



# Customs-to-Customs Data Exchange Workshop

Tbilisi, Georgia, 22-23 June 2015



# The Exchange Platform

## **Customs-to Customs (C2C) Electronic Information Exchange for Transit**

UNDA Project “Strengthening the Capacities of Developing Countries and Countries with Economies in Transition to Facilitate Legitimate Border Crossing, Regional Cooperation and Integration”

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# C2C ELECTRONIC INFORMATION EXCHANGE FOR TRANSIT

## OBJECTIVES

To strengthen the capacities of developing countries as well as countries with transitioning economies to facilitate legitimate border crossing, by means of **increased secure electronic exchange of information between customs administrations**

## OUTPUT

A secure **C2C versatile electronic exchange platform** will be developed and deployed, taking due account of the specific challenges faced by developing countries and countries with economies in transition.

# C2C ELECTRONIC INFORMATION EXCHANGE FOR TRANSIT

## EX PLATFORM

The secure C2C electronic exchange platform, that will allow participating **pilot countries** to exchange transit related information and be flexible enough to allow to easily add additional countries to the data exchange and new flows of messages based on sub-sets of the transit WCO data model

## PILOT PROJECT

On the basis of the results of the gap analysis, **Georgia** is selected to link national Customs IT systems to C2C exchange platform in order to exchange data with **Turkish Customs**

# GEORGIA-TURKEY PILOT PROJECT

## PURPOSES

1. To **exchange** electronically and securely TIR related data between customs administrations **via a central platform**
2. To make a **first step towards the implementation of standard eTIR** messages and the eTIR international system
3. To demonstrate, at a reduced scale, the **practical feasibility of the complete eTIR project** and, possibly, identify areas of improvement

# DATA EXCHANGE: EXISTING PRACTICE

## JUST GEORGIA

Exchange of information under multiple bilateral agreements with **neighbouring** countries, based on the peer-to-peer exchange of limited information in pre-agreed custom format and technology

- Protocol on Organizing the Exchange of Preliminary Information on **Goods and Vehicles Transiting across the State Borders of Georgia and Ukraine**
- Periodic batch data exchange, used for analytical and RM purposes
- Data is exchanged through a secure VPN channel
  
- Agreement between the Government of Georgia and the Government of Republic of Turkey on **the Joint Use of Land Crossing Points**
- Real-time data exchange, used for operational purposes
- Data is exchanged through a secure VPN channel



- Agreement on **the Joint Use of Land Crossing Points**
- Real-time provision of electronic information

- Agreement between the Government of Georgia and the Government of Republic of Armenia on **the Joint Use of Land Customs Crossing Points**
- Real-time provision of electronic information

# THE EXCHANGE PLATFORM

## APPROACH

- **Centralized** Exchange Platform, will be based on the **Enterprise Service Bus** (ESB) technology and will contain the functional rules that allow the functioning of the Exchange Platform
- The central **Database** will contain information on the data on guarantees and their coverage, as well as all data regarding the TIR transports linking them to the guarantee information
- **Web services** implemented on the central platform will allow authorized computer systems to interact securely with the eTIR international system

# THE EXCHANGE PLATFORM

## APPROACH

- Based on **eTIR Reference Model** v.4.1a, **WCO data model** v.3.5 and taking into account the overall structure of the WCO transit data model
- Taking into account the availability of **data** that **pilot countries** will be exchanging
- Additionally allowing alternative secure mechanisms to exchange data (e.g. **email, FTP**) if the web service mechanism is not available for participant country
- Hosted and managed by the IT centre of the **UN Office** at Geneva

