CROSS•BORDER
ROAD TRANSPORT AGENCY

Updated

OCAS Design Framework For

Development of OCAS IT System

June 2021

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1. INTRODUCTION

This Operator Compliance Accreditation System (OCAS or the System) Design report (or the report) articulates the design architecture of OCAS, the components of OCAS and the scope and procedures which will be administered for each component. The report articulates how the various OCAS components fit together, interface of the System to national transport information systems and regional transport information systems. Furthermore, the report articulates envisaged information flows and how the different stakeholder and structures will be involved in the administration of OCAS. The report must be read in conjunction with the OCAS Implementation Manual which was approved by the Executive Committee, to guide implementation and operationalisation of OCAS. Reference should also be made to the OCAS Registration Platform Design and Model reports attached.

This Design report shall be used to inform the specifications for the development of the OCAS IT system, in conjunction with the OCAS Implementation Manuals which articulates the component requirements, step by step process and procedures for operationalisation of each component of the System.

OCAS will be used to implement quality regulation for all cross-border road (freight and passenger) transport operations guided by and as contemplated in the following:

a) The White Paper on National Transport Policy, the Roads Policy, the National Freight Logistics Strategy and the National Road Freight Strategy;
b) The National Road Safety Strategy which requires the implementation of ISO39001 (Road Traffic Safety Management Systems) as a road safety intervention; and
c) Relevant domestic road transport legislations namely: C-BRT Act No 4 of 1998, as amended, the NRTA and the Dangerous Goods Act.

From a regional perspective, OCAS will enable implementation of the requirements of quality regulation as contemplated in the Tripartite Transport Transit Facilitation Programme (TTTFP) particularly with regard to the Multilateral Cross-Border Road Transport Agreement (MCBRTA).

The design and performance requirements of each of the OCAS components, their operational capabilities, processes and procedures followed in operationalising each of the components, stakeholder role sequence and information flow are articulated in Part 5 of the OCAS Implementation Manual (***attached***), and briefly described in sections below. Reference must be made to the manual for purposes of design and development of OCAS.

2. THE OCAS ARCHITECTURE

2.1 Architecture of the Operator Compliance Accreditation System

The architecture describes the various components of OCAS. Figure 1 below shows the components of the System.

Figure 1: Components of OCAS

Each of the components of the System shown in Figure 1 above are explained underneath. Each one of the components will need to be developed and integrated to the other components.

2.1.1 The Components of OCAS

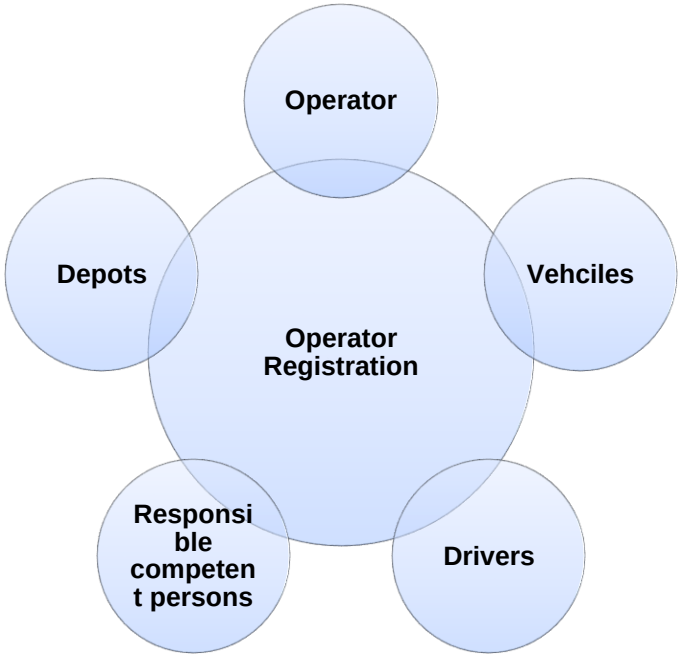
2.1.1.1 Operator Registration Module

The System must have an Operator Registration Module or Platform. This module must be designed to enable the registration of:

a) Transport operators;
b) Transport Operator's vehicles used for cross-border operations;
c) Depots or facilities where operations are conducted;
d) Operator's drivers; and
e) Operator's Responsible Competent Persons (RCPs) tasked with management of operations.

The registration module, or platform must enable the linking of the vehicles, depots, drivers and RCPs to the operator. Figure 2 below illustrates the Operator Registration module of the System.

