

*TA-8585 REG: Aligning Customs Trade Facilitation Measures with Best Practices
in Central Asia Regional Economic Cooperation*

CAREC Advanced Transit System prototype software requirements specification

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*Draft version 0.94
May 2017*

1	Introduction	4
1.1	Purpose	4
1.2	Scope	4
1.3	Definitions, acronyms, and abbreviations	4
1.4	References	4
1.5	Overview of the document.....	5
2	Overall description	5
2.1	CATS prototype functions.....	5
2.1.1	Data model	9
2.1.2	Users and interfaces	9
2.1.2.1	Customs Officer	10
2.1.2.2	Trader	10
2.1.2.3	Insurer	11
2.1.2.4	Administrator	12
2.1.3	Constraints, assumptions and dependencies	12
2.1.3.1	Legal constraints.....	12
2.1.3.2	Parallel IT systems usage	12
2.1.3.3	CATS prototype paperless workflow	12
3	Specific requirements.....	13
3.1	Functional requirements (by user roles)	13
3.1.1	Customs officer.....	13
3.1.2	Trader	13
3.1.3	Insurer	13
3.2	Notification system	13

3.3	Internationalisation and localisation	13
3.3.1	Interface translation	13
3.3.2	Terms translation	13
3.3.3	Fields translation (multi-language models/fields)	13
3.4	Software interfaces	13
3.4.1	Communications interfaces.....	13
3.4.1.1	VPN gateways.....	14
3.4.1.2	Notification server, notification gateway.....	14
3.5	Data model and references	15
3.5.1	CATS prototype data model	15
3.5.2	CATS-specific references	16
3.5.2.1	Customs offices reference	16
3.5.2.2	AEO reference	16
3.5.2.3	Authorized trader reference.....	16
3.5.2.4	Approved insurer reference	16
3.5.2.5	Insurance contract reference	16
3.5.2.6	Transit route country codes	16
3.5.2.7	CATS Prototype restricted goods list	16
3.6	Other requirements.....	16
3.6.1	Report generation system	16
3.6.2	Users manuals	17
3.6.3	User training	17
3.6.4	End-users support	17
3.6.5	Project management / collaboration platform	17

1 Introduction

This CAREC Advanced Transit System (CATS) Prototype Software Requirements Specification (SRS) provides an overview of the system, scope, definitions, acronyms, abbreviations, references and overview of the SRS.

1.1 Purpose

The CATS Prototype is designed to test the use of a single transit declaration, the AEO and Comprehensive Guarantee Mechanisms within the CATS.

1.2 Scope

The CATS prototype shall be a stand-alone information system, not connected to the existing Customs ICT systems at the current Prototype pilot stage. The Prototype is intended to test a number of transit operations between pilot countries. Specific Prototype participants will be selected in coordination with the pilot countries Customs services.

1.3 Definitions, acronyms, and abbreviations

AEO	Approved Economic Operator
Authorised trader	An Economic Operator approved by Customs to use comprehensive guaranty within the CATS prototype
Authorised Insurer (Guarantor)	A legal 'person', such as an insurance company or bank which undertakes to pay the duties and taxes that will be due if a transit operation is not discharged properly and the Principal is not able to pay for the duties and taxes due to Customs.
CAREC	Central Asia Regional Economic Cooperation
CATS	CAREC Advanced Transit System
NCTS	New Computerised Transit System

1.4 References

- TA-8586 (REG): Facilitation of Regional Transit Trade in CAREC – Final Report – March 2017
- TA-8586 (REG): Facilitation of Regional Transit Trade in CAREC – ICT Solutions for Transit Report - Final Report - November 2016
- Transit Manual - European Commission Directorate-General, Taxation and Customs Union Customs Policy, Legislation, Tariff Customs Legislation, Brussels, 27-04-2016
- The technical provision document on 'Data Exchange System' between the State Customs Committee of Azerbaijan Republic and the Georgia Revenue Service.
- NCTS - message implementing guidelines

- NCTS - Guide for Transit Declaration Message Exchange

1.5 Overview of the document

This document defines the requirements for the system to be developed to accommodate the CATS prototype in its initial pilot phase covering three CAREC countries (Azerbaijan, Georgia and Kazakhstan). The document provides a detailed overview of the software product, its parameters and goals including:

“Overall Description” - this section of this document provides a general description, including the characteristics of the users of this project and the general functional and data requirements of the product.

