyzstan.

7 Steps Methodology for Feasibility Study

Step 5. Operational Feasibility and Agency Involvement

Evaluate the readiness of government agencies for electronic data exchange and develop strategies for capacity building and change management.

As a result

Recommendations for Lead agency on how to organize and provide a Pilot Project

Step 5 example. Operational Feasibility and Agency Involvement for Tajikistan's eCoO case

Lead Agency	*Chamber of Commerce and Industry*
Involved Bodies and Agencies	*Customs Service; Single Window Center; Ministry of Economic Development and Trade; Agency of Innovation and Digital Technologies; Export Agency*

Implementation Challenges and Requirements for Electronic Document Exchange

Key Issues	• *Lack of Information System* • *Internet Access*
Cyber security	Ensuring the cybersecurity of e-document exchange when connecting to external systems
Staff Readiness	Basic IT and security courses needed, available as online courses, webinars, and interactive seminars.
Change Management	•A team comprising key ministries, IT specialists, and project managers. •Develop and implement a change management plan, coordinate efforts, and monitor progress.

As a result

The CCI of Tajikistan plays a key role in facilitating cross-border trade by issuing certificates of origin for goods

7 Steps Methodology for Feasibility Study

Step 6. Implementation Plan

To delineate a clear, actionable plan for implementing the proposed electronic data exchange model for a pilot project.

Preparation Phase (1)
- Stakeholder Engagement
- Requirement Gathering
- Resource Allocation

Design and Development Phase (2)
- System Design
- Development and Testing

Pilot Project Launch (3)
- Selection of Pilot Area
- Training and Launch

Monitoring and Evaluation (4)
- Performance Tracking
- Impact Assessment
- Adjustments

Scaling Up (5)
- Expansion Plan
- Continued Improvement

Documentation and Reporting (6)
- Prepare Comprehensive Documentation
- Reporting

As a result Plan for the Pilot Project realization

Step 6 example. Implementation Plan for Uzbekistan's ePhyto case

Stage Name	Implementation Period	Responsible Agencies
1. Preparatory Stage	2024	
2. Design and Development Phase	2024	→ Ministry of Investment, Industry and Trade of the Republic of Uzbekistan
3. Launch of the Pilot Project	2025	
4. Monitoring and Evaluation	2024-2026	→ Ministry of Agriculture of the Republic of Uzbekistan
5. Scaling	2025-2026	
6. Documentation and Reporting	2026	→ Customs Committee under the Ministry of Economy and Finance of the Republic of Uzbekistan

As a result

Comprehensible Plan for the Uzbekistan's Pilot Project realization

7 Steps Methodology for Feasibility Study

Step 7. Collaboration and Regional Integration

a. Exploration of Collaborative Opportunities with Regional Entities and Partner Countries

To identify and evaluate potential collaborations with regional entities, and international organizations that can support and enhance the electronic data exchange project

- Identify Potential Collaborators
- Assess Current Collaborations
- Document Collaborative Frameworks

b. Role of Regional Trade Agreements and Frameworks in Supporting Electronic Exchange

To understand and leverage the role of regional trade agreements and frameworks in facilitating and enhancing the implementation of electronic data exchange initiatives

- Review Relevant Agreements and Frameworks
- Understand Commitments and Obligations
- Leverage Agreements for Support
- Document Integration Strategies

As a result Existing resource planning and allocation

Step 7 example. Collaboration and Regional Integration for Uzbekistan's ePhyto case

a. Exploration of Collaborative Opportunities with Regional Entities and Partner Countries

- *Ready4Trade Central Asia (R4TCA)*
implemented by the International Trade Centre (ITC) and funded by the European Union

- *Trade Facilitation in Central Asia Project*
implemented by GIZ

- *Trade Central Asia*
Selected activities of the USAID Trade in Central Asia program

b. Role of Regional Trade Agreements and Frameworks in Supporting Electronic Exchange

- Readiness to accede to the *Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific (CPTA)*

- Within the framework of the initiatives launched in Baku in November 2023 (SPECA), a draft *Regional Roadmap* is being developed to harmonize standards in the commodity transportation system

As a result

Improving Uzbekistan's competitiveness and enabling it to take full advantage of the fast-growing digital economy

Key Components of the Feasibility Study

Trade Volume and Activity Analysis

Evaluate areas based on the volume of trade and the prevalence of LPCO processes to ensure a significant impact can be made

Stakeholder Readiness and Support

Assess the readiness of local stakeholders, including government agencies, traders, and other entities, to participate and support the project

Digital Infrastructure Availability

Examine the existing digital infrastructure and the capacity to implement new technologies

Regulatory Compliance and Legal Framework

Review the legal and regulatory environment to ensure it supports electronic data exchange and pilot project goals

Documents suggested for the pilot projects:

1. Pre-arrival information
2. Certificate of Origin
3. Cargo Manifest
4. Customs Declaration
5. SPS Certificates
6. Dangerous Goods Declarations
7. Invoice and Packing List
8. Bill of Lading

Selected Pilot project Areas in:

- Nepal
- Bangladesh
- Bhutan
- Timor-Leste

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