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Digitalization and Connectivity
Good Practices and Lessons Learned
## Digitalisation projects

### Digital Customs
- ASYCUDAWorld versions **4.4**, including alignments with regional Customs Unions requirements (EU, EACU, EAC, CARICOM, COMESA, etc.). Customs enhancements

### Digital Partner Government Agency
- Permits management solutions integrated with customs systems

### Interconnectivity & Interoperability (national/-regional/ international)
- Cross-Border Information Exchange (Customs, Transport, Regulatory data integration and processing)
- Digital corridors (Air/Sea/Road/Rail/MMT)

### Single Window environment
- Customs-centric Single Window

## Digital solutions (movement of goods & persons)

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ASY ADN</td>
<td>Extraction module that aggregates and transfers tariff and trade data from ASYCUDA to the World Trade Organization’s (WTO) Integrated Database (IDB).</td>
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<tr>
<td>ASY PCD</td>
<td>Interface of UNCTAD/ASYCUDA with UPU/CDS for effective and efficient management of cross-border E-Commerce.</td>
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<tr>
<td>ASY STA</td>
<td>Statistical reporting module providing a set of standard reports, and the tools to develop other ad hoc reports.</td>
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<tr>
<td>ASY ATO</td>
<td>Extraction tool that compiles and transfers trade-related customs data from ASYCUDA to the African Trade Observatory (ATO).</td>
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<td>ASY PM</td>
<td>Business intelligence - Performance Measurement for strategic decision.</td>
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<tr>
<td>ASY SW</td>
<td>Collection of integrated applications and solutions developed by UNCTAD/ASYCUDA at the request of member states to address the needs of different regulatory agencies, and to achieve the required balance between trade control and facilitation.</td>
</tr>
<tr>
<td>ASY HUB</td>
<td>Platform to facilitate the electronic exchange and processing of electronic Sea Cargo Manifest pre-arrival (Entry) and pre-departure (Exit) data.</td>
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<tr>
<td>ASY PM</td>
<td>Module to facilitate legitimate Humanitarian aid through efficient, managed and automated coordination workflow before, during and post disaster.</td>
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<tr>
<td>ASY PX</td>
<td>Module that supports the Customs Department in facilitating legitimate travelers and managing risks.</td>
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<td>ASY REC</td>
<td>ASYCUDA module for the management of sanitary and phytosanitary certificates.</td>
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<tr>
<td>ASY PCA</td>
<td>ASYCUDA module for the management of mineral value chain, from mineral extraction all the way to export of the final product. This module is aimed at mineral traders, ministry of mines and customs.</td>
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<td>ASY SPS</td>
<td>ASYCUDA module for the management of sanitary and phytosanitary certificates.</td>
</tr>
<tr>
<td>TiSTAT</td>
<td>Collection and processing of trade in services data for National Statistical Offices (NSOs) in member states of the UEMOA. It is a cooperation between ASYCUDA and UNCTAD’s Development Statistics and Information Branch (DSIB).</td>
</tr>
</tbody>
</table>

### Additional Modules
- Permit management solutions integrated with customs systems
- Cross-Border Information Exchange (Customs, Transport, Regulatory data integration and processing)
- Digital corridors (Air/Sea/Road/Rail/MMT)
- Customs-centric Single Window

### ASSIST Project
- Development of a cloud-based electronic permit system offering automated support for permit application, processing, issuance, and reporting.
**ASYCUDA Programme in Action**

**Regional and International Transit**

The Economic Community of West African States (ECOWAS) Customs Interconnection Project with Côte d’Ivoire, Burkina Faso, Togo and already exchanging data in real time with ASYCUDAWorld for multi-modal transport including rail and road.

**SIGMAT**

Development of a NCTS Phase 5 application for implementing the Common transit procedure used for the movement of goods between Georgia/Moldova and EU/EFTA and other designated member States (36 countries).

**NCTS Phase 5**

Data processing and integration between TIR international system and the information systems of the customs authorities to manage all information exchange as defined in the eTIR specifications.