“Specific Requirements” - this section is mostly addressed to the Customs specialists and consultants involved in the prototype implementation. This section gives the functional requirements, data requirements (including Single Transit document data model), constraints and assumptions made while designing the CATS prototype. It also gives the user a viewpoint of product. The section also discusses the external interface requirements and gives detailed description of functional requirements.

2 Overall description

2.1 CATS prototype functions

Figure 1 provides graphical and narrative descriptions of the workflow of the CATS prototype.

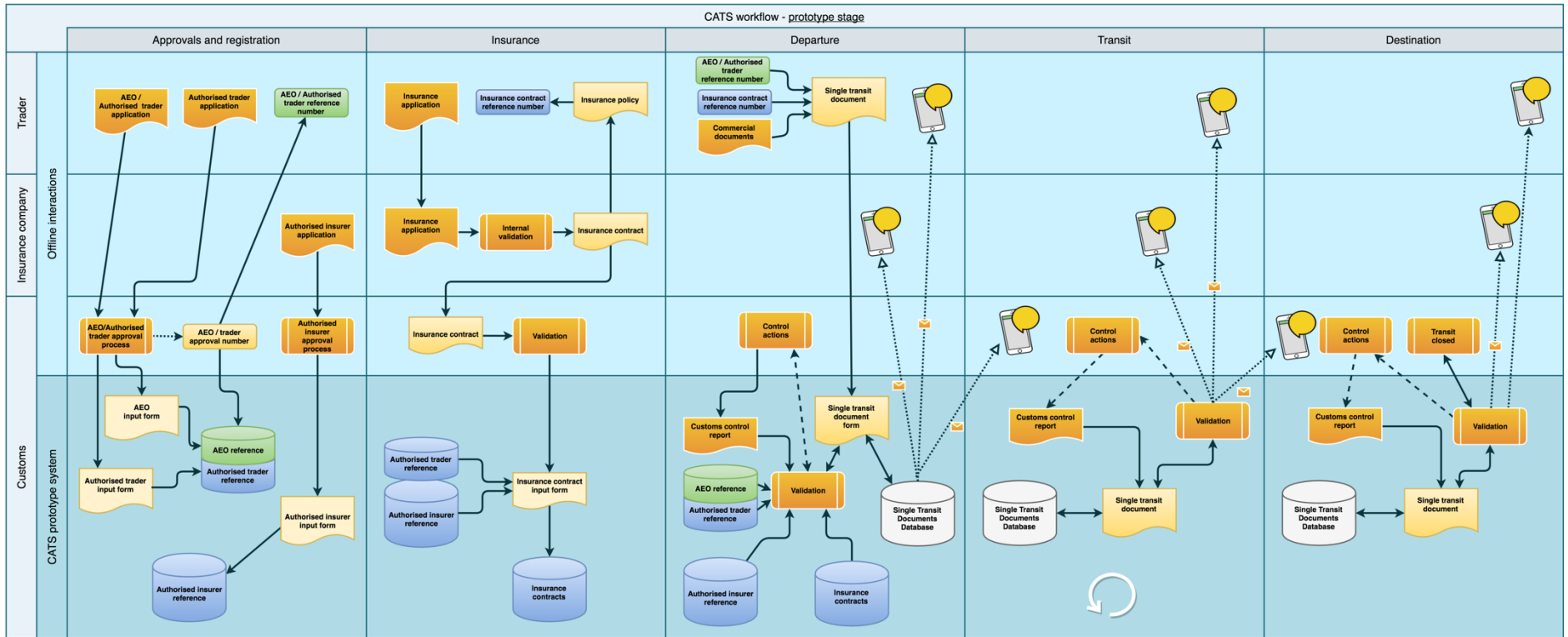


Figure 1 - Graphical workflow of the CATS prototype

A narrative description of the workflow of the CATS prototype is provided below:

Approvals and registration	AEO registration	Customs officer registers an AEO in the CATS prototype with an AEO identification number. <i>The process of AEO approval and issuing of AEO identification number is not a part of the CATS prototype.</i>
	Authorized trader registration	Customs officer registers an authorized trader (a trader qualified to use the CATS guarantee mechanism) in the CATS prototype with an authorized trader identification number. <i>The process of approval and issuing of the identification number is not a part of the CATS prototype.</i>
	Authorized insurer registration	Customs officer registers an authorized insurer in the CATS prototype with an authorized insurer identification number. <i>The process of approval and issuing of the identification number is not a part of the CATS prototype.</i>
Insurance	Insurance contract approval and registration	The authorized insurer submits an insurance contract for approval. Customs officer approves or rejects the contract. If approved, the contract is stored in the database with its identification number. <i>The process of contract validation and approval is not a part of the CATS prototype.</i> <i>Insurance contract can also be submitted by authorized customs officer.</i>
Transit office departure	Single Transit Document submission	The Single Transit Document is keyed into CATS prototype by the Principal (or their approved representative). <i>The Single Transit Document can also be submitted by authorized customs officer</i>
	Single Transit Document validation and approval	The accuracy of the transit document and validation of the transit guarantee is checked by the validation officer. The transit document is accepted or rejected.
	Selection of transit declaration for inspection	The transit declaration is risk assessed and routed to a Customs control lane (Red - Physical Examination; Yellow - Documentary Check; Green – Released to Proceed to Border.
	Customs control action	The nominated customs officer at the Departure office carries out the designated control check and completes the inspection report. If the control check is satisfactory the transit declaration is re-routed to the Green lane. If an irregularity has been established, the transit declaration is suspended. The CATS prototype sends an electronic message regarding the control action, including relevant data such as x-ray images to each customs office on the transit route.
	Transit started	The CATS prototype, at the point of departure, sends an electronic message regarding transit goods to each customs office on the transit route.
Transit office exit	Transit	When the goods arrive at a transit point, a message of arrival is sent to the office of departure.
	Selection of transit declaration for	The transit declaration is risk assessed and routed to a Customs control lane (Red - Physical Examination; Yellow - Documentary Check; Green – Released to Proceed to Border.

	inspection	
	Customs control action	The nominated customs officer at the Departure office carries out the designated control check and completes the inspection report. If the control check is satisfactory the transit declaration is re-routed to the Green lane. If an irregularity has been established the transit declaration is suspended. The CATS prototype sends an electronic message regarding the control action, including relevant data such as x-ray images to each customs office on the transit route.
	Transit proceeded	The CATS prototype, at the point of exit, sends an electronic message regarding transit goods to each customs office on the transit route.
Transit office entry	Single Transit Document validation and approval	The accuracy of the transit document and validation of the transit guarantee is checked by the validation officer.
	Selection of transit declaration for inspection	The transit declaration is risk assessed and routed to a Customs control lane (Red - Physical Examination; Yellow - Documentary Check; Green – Released to Proceed to Border.
	Customs control action	The nominated Customs Officer at the Departure office carries out the designated control check and completes the inspection report. If the control check is satisfactory, the transit declaration is re-routed to the Green lane. If an irregularity has been established the transit declaration is suspended. The CATS prototype sends an electronic message regarding the control action, including the relevant data such as x-ray images to each customs office on the transit route.
	Transit proceeded	The CATS prototype, at the point of entry, sends an electronic message regarding transit goods to each customs office on the transit route.
Office of destination	Single Transit Document validation and approval	The transit document and vehicle are checked by the validation officer.
	Customs control action	The nominated customs officer at the Departure office carries out the designated control check and completes the inspection report. If the control check is satisfactory the transit declaration is re-routed to the Green lane. If an irregularity has been established the transit declaration is suspended. The CATS prototype sends an electronic message regarding the control action, including relevant data such as x-ray images to each customs office on the transit route.
	Transit completed	The CATS prototype sends an electronic message regarding transit completed and discharge of guaranty to each customs office on the transit route.

2.1.1 Data model

The CATS prototype data model is based on the EU's National Computerised Transit System's (NCTS) transit declaration system data model with adaptations to take account of the specific CATS requirements.