# NATIONAL MANAGEMENT OF DATA

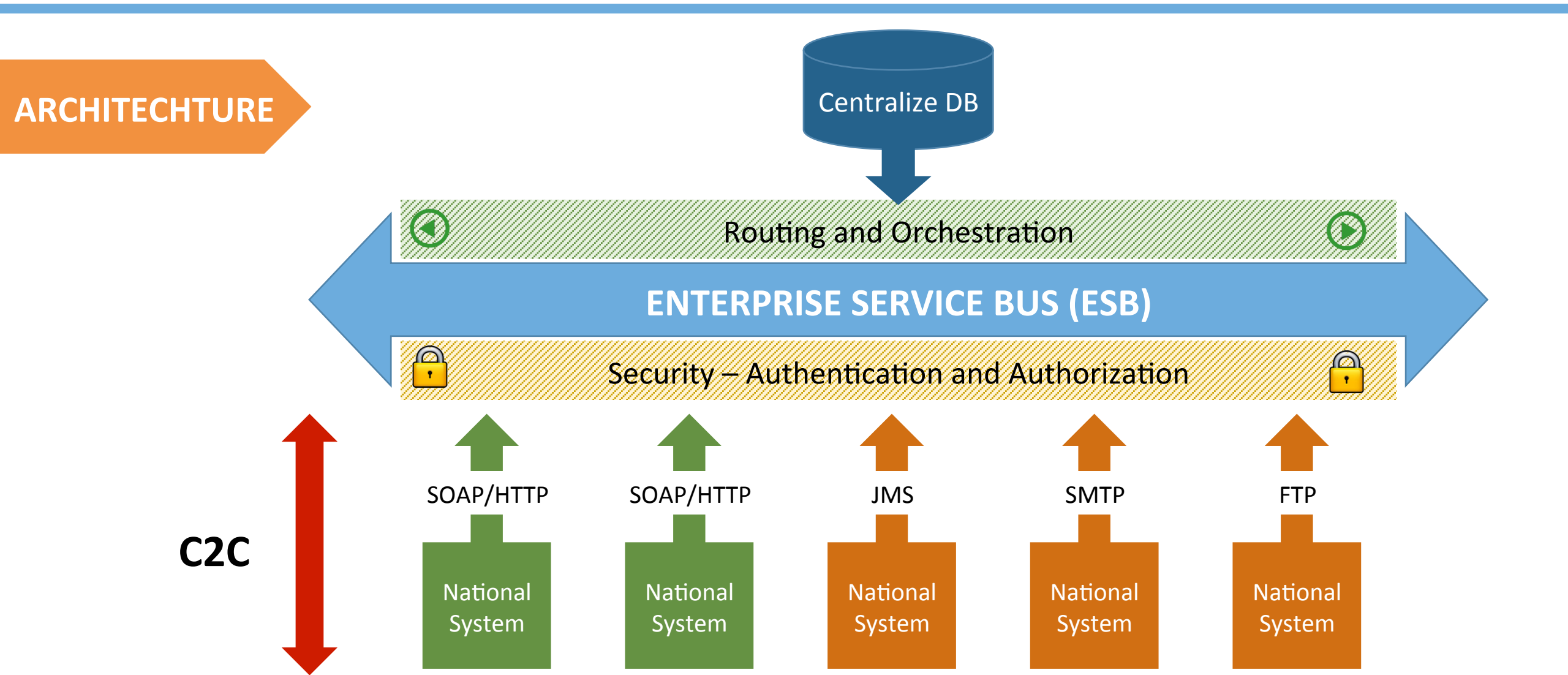
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## APPROACH

- The national computer systems of the countries process electronically the data from and to the Exchange Platform
- The national applications are primarily focused on reception and validation of the electronic declaration as well as on the management of the TIR operations
- National computer systems communicate with the Exchange Platform using a predefined set of standard messages and technology