**TIR**

**Latest projects**

- Chad
- ECOWAS
- Georgia
- Iraq
- Mozambique
- Pacific (PRISE)
- Turkmenistan
- Vanuatu
- Zimbabwe

**Upcoming**

- Angola
- Barbados
- St Vincent & Grenadines
- Tajikistan
ASYCUDA for Transit

Transit solutions deployed in ASYCUDA user countries

- **ASYCUDA Standard Transit**, national transit solution (aligned with national requirements)
- **ASYCUDA TIR**, international transit solution (aligned with TIR-EPD/SafeTIR requirements)
- **ASTANA-1 Transit** between Kazakhstan and EAEU member states (aligned with EAEU legislation & requirements/regional transit + TIR-EPD)
- **CTC/NCTS NTA P5** between Georgia/Moldova and member states of Common Transit Convention (aligned with CTC/EU requirements)
- **Regional Transit module** (SIGMAT) between ECOWAS member states
- **International transit eTIR** under eTIR international system (in progress)
SIGMAT – Solution and results

- **Before**: A transit declaration has to be registered at the border of each country.

- **Solution**:
  - At the departure country, a transit declaration is registered and a copy is electronically sent to the transit and destination countries’ systems.
  - Customs agents confirm the exit/entrance at the border or at the arrival at the destination office. Confirmations are sent electronically.

- **Results**:
  - Simplification of transit procedures (only 1 transit declaration registered).
  - Shorter transit processing time.

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SIGMAT (ECOWAS Regional transit module)

- Technical and functional specifications defined with the support of WCO to exchange transit declarations messages between Customs clearances systems of ECOWAS member states (12 are using ASYCUDA out of 15).

- **SIGMAT for road transport**:
  - Developed by 5 IT experts of ECOWAS region with the support of ASYCUDA experts (2018).
  - Implemented in 2019 in 5 countries (2 LLDCs): Burkina, Benin, Côte d’Ivoire, Niger and Togo for road transport.
  - Tested between Mali and Senegal (in 2020).
  - Deployment planned in all ECOWAS countries / SIGMAT could be also used in other region (like CEMAC).

- **SIGMAT for rail transport**:
  - Developed in 2020 and tested in 1st quarter of 2021.
  - Should be deployed before June 2021 between Burkina Faso and Côte d’Ivoire.

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ASYCUDA – Transit in ECOWAS
Results and activities

Transit solutions in Europe and Central Asia Region

Middle Corridor/Trans-Caspian International Transport Route
Transit solutions deployed in the region by the ASYCUDA user countries

**National, Regional, International transit**

- **Tajikistan & Turkmenistan**
  - ASYCUDA standard Transit, national transit solution (aligned with national requirements), combined with
  - ASYCUDA TIR, international transit solution (aligned with TIR-EPD/SafeTIR requirements)

- **Kazakhstan**
  - ASTANA-1 Transit between Kazakhstan and EAEU member states (aligned with EAEU legislation & requirements/regional transit + TIR-EPD)

- **Georgia**
  - CTC/NCTS NTA P5 between Georgia and member states of Common Transit Convention (aligned with CTC/EU requirements)
Kazakhstan – Cross-Border Information Exchange

Transit in EAEU & digital connectivity

Cross-Border IE & Connectivity

Automatic Exchange of Information (national, Customs Union and international level)

- Information Exchange messages with KTZ (National Railway Company)
- Information Exchange messages with IRU (TIR EPD, SAFETIR etc.)
- Information Exchange messages with Customs Union countries (EAEU, incoming and outgoing)

Automatic Exchange of Information (neighboring countries, bilateral agreements)

- Customs data exchange between Kazakhstan and China
- Customs data exchange between Kazakhstan and Uzbekistan
Kazakhstan - Regional interconnectivity EAEU

Data Exchange with Eurasian Economic Union

AS Y HUB

Messaging Service with the Customs Union

Peer to Peer messaging

Types of messages:
1. Customs Automatic Messages (Open/close Transit, etc.)
2. Inquiry Messages based on User requests
3. Technical Messages (e.g. Results)

Message Envelope:
1. Information on Application generating the message
2. Message Type
3. Routing Information (sender and receivers)
4. The Body contains the payload (document data)
Kazakhstan – Connectivity and interoperability at BCP

Interfacing ASYCUDA/ASTANA-1 with 3rd party systems/equipment’s

Implementation of ASTANA-1 Secure e-Borders by State Revenue Committee

- Integrations with specialized equipment to receive and process data
  - E-GATE – Automatic License Plate Recognition (ALPR),
  - Weighbridges,
  - X-Ray/Radiation equipment,
  - Surveillance cameras (Multimedia/Digital images of means of transport crossing the border)