2.1.2 Users and interfaces

Access to the CATS prototype shall be carried out from a unified interface built on web technologies. Data transfer between the CATS prototype and authorised user interfaces and all data exchange between CATS shall be carried out via secured protocols. Figure 2 provides a diagram of the CATS Prototype Architecture.

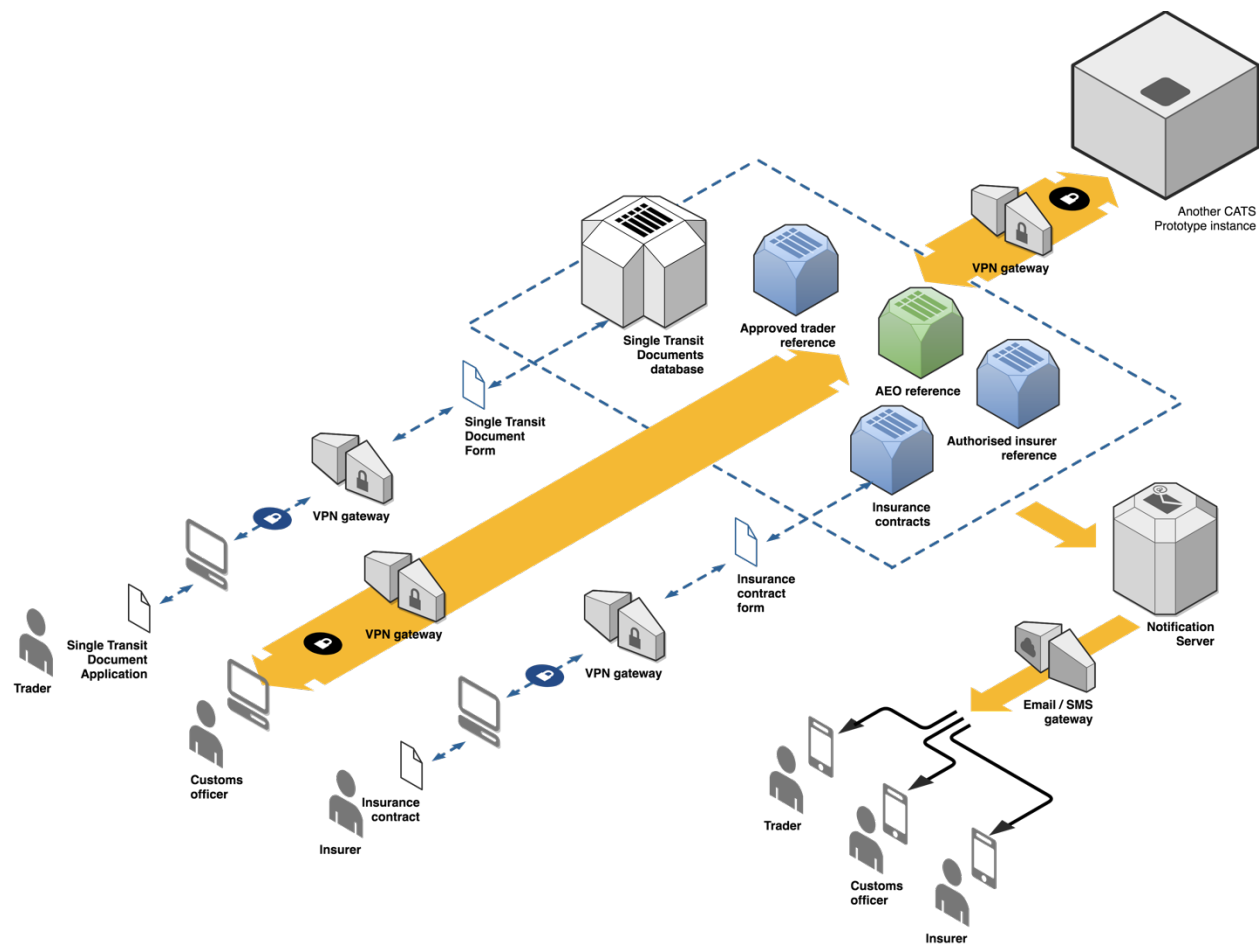


Figure 2 - CATS prototype architecture

2.1.2.1 Customs Officer

An Authorised Customs officer has access to all functions and interfaces provided by CATS prototype except the administrative functions. This is shown in Figure 3 below.