Figure 2 Operator registration



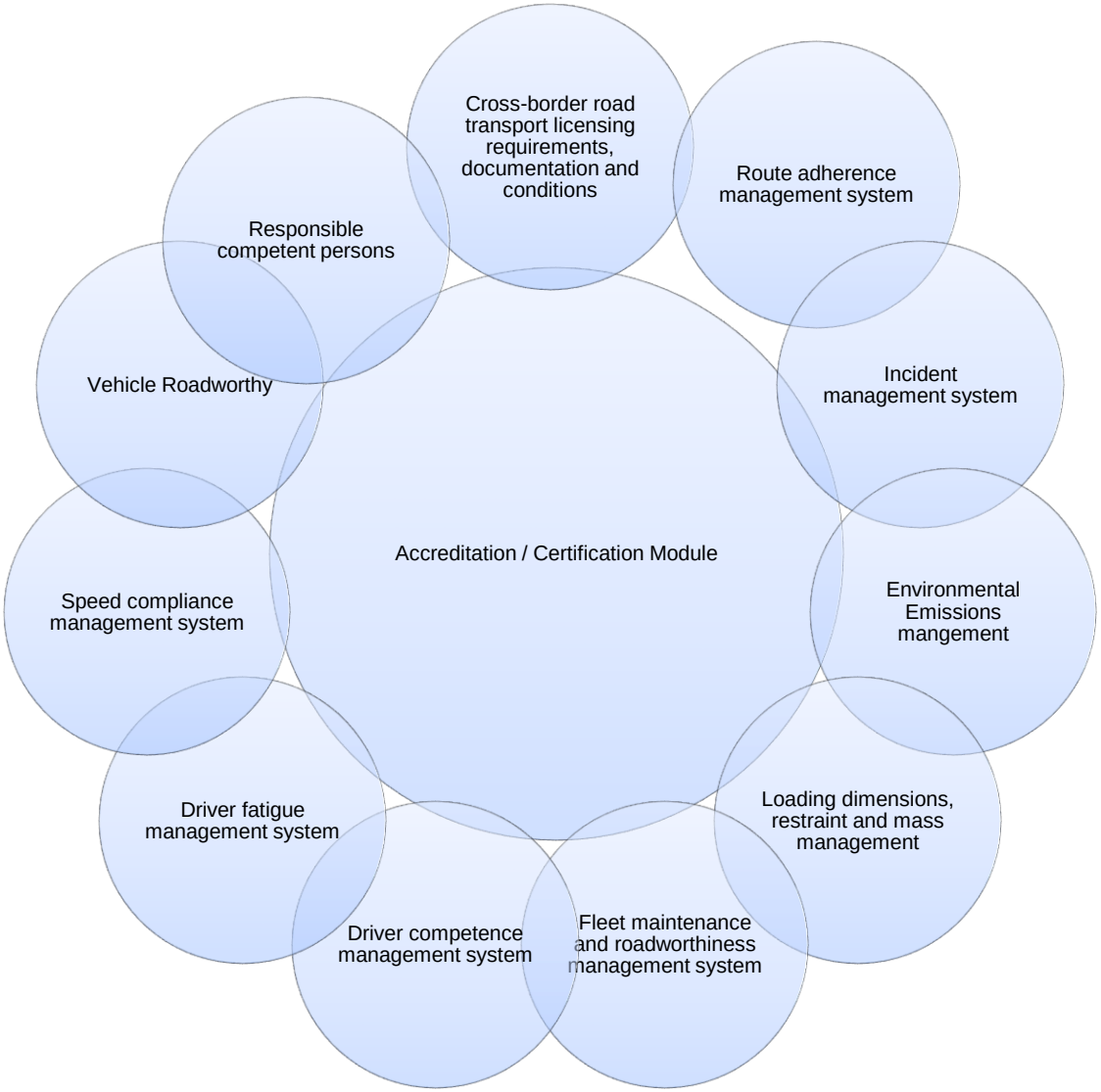
The Operator Registration Module:

a) Must be built or designed to enable the registration of the operator, depots, vehicles, drivers and the RCPs;
b) Must be able to execute operations articulated in section 5.2 of the OCAS Implementation Manual;
c) Must enable querying of information by stakeholders i.e. Law enforcement, regulatory authorities and others directly or through the Transport Registers Information Platform Systems (TRIPS); for purposes of confirming registered operators, vehicles, drivers, RCP and depots where operations are conducted from;
d) Must integrate be integrated with the other modules or components of OCAS as contemplated in the Implementation Manual;
e) Must be able to integrate with other national transport systems such as Natis; and
f) Have user-access authorisation and security features based on roles of different stakeholders administering different responsibilities as contemplated in the OCAS Implementation Manual.