- Enhancement of ASYCUDA Risk Management
  - Selectivity and targeting
  - Handling of results of controls

- Streamlined Submission and Information sharing
  - Data pipeline to streamline border processes (multi-agency)
Turkmenistan – Transit and regional connectivity

Facilitation of Silk Road transit

- Digitalization of TIR operations by the State Customs Service of Turkmenistan
- Customs data exchange between ASYCUDA systems of Turkmenistan and Afghanistan implemented
- Transit data exchange with Azerbaijan implemented
- Transit data exchange with Iran implemented
- Regional transit corridors (Lapis Lazuli) under discussion
Tajikistan - Transit and regional connectivity
Transforming Land locked to Land linked country

- Fourth Phase of Central Asia Regional Links Programme CARS-4, World Bank funded
- E-borders, digital TIR and other ICT tools (ongoing)
- Customs Transit data exchange with Uzbekistan, Russia, Kyrgyzstan, Turkmenistan, Afghanistan in progress (scheduled for 2025-2026)
Islamic Republic of Afghanistan - Transit and connectivity

Cross-border Data Exchange with neighboring countries

- **2017-2018:** piloting of transit data exchange between ASYCUDA system of Afghan Customs department and UAIS of the Customs Service under the Government of Tajikistan
- **2018-2019:** transit data exchange piloting between the Afghan Customs Department and Iranian Customs Administration (IRICA)
- **2019:** automated export data exchange mechanism successfully tested between the ASYCUDA ACD and UAIS of State Customs Committee of Uzbekistan
- **2020:** implementation of transit data exchange between ASYCUDA systems of ACD and State Customs Service of Turkmenistan
Georgia - Accession to the Common Transit Convention

National Transit Application aligned with the NCTS-P5 specifications and national requirements, including country specific deviations. Target date Q42024 Cross-border IE with 36 CTC parties

NCTS geographical extension

- Status of implementation of NCTS-P5 Information Exchange messages into GRS NCTS-NTA prototype
  - NTA.GE ready for message exchange. IEs aligned to the data requirements of CTC and EUCDM. Rules and conditions applied to NCTS-P5 messages implemented

- Level of GRS NCTS-NTA alignment with EU NCTS-P5 specifications and national requirements
  - NTA.GE is fully aligned with DDNTA-5.15.2-v2.0 and national requirements
NCTS geographical extension

- CSRM reached their first major national milestone in April 2024, when the economic operators started to process national movements in NCTS – NTS

- The NCTS-NTS is being rolled-out gradually (nationwide and for all economic operators) progressively

- Moldova will join the CTC in 2025 (target date)
Mongolia – eTransit solution

eTransit to facilitate border crossing through the digitisation of entry/exit and transit procedures

- Introduction of efficient procedures and appropriate IT technologies to minimize the fraud and to protect financial and economic interests of Mongolia, while increasing the comparative advantage of Mongolian business sector via improving national and regional transit capacity
- Introduction of modern, faster and more transparent transit procedure, reducing administrative burdens and costs for traders
- Further enhancement of operational Customs capacity, allowing for a better monitoring and a better supervision of the transit procedure
Albania – Kosovo Transit

Albania – Kosovo Common Transit System (CTS)

- System-to-System exchange of electronic data
- One single transit declaration covering the movement
- Mutual recognition of guarantee system
- Mutual recognition of Customs controls and procedures, seals and stamps
- Notification Crossing Frontier (NCF)
- Common Management of Reference Data (technical and business code lists, system messages and notifications)
- Joint Customs controls at shared Border Crossing Point Morine-Vërmice
Common Data Set (WCO DM) and Agreed Syntax

Single Entry Point

Data Exchange and Processing Between Customs and PGAs

Interfacing Partner Government Agencies with the National Single Window

Security

Statistical Reporting
ASYCUDA Programme approach to SW implementation

Project Planning and Execution

1. Initial assessment to identify all stakeholders involved in the clearance process. Assess legal framework and infrastructure required. Identify scope of intervention, required modules and interfaces to be developed. Define project road map.

2. Gather detailed information for each identified process. Business process reengineering required is documented, discussed and validated by management. Detailed user requirements (system requirement specification) document is drafted.

3. Prototyping completed by IT developers. Test cases developed against SRS document submitted to IT team. Once prototype successfully tested, user acceptance carried out by implementing agencies. Accommodate changes to user requirements, if requested.