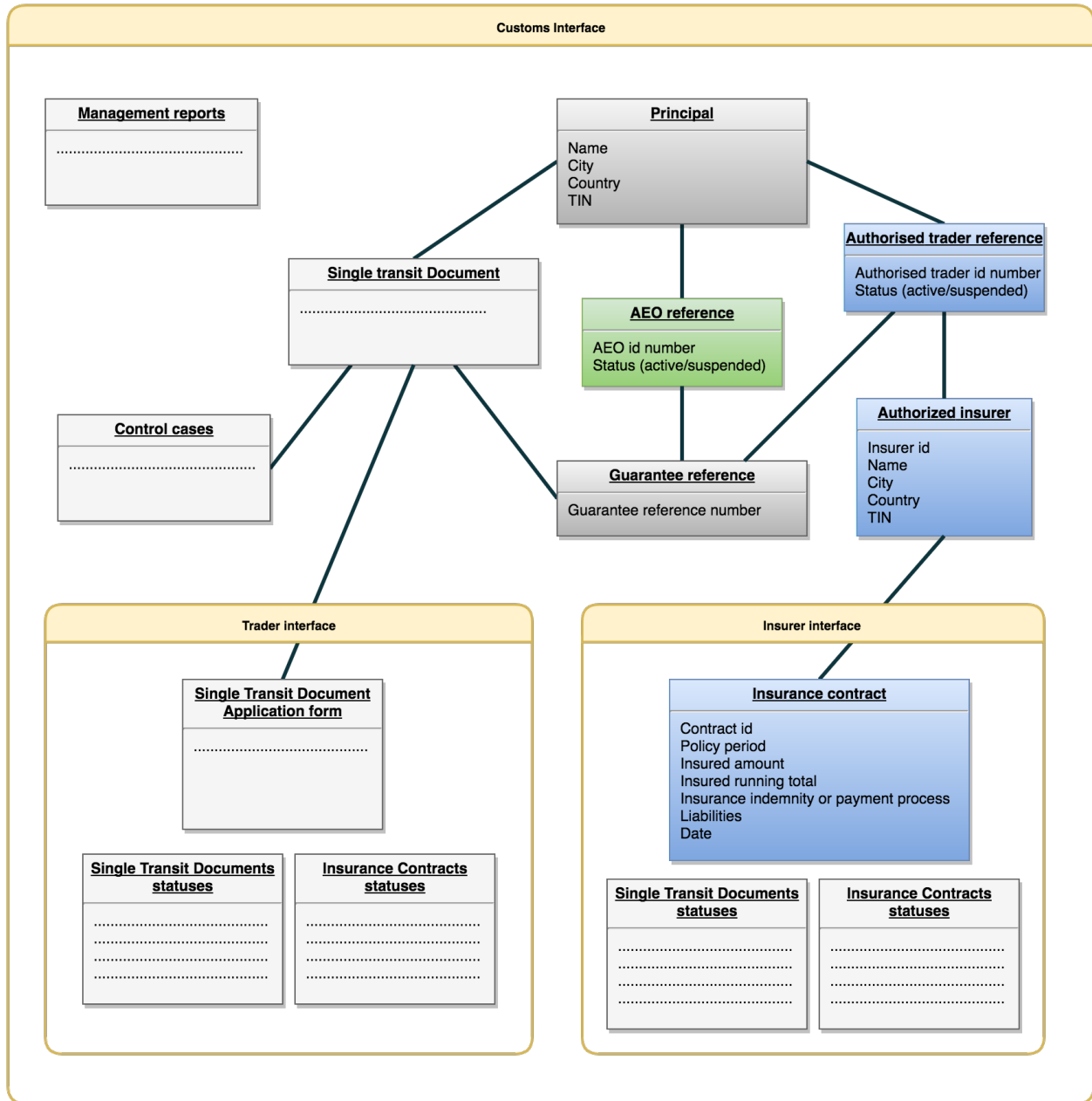


Figure 3 - Customs Officer interface

2.1.2.2 Trader

An economic operator (AEO or an authorised trader) is able to submit an electronic Single Transit Document application. They have no access to the database, except to the STD submission interface, STDs status, and insurance contract status. However, economic operator, registered in the CATS

prototype, will receive notifications on the progress of each transit operation. These are shown in Figure 4 below.