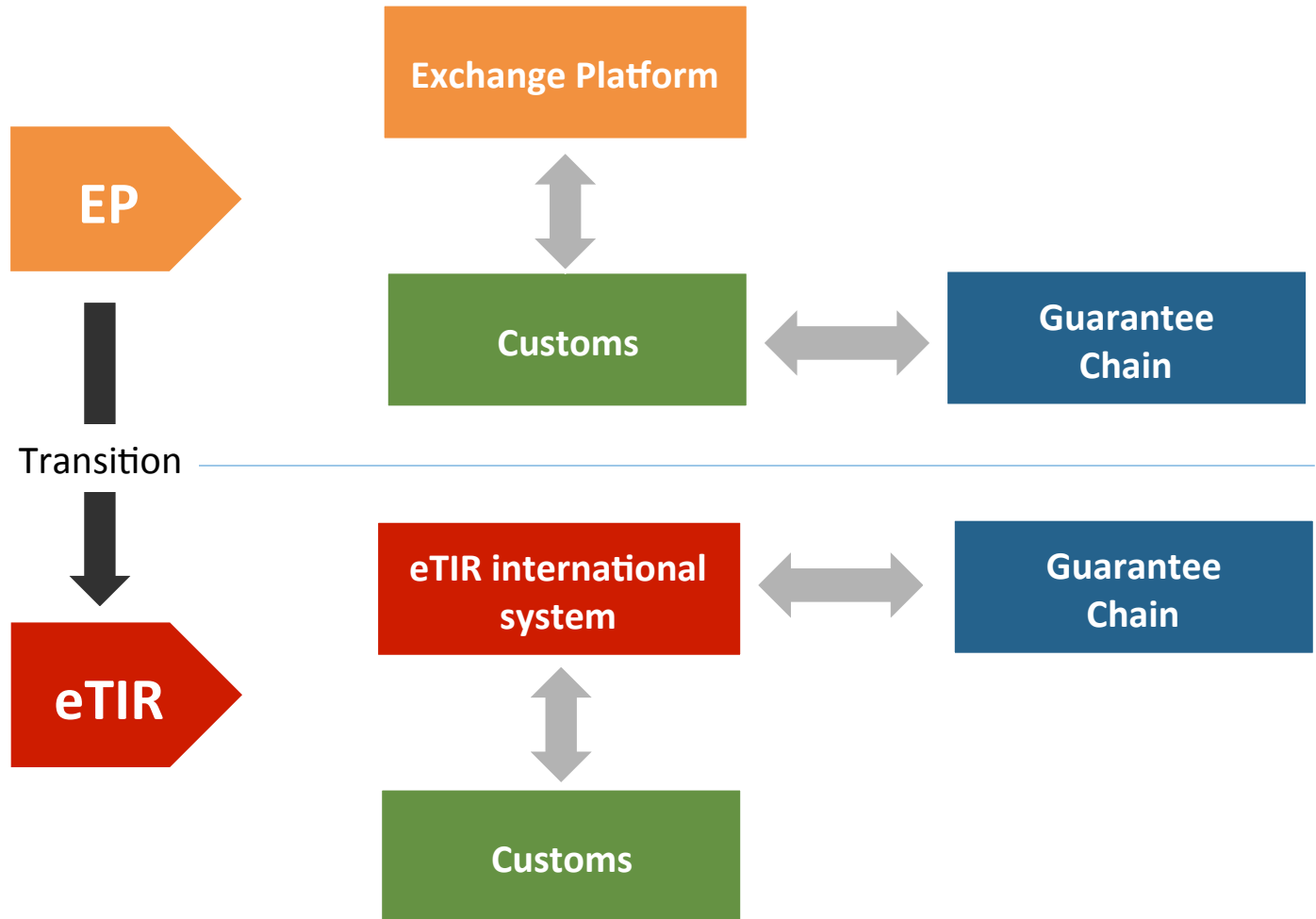


# THE EXCHANGE PLATFORM



# eTIR vs. EXCHANGE PLATFORM

- Exchange Platform is a pilot, enabling emerging environment to cooperate through the centralized mechanism and preparing them for the eTIR deployment



- eTIR has a larger scope, including comprehensive communication system and regulatory environment, meaning elimination of paper-based operations