4. User training and stakeholder awareness undertaken by project implementation team, in collaboration with implementing agencies. Final management approval and subsequent communications for rollout are done. Post system deployment support to be provided.
## Use cases:

**ASYCUDA a platform to build Single Window**

<table>
<thead>
<tr>
<th>Country</th>
<th>Single Window Name</th>
<th>Status</th>
<th>Number of PGAs connected</th>
<th>Lead Agency</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jamaica</td>
<td>Jamaica Single Window for Trade (JSWIFT)</td>
<td>Launched June 2020 &amp; under further enhancement</td>
<td>10 PGAs / 60+ e-services</td>
<td>Jamaica Customs Agency</td>
<td><a href="https://www.jswift.gov.jm/">https://www.jswift.gov.jm/</a></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>Single Window of Kazakhstan</td>
<td>10 PGAs / 60+ e-services</td>
<td>12 PGAs</td>
<td>State Revenue Committee of the Ministry of Finance</td>
<td><a href="http://www.eokmo.gov.kz">www.eokmo.gov.kz</a></td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>Timor-Leste electronic Single Window (TileSW)</td>
<td>Launched February 2021 &amp; under further enhancement</td>
<td>13 implemented, 2 in process</td>
<td>The Project Steering Committee is Chaired by the Ministry of Finance, while the Customs Administration is the Technical lead</td>
<td><a href="https://customs.gov.tl/doing-business/national-single-windows/">https://customs.gov.tl/doing-business/national-single-windows/</a></td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>Single Window for Export-Import Operation</td>
<td>Deployment phase</td>
<td>7 PGA + 3 planned</td>
<td>Customs</td>
<td>No Website</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>Vanuatu electronic Single Window System</td>
<td>Launched in 2020, 6 modules launched under Phase 2 as of January 2023</td>
<td>13 implemented, 5 in process</td>
<td>Vanuatu Aid-for-Trade Management Unit (VAMU)</td>
<td><a href="https://singlewindow.gov.vu/">https://singlewindow.gov.vu/</a></td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>Zimbabwe Electronic Single Window System (ZESW)</td>
<td>First module with Port Health Agency to be launched end of September 2023</td>
<td>0</td>
<td>Zimbabwe Revenue Authority (ZIMRA)</td>
<td><a href="https://eew.gov.zw">https://eew.gov.zw</a></td>
</tr>
</tbody>
</table>
ASYCUDA for Single Window Systems

Examples

**Rwanda (over 20 OGA):** Health Ministry, Rwanda Development Comitee, Bureaus of standards, Magasin générale du Rwanda etc.

**Uganda (over 20 OGA):** Foreign Affairs Ministry, Atomic Agency, Bureaus of Standards, Coffee Export Board etc.

**Kazakhstan (12 OGA):** Ministry of Agriculture, Central Bank, Justice Ministry, Energy Ministry etc.

**Jordan (7 OGAs):** Ministry of Health etc.

**Jamaica (6 OGA):** TBL Trade Board Ltd, PQPI Plant Quarantine Produce Inspection, JACRA Jamaica Agricultural Commodities Regulatory Authority (March), PCA Pesticides Control Authority, VSD Veterinary Services Division (April), JCA Jamaica customs agency

**Vanuatu (5 OGA):** Biosecurity, Department of Energy, Department of Environment, Department of Industry (2022), Immigration Department; 3 more OGA to go: Telecommunications, Radiocommunications and Broadcasting Regulator (TRBR), Vanuatu Post (AW-CDS interface), NDMO (ASYREC)

**Comoros (4 OGA):** INRAPE (Agriculture), ANAMEV (Medecines), Direction des mines (Vehicles), ANPI (Investments)

**Timor-Leste (10 OGA):** TradelInvest, Ministry of Tourism, Commerce and Industry, National Ozone Unit, Direction National Quarantine and Biosecurity, Ministry of Heath, Ministry of Finance, Direction National des Transports Terrestres, Immigration, Tibar Port

**Grenada (2 OGA):** Ministry of Trade and Bureau of Standards

**Burundi (1 OGA + 2 planned):** Medicine agency, Agriculture and Development

**Zimbabwe: Inception phase**

**Turkmenistan (15 OGA + 7 planned):** Deployment phase

**Barbados:** Inception phase
UNCTAD Single Window Roadmap

THANK YOU!

QUESTIONS & ANSWERS

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