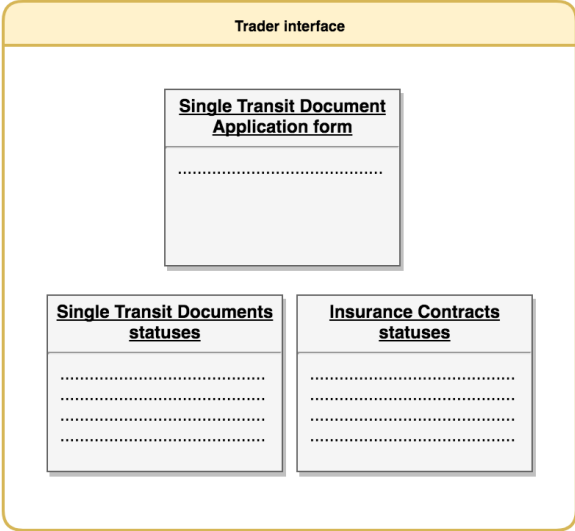


Figure 4 - Trader interface

2.1.2.3 Insurer

An authorised insurer/bank is able to submit a comprehensive guarantee. The authorised insurer/bank has no access to the database, except to the guarantee submission interface and contract status, including the usage of the comprehensive guarantee sum. However, the authorised insurer/bank, registered in the CATS prototype, will receive notifications on the progress of each transit operation.

These are shown in Figure 5 below.

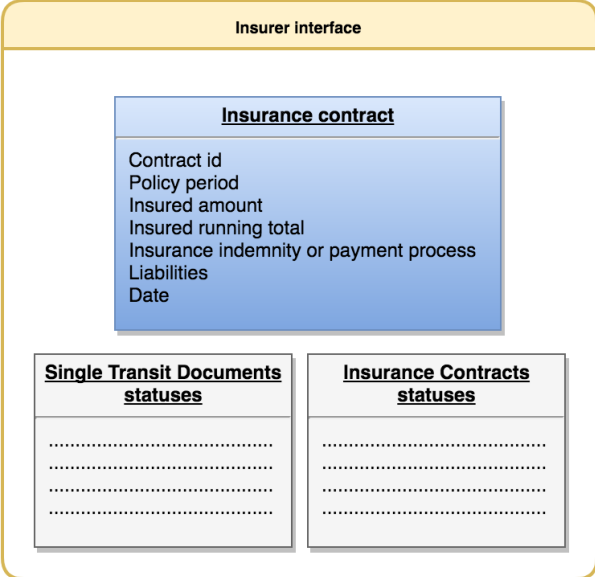


Figure 5 - Insurer interface

2.1.2.4 Administrator

The CATS prototype administrator is responsible for user management and CATS-specific references. Administrator has exclusive access to system administration functions. These are shown in Figure 6 below.

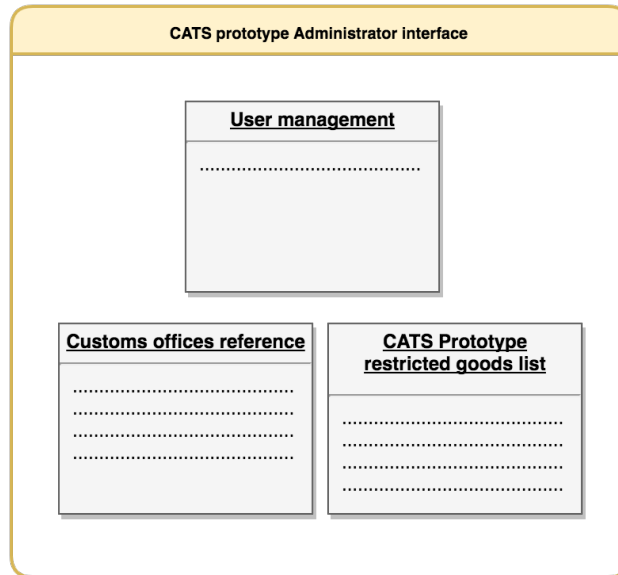


Figure 6 - Administrator interface

2.1.3 Constraints, assumptions and dependencies

2.1.3.1 Legal constraints

The CATS prototype works within the legal confines of the Memorandum of Understanding on which the pilot project is authorised.