2.1.1.2 Accreditation and Certification Module

The system must have a certification and accreditation module which will be used for purposes of certifying all cross-border operators. The module must have capability to add more factors which will be considered in the certification process, in addition to those indicated in Figure 3 below.

Figure 3 Requirements for Accreditation/ Certification


Cross-border road transport licensing requirements, documentation and conditions
Route adherence management system
Responsible competent persons
Incident management system
Vehicle Roadworthy
Accreditation / Certification Module
Environmental Emissions mangement
Speed compliance management system
Loading dimensions, restraint and mass management
Driver fatigue management system
Fleet maintenance and roadworthiness management system
Driver competence management system

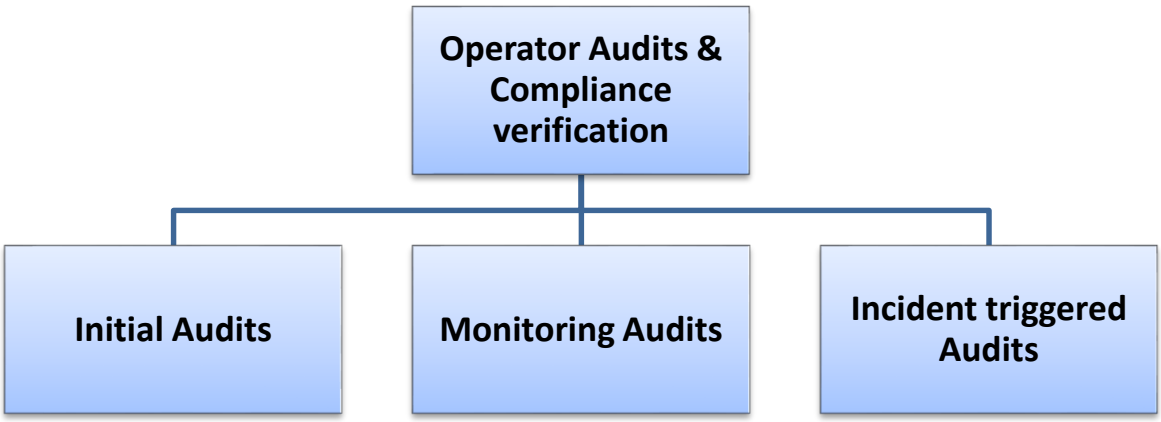
The module must be designed to:

a) Perform requirements and functions articulated in section 5.3 and 5.4 in the OCAS Implementation Manual;
b) Enable assignment of different grades or status for operators based on their level of grading or accreditation;
c) Enable operationalisation of processes and procedures including grading of operators into different grades based on certification framework;
d) Enable execution of role sequence and information flow as contemplated in section 5.3 in the OCAS Implementation Manuals;
e) Have user-access authorisation and security features based on roles of different stakeholders administering different responsibilities as contemplated in the OCAS Implementation Manual.

2.1.1.3 Operator Auditing & Compliance Monitoring

The system must have an auditing and compliance monitoring module. The module or component must enable operationalisation of the functions articulated in section 5.6 in the OCAS Implementation Manual. Figure 4 below shows the pillars of the module.

Figure 4 Operator Auditing



The module must be designed to:

a) Perform requirements and functions articulated in section 5.6 in the OCAS Implementation Manual;
b) Enable assignment of different audit outcomes or status for operators based on audit outcomes;

c) Classify nature or type of audit conducted for each operator;
d) Enable operationalisation of processes and procedures articulated in section 5.6 of the OCAS Implementation Manual;
e) Enable execution of role sequence and information flow as contemplated in section 5.6 in the OCAS Implementation Manuals; and
f) Have user-access authorisation and security features based on roles of different stakeholders administering different responsibilities as contemplated in the OCAS Implementation Manual.