# THE EXCHANGE PLATFORM

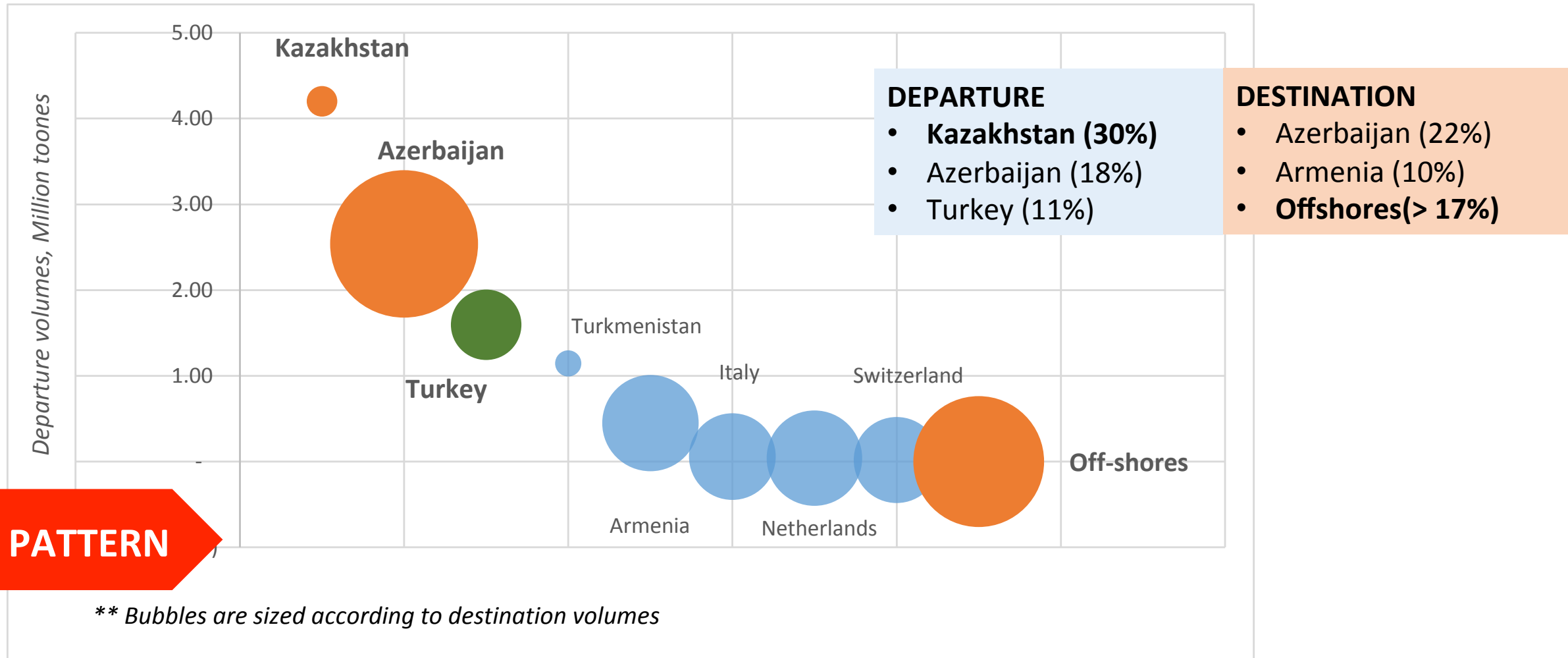
## ADVANTAGES

### ACCESS TO INFORMATION AND RISK MANAGEMENT

- Access to **actual information** across the route
- Enriched risk profiles (route vs. departure/ destination): extended facilities to manage **transit risks**
- *Access to both advance information (departure) and final (destination) information: extended facilities to manage **tariff risks***

The exchanges of information will allow customs authorities to carry out risk analysis at central level in advance in order to facilitate and to accelerate the border crossing of goods, as well as to avoid possible repetitious keying in of TIR information.

# TRANSIT FLOWS THROUGH GEORGIA, 2013



# THE EXCHANGE PLATFORM

## ADVANTAGES

### SINGLE POINT ACCESS AND COMMON INTERFACES

- The **single point access** to the actual information: no needs to establish multiple connections with different systems
- **Common interfaces** to exchange information across the countries: no needs for negotiation and adoption of several formats and data exchange interfaces
- **Forced informing**: pushed availability of the real-time information (both initial and updates) upon appearance in the system

The exchanges platform will allow customs authorities to establish access to both advance and en route information quickly and without establishment of customized bilateral communication channels

# THE EXCHANGE PLATFORM

## ADVANTAGES

### TRANSITION TO eTIR

**First step towards the technical integration in the eTIR** international system will be done:

- Basic messages in accordance with **eTIR Reference Model** tested through the platform and adopted by the participant countries
- **C2C communication channels** adopted and cooperation between participant countries established

The exchange platform can be technically easily substituted by the **eTIR International System** without significant transition effort from the countries, connected to the Exchange Platform

# THE EXCHANGE PLATFORM

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## LIMITATIONS

- **The overall problem:** The limited ability of **unique identification** of transport case along the
- The **serial number of TIR Carnet** can be used for unique identification
- The data is expected to be **limited to information on movement of cargos under the TIR regime**

# THE EXCHANGE PLATFORM

## SCOPE

The following **messages** according to **eTIR Reference Model v. 4.1a** are expected to be adopted (fully or partially)

1. Record Advance Cargo Information
2. Notify Customs
3. Start TIR Operation
4. Terminate TIR Operation
5. Discharge TIR Operation
6. Query Guarantee



# RECORD ADVANCE CARGO INFORMATION

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*eTIR Reference: 17-18*

- The first **Customs office of departure** sends all data contained in the **electronic declaration** together with the information on seals affixed to the Exchange Platform after having accepted the declaration and sealed the loading unit
- The information related to a declaration can be updated after **subsequent loading or partial unloading**, after the **truck and/or the goods have been submitted to checks**, after the **itinerary has been changed** or after the **vehicle has been changed**

# NOTIFY CUSTOMS

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*eTIR Reference: I16-I17*

- The **Exchange Platform** provides all **subsequent countries indicated in the itinerary** with the information regarding
  - Submission of advance information
  - Start TIR Operation
  - Termination TIR Operation
  - Discharge TIR Operation
- The **National System confirms** the reception of the notification and provides a national reference in case of reception of advance cargo information