2.1.3.2 Parallel IT systems usage

It is envisaged that the CATS prototype participants will only submit transit declaration to the CATS prototype.

2.1.3.3 CATS prototype paperless workflow

The CATS prototype is intended to be a paperless system, using only electronic message exchange and notifications for all users.

3 Specific requirements

3.1 Functional requirements (by user roles)

3.1.1 Customs officer

To be confirmed with the CATS prototype developer.

3.1.2 Trader

To be confirmed with the CATS prototype developer.

3.1.3 Insurer

To be confirmed with the CATS prototype developer.

3.2 Notification system

The CATS prototype shall include a sub-system to notify users of events within CATS processes - by email and SMS - to be confirmed with the CATS prototype developer.

3.3 Internationalisation and localisation

3.3.1 Interface translation

All messages, inclusive of system ones and interface screens, shall also be displayed using official languages of the pilot countries. A user will be able to switch interface language. However, all third-party software, such as the DBMS and system software, used together with the CATS prototype will not be translated.

3.3.2 Terms translation

All the terms and references, included into the CATS prototype, shall also be translated, including CATS-specific references.

National conventions, such as time zones, will also be taken into account.

3.3.3 Fields translation (multi-language models/fields)

The CATS prototype shall provide model translation for all the key data models - to be confirmed with the CATS prototype developer.

3.4 Software interfaces

3.4.1 Communications interfaces

To be confirmed with the piloting countries.

3.4.1.1 VPN gateways

To be confirmed with the piloting countries.

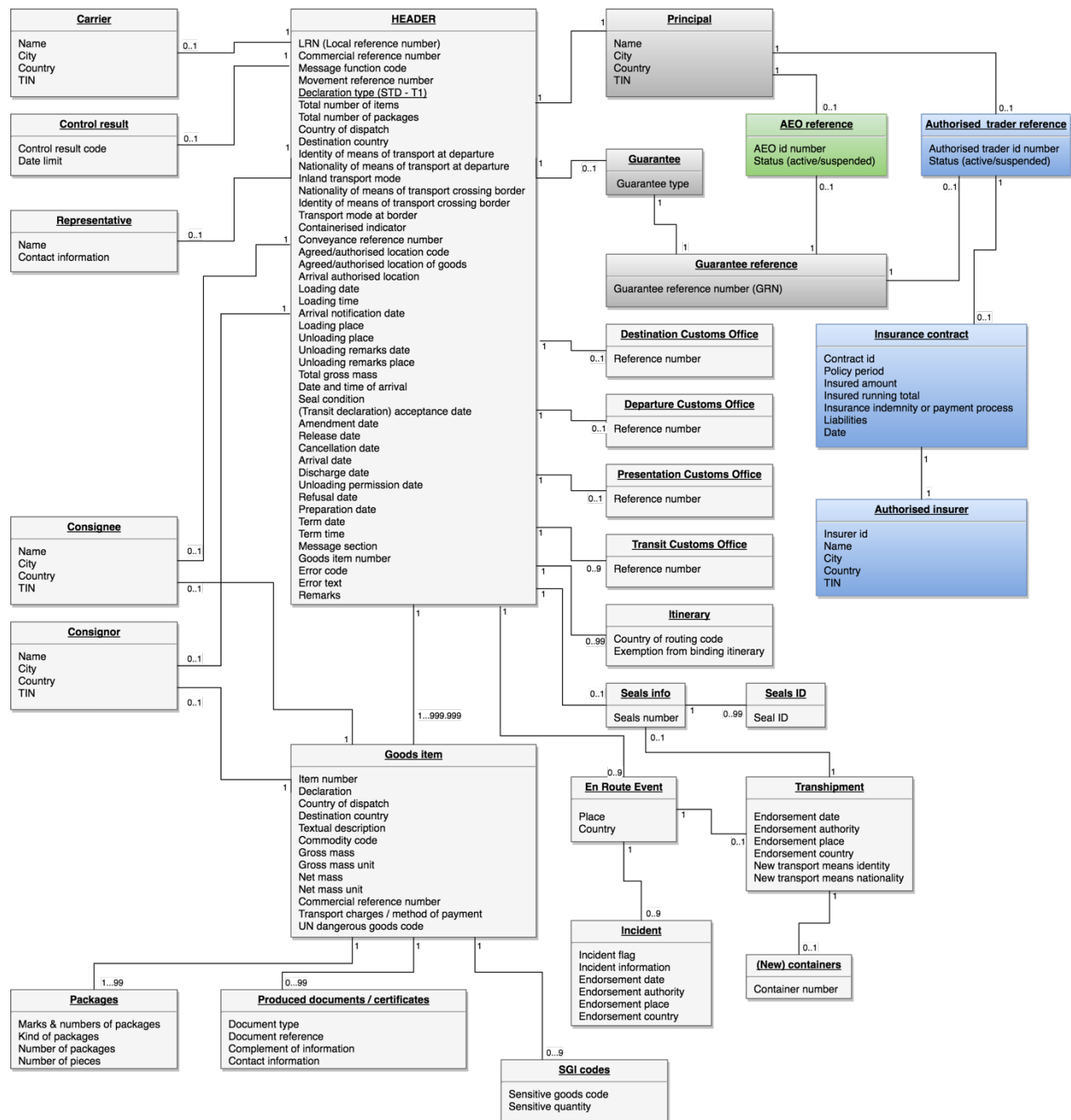
3.4.1.2 Notification server, notification gateway