2.1.1.4 Profiling and Risk Management Module

The module must be designed to:

a) Perform requirements and functions articulated in section 5.7 in the OCAS Implementation Manual;
b) Enable determination of or categorisation and assignment of different risks or risk categories to different operators as contemplated in the OCAS Implementation Manual;
c) Perform profiling of operators based on their risk levels;
d) Enable risk simulation for different operators;
e) Enable operationalisation of processes and procedures including grading of operators into different grades based on risk levels;
f) Enable execution of role sequence and information flow as contemplated in section 5.7 in the OCAS Implementation Manuals;
g) Have user-access authorisation and security features based on roles of different stakeholders administering different responsibilities as contemplated in the OCAS Implementation Manual.

2.1.1.5 Points Demerit Module

The module must be designed to:

a) Perform requirements and functions articulated in section 5.8 and 5.9 in the OCAS Implementation Manual;
b) Enable assignment of different points or status for operators based on transgressions or contraventions;
c) Enable operationalisation of processes and procedures including assigning different points to operators based on certification framework;
d) Enable execution of role sequence and information flow as contemplated in section 5.8 in the OCAS Implementation Manual;
e) Enable integration to other points demerit systems; and
f) Have user-access authorisation and security features based on roles of different stakeholders administering different responsibilities as contemplated in the OCAS Implementation Manual.

2.1.1.6 Telematics and IT Systems Interface

The complete OCAS System must be designed to:

a) Achieve implementation and operationalisation of OCAS as articulated in section 5 in the OCAS Implementation Manual, and section 5.10 in particular;
b) Enable execution of roles, procedures and information flow as contemplated in section 5.10 in the OCAS Implementation Manuals;
c) Enable integration to national and regional transport information systems;
d) Enable integration to vehicle tracking and communications systems;
e) Enable querying of information by different stakeholders using handheld devices and other systems including the C-BRTA Smart-Car system;
f) Enable integration to cross-sector systems such as the Authorised Economic Operator system; and
g) Have system security features.

3. COMPONENTS DESIGN INTEGRATION

3.1 Design Levels and Integration

The Operator Compliance Accreditation System components will be configured into four levels:

a) Level 1: Operator Demographics and Related Information;
b) Level 2: Management and Administration;
c) Level 3: Compliance; and
d) Level 4: Risk Framework.

3.1.1 Operator Demographics and Related Information

OCAS design will be integrated to the following road transport information systems i.e. interface and integration of OCAS to road transport information systems.

a) ICBMS;
b) ENATIS;
c) Customs' Preferred Trader/ AEO system; and
d) TRIPS.

3.1.2 OCAS Management and Administration

The following components will be designed in Level 1 for management of the system:

a) OCAS Operator registration system;
b) Vehicle registration system;
c) Driver registration system;
d) Deport registration system;

e) Responsible Competent Person registration system; and
f) Operator Profiling system.

3.1.3 Compliance Management

a) OCAS requirements;
b) Auditing system;
c) Accreditation, Certification and licensing system; and
d) Points Demerit system.

3.1.4 Risk Framework

a) Operator Monitoring and Profiling; and
b) Risk Management Engine with risk modelling tool.

4 FUNCTIONS OF STAKEHOLDERS IN THE ADMINISTRATION OF THE SYSTEM

4.1 The Departments and Agencies

a) At regional level the respective Agencies will work in coordination with their respective National Departments and / or Ministries of Transport.
b) The Departments/ Ministries of Transport required to ensure alignment, campaign for the development and roll-out of the scheme in line with National legislations and other regional instruments and programmes.

4.1.1 The functions of Stakeholders

4.1.1.1 C-BRTA

a) To provide administration of the System;
b) To register, certify & accredit operators based in line with OCAS Implementation Manual;
c) Periodic audits to monitor compliance and ongoing risk assessments;
d) Collaboration, sharing of information, coordination between regulatory authorities, law enforcement in corridors and border posts; and
e) Extension of benefits in liaison with other stakeholders to accredited operators based on performance and point demerit for non-compliance.

4.1.1.2 RTMC SANRAL Provincial DoTs Municipalities and Metros

C-BRTA will receive information from traffic law enforcement i.e. MRTMC, Provincial DoTs, Municipalities, Metros and regional counterparts and use the information to profile and update the status of the operator.

Overall, the stakeholders will support C-BRTA through:

a) Detecting and submit transgressions to C-BRTA for profiling of operators;
b) Regular compliance monitoring.

5 CONCLUSION

The design and development of OCAS will be guided by the OCAS Implementation Manual. The System must be built to enable C-BRTA to achieve quality regulation performance factors contemplated in the OCAS Implementation Manual.