# START TIR OPERATION

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*eTIR Reference: I9-I10*

- The **National System sends a message** to the Exchange Platform, notifying that a **TIR operation has started**
- The **Exchange Platform saves** the information, links it to a guarantee information and *notifies the relevant National systems of the start of a TIR operation (optional, “Notify Customs” message)*
- Due to the limited scope, the **Exchange Platform is not expected to verify** authorization of the holder and the guarantee status (whether “in use”)

# TERMINATE TIR OPERATION

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*eTIR Reference: I11-I12*

- The **National System sends a message** age to the Exchange Platform notifying that a **TIR operation has terminated**
- The **Exchange Platform stores** the information, links it to a guarantee information (including Start TIR Operation) and *notifies the relevant National systems of the termination of all TIR operations, including the final termination (optional, “Notify Customs” message)*
- Due to the limited scope, the Exchange Platform **is not expected to** verify the status of the guarantee to be cancelled

# DISCHARGE TIR OPERATION

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*eTIR Reference: I13-I14*

- The **National System sends a message** to the Exchange Platform notifying that a **TIR operation has been discharged**
- The **Exchange Platform stores** the information, links it to a guarantee information and *notifies the relevant National systems of the discharge of the TIR operations constituting a single TIR Transport (optional, “Notify Customs” message)*
- When all goods have reached their final destination and all TIR operations covered by the guarantee have been discharged, the status of the guarantee is changed to “discharged in all countries”.

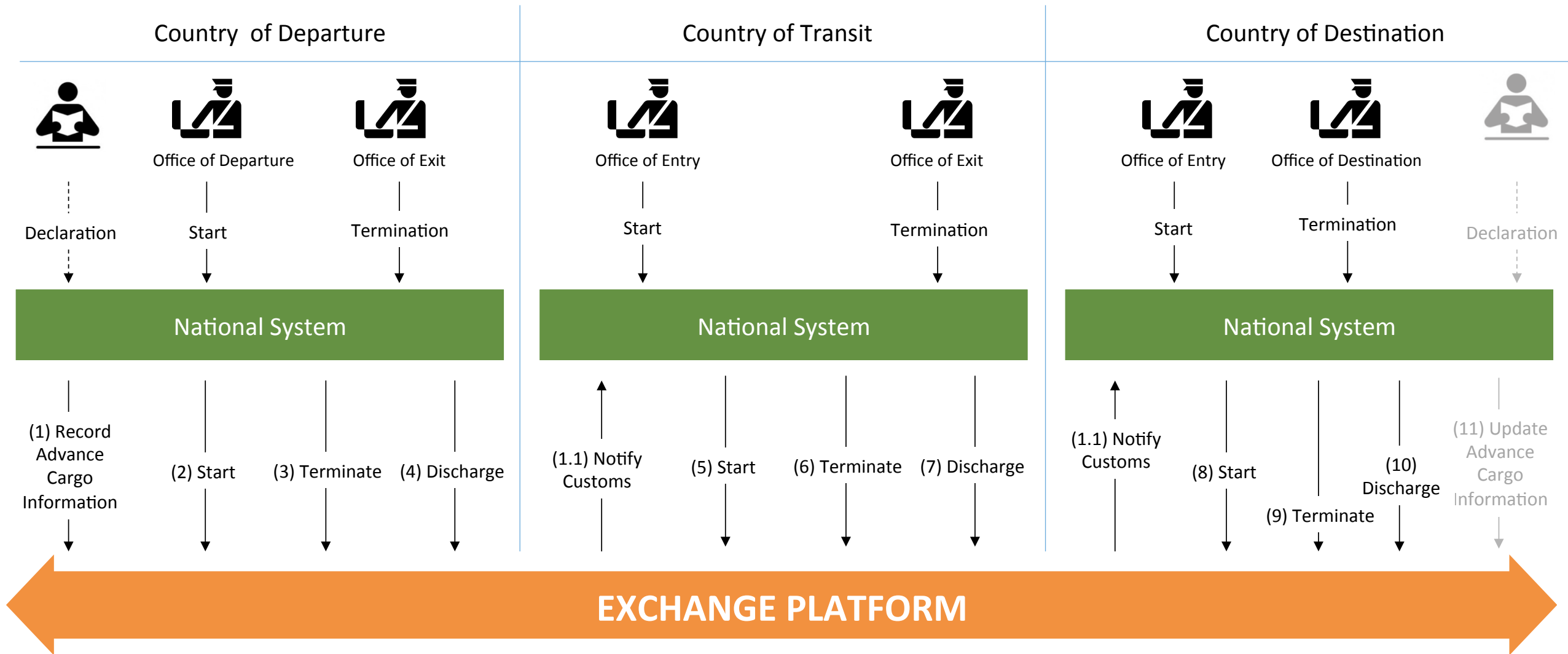
# QUERY GUARANTEE

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*eTIR Reference: 15-16*

- This message allows **Customs authorities to query the Exchange Platform to obtain information** on one or multiple guarantees
- The **Exchange Platform** returns the full available information requested regarding the guarantee(s) or the error code in information is not available