To be confirmed with the CATS prototype developer.

3.5 Data model and references

3.5.1 CATS prototype data model

The CATS data model is based on the EU’s NCTS data model adapted to take account of specific CATS prototype requirements. See Figure 7 below.



3.5.2 CATS-specific references

The CATS prototype extends the NCTS's transit declaration system data model with following CATS-specific references.

3.5.2.1 *Customs offices reference*

To be confirmed with the piloting countries.

3.5.2.2 *AEO reference*

To be confirmed with the piloting countries.

3.5.2.3 *Authorized trader reference*

To be confirmed with the piloting countries.

3.5.2.4 *Approved insurer reference*

To be confirmed with the piloting countries.

3.5.2.5 *Insurance contract reference*

To be confirmed with the piloting countries.

3.5.2.6 *Transit route country codes*

To be confirmed with the piloting countries.

3.5.2.7 *CATS Prototype restricted goods list*

Goods not eligible to be moved under the CATS Prototype - to be confirmed with the piloting countries.

3.6 Other requirements

3.6.1 Report generation system

In order to generate various reports, including:

- Management reports
- Statistical reports
- Custom reports

the CATS prototype shall:

- provide a basic report generation tool, able to generate various reports based on any database table, or
- include a full-scale standalone report generation tool (such as Crystal Reports etc.).

3.6.2 Users manuals

The software developer shall provide end-user documentation on the CATS prototype operation and performance. This document shall contain a description of operating procedures for the CATS prototype and be designed for day-to-day work with the end-user system. The user guide shall also describe common user actions and system responses and be illustrated with basic interfaces snapshots containing explanatory notes.

3.6.3 User training

All key users of the CATS Prototype will be provided with training on the system. The user training will be focused on the common use of the CATS prototype. All users shall be correspondingly prepared for the use of every function, including how to interpret error messages, and displayed instructions.

3.6.4 End-users support

The developer shall provide the maintenance and support services during the Prototype pilot period. Any support requests submitted by the users will be answered within 24 hours.

3.6.5 Project management / collaboration platform

During the implementation and testing of the project phase, a collaboration platform will be utilized as a communication and project management tool. The platform will be used for all:

- all project-related communication;
- drafting and storing of design documentation, basic specifications and subject related discussions;
- testing, bug-tracking and user support.