# THE EXCHANGE PLATFORM IN ACTION



# GEORGIA-TURKEY PILOT PROJECT

## SCOPE

Only operations, started and completed in Turkey and Georgia are expected to be deployed initially

### **Direction Turkey – Georgia**

1. Departure – Exit in Turkey / Entry in Georgia – Destination in Georgia
2. Departure – Intermediate Loading – Exit in Turkey / Entry in Georgia – Destination in Georgia
3. Departure – Intermediate Loading – Intermediate Loading – Exit in Turkey / Entry in Georgia – Destination in Georgia

### **Direction – Georgia Turkey**

1. Departure – Exit in Georgia / Entry in Turkey – Destination in Turkey
2. Departure – Exit in Georgia / Entry in Turkey – Intermediate Unloading – Destination in Turkey
3. Departure – Exit in Georgia / Entry in Turkey – Intermediate Unloading – Intermediate Unloading – Destination in Turkey



# CHALLENGES (SO FAR)

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## PILOT PROJECT

- Reduced scale in compare to eTIR International System
- Establishment of unified identification system for the customs control points
- Source of Information (Declaration vs. TIR-EPD)
- Limited structured TIR related information in the national system (Georgia)
- Limited real-time communication with available IRU's tools (Real-Time SafeTIR (RTS) and TIR-EPD) to employ full capabilities and benefits from exchange of information

## EX PLATFORM

# TECHNOLOGY

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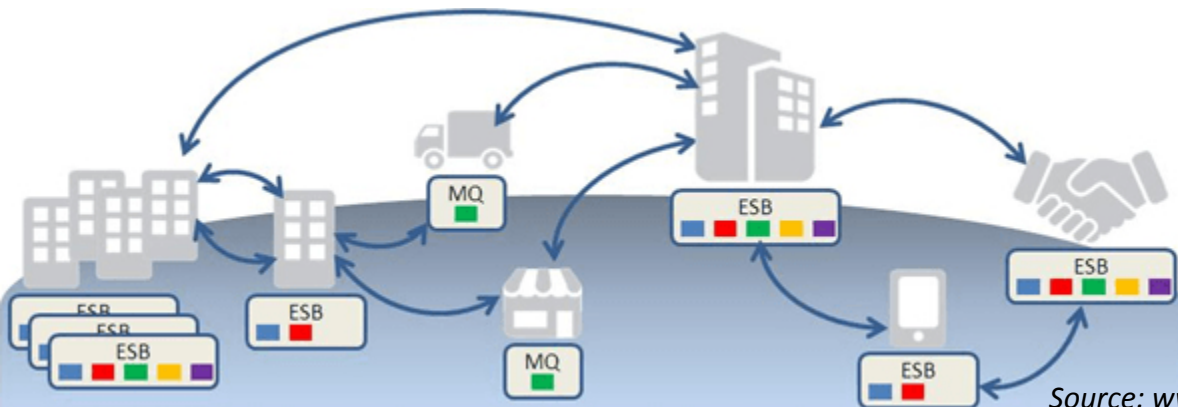
## THE PLATFORM

- The Enterprise Service Bus (ESB) is expected to be built on **Jboss Fuse** and/or the various open source components which are part of it
- The database is expected to run on **MS SQL Server**
- The exchange platform and database will be installed in the IT Centre of the United Nations Office at Geneva.

# WHY JBOSS FUSE?

## THE PLATFORM

- An **open source** Enterprise Service Bus (ESB)
- Has an elastic footprint that supports **integration beyond the data center**
- Available for **deployment in several different configurations**, enabling intelligent integration both on premise or in the Cloud
- Includes **industry-standard integration patterns**, allowing connectivity of customized solutions, eliminating batch delivery and needs for hub-and-spoke architecture



Source: [www.jboss.org](http://www.jboss.org)

Thank You for Attention!  
Questions?

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