



REPUBLIC OF SERBIA  
MINISTRY OF FINANCE

**CUSTOMS  
ADMINISTRATION OF  
THE REPUBLIC OF  
SERBIA**

**WORK PLAN FOR DEVELOPMENT  
AND USAGE OF ELECTRONIC  
SYSTEMS OF THE CUSTOMS  
SERVICE OF THE MINISTRY OF  
FINANCE FOR THE PERIOD  
2020-2024**

# 1. INTRODUCTION

The key goal of any modern customs organization today is to allow for efficient, well controlled exchange of goods, people and services across its national borders, fully respecting and fulfilling the relevant legal regulations of the country and country's international commitments. Today's international business activities and processes require ever-increasing speed of moving goods and providing services across international borders; these must also be followed (or even preceded) by ever-increasing speed and efficiency of customs procedures.

In order to satisfy this and other related, more specific business goals, well planned and implemented Information and Communication Technology (ICT) tools are essential. The Work Plan for Development and Usage of Electronic Systems of the Customs Service of the Ministry of Finance for the period 2020 -2024 (hereinafter The Work Plan for Development and Usage of Electronic Systems of the Customs Service) is strategic document designed to serve that purpose, and thus provide the Customs Administration (CAS) with a valuable reference and guidance for the implementation of ICT over the next several years.

In this effort of further modernization and technological upgrade of CAS services over the next 2020 - 2024 period, particular attention has to be paid to ongoing Serbia's EU accession process, in which the compatibility with customs rules and processes becomes crucial.

Although the CAS EU Customs Union compliance and preparedness is formally tied to the Chapter 29 – Customs Union, it also represents the key, *sine qua non* condition for number of other chapters in the accession process, as well as for the future efficient and successful overall operation of the customs service. The Republic of Serbia's future entry into EU requires its customs service becoming fully compliant with the EU rules, i.e. with Article 5 of the Union Customs Code that is already in force and standard information and communication technology systems (ICT systems). CAS has to technologically modernise itself in order to also satisfy national goals and needs in this area, contributing to the country's overall business efficiency and competitive stand in the world.

The EU accession process timeline is of such importance that it would require CAS to mobilize all available internal resources, as well as external assistance, financial and otherwise, in order to prepare itself for this significant step within the prescribed timeframe.

Considering the overall costs of taking CAS ICT to the level of readiness for EU membership, it is important to understand the financial size of this effort. For the period of 5 years this strategy is referring to, the overall ICT costs are estimated at 65,324,094 Eur. This amount is based on reliable internal and external estimates, including similar experiences by previously joined EU countries

It is crucial that this fact - the required financial effort to bring ICT at CAS to adequate level of performance - is well understood by the top administration officials of the Republic of Serbia, and thus be given adequate priority over the future 5-year period; this includes lobbying with various international donors, in order to ensure adequate financing for this purpose, without which it would be very difficult for the CAS alone to ensure proper and complete financing.

The major challenges on this road to full modernization and compliance with EU Customs Union regulations and systems, as defined within this document, are:

- Timely lobbying and provision of financial resources;
- Usage of standardised project management methodology and tools for all upcoming efforts;
- Choice of CAS external partners to help implement all new systems and changes;
- CAS proper internal organizational restructuring, with sufficient IT staff;
- Timely application of business continuity principles (including emergency disaster recovery capacity), to support 24x7 operations;
- Gradual integration of retained and newly acquired applications into a coherent, standards based, interconnectivity and interoperability enabled system;
- Gradual introduction of mobile solutions for CAS staff in the field, using carefully designed, selective access policy;
- Gradual upgrade to required hardware, software and communications equipment.

This document will indicate which measures have to be taken to meet these challenges, and provide basis for further, more detailed planning of necessary actions at CAS over the next 5 years. It also attempts to provide continuity with the activities related to the previous commitments in ICT field, as well as other relevant sources of information, envisioning potential future steps and actions to be taken in this field.

After providing an overview of the current state of play in the customs service of the Republic of Serbia regarding ICT, this document focuses on 5-year strategic directions in this area, including resources, procedures, organization, applications, software, hardware and communication equipment, as key elements, bearing in mind that within this timeframe ultimate goals of the CAS are modernization of the customs service and EU accession.

The following are the key elements of this document, providing the starting point for determining the future needs and trends for the CAS ICT strategic directions in the period 2020-2024:

- An overview of previous development documents of CAS ICT, in order to provide continuity and balance between past and future efforts in this area;

- A summary of the “Current State Analysis Report” (AS-IS) document giving the current state of play in CAS regarding information communication technology with focus on resources, procedures, organization, applications, hardware and communication equipment bearing in mind that ultimate goal of the Republic of Serbia is EU accession;
- A compendium of the relevant current and future needed applications’ scope and directions, both at the national level and of those introduced by the EU;
- An update on Security and ICT Infrastructure, plans and directions, based on recognized needs over the period to which this document refers to, and up to currently projected Republic of Serbia EU accession dates/periods;
- An overview of the proposed CAS ICT organization and methodology, with high-level recommendations for the future steps in this area, in order to bring this part of the CAS organization in line with the overall current technology trends, as well as relevant EU regulations and recommendations (MASP) on how to improve and update CAS ICT operations, to become EU-compliant and able to effectively perform all their major commitments, both at national and international level.

Table 1. provides a List of abbreviations used in a text below, Table 2. provides an overview of Reference Documents and Table 3. provides definition of terms.

Table 1.: List of abbreviations

Abbreviation	Description
AEO	Authorised Economic Operator
AES	Automated Export System
AIS	Automated Import System
AFIS	Anti-Fraud Information System
AN	Arrival notification
BOI	Binding Origin Information
BTI	Binding Tariff Information
CAS	Customs Administration of Serbia
CCC	Community Customs Code in accordance with Council Regulation (EEC) No 2913/92 of 12 October 1992 (Official Journal, L 302 of 19 October 1992)
CCI	Centralize Clearance for Import
CCN	Common Communication Network
CCN/CSI	Common Communications Network / Common Systems Interface
COPIS	System for Protection of Intellectual Property Rights (Counterfeiting and Piracy)
CRMS	Customs Risk Management System
CS/MIS	Central Services / Management Information System
CS/RD	Central Services / Reference Data
DDS	Data Dissemination System
DG TAXUD	Directorate General for Taxation and Customs Union
EBTI	European Binding Tariff Information
EC	European Commission
ECS	Export Control System
EIF	European Interoperability Framework
EIS	European Interoperability Strategy
EMCS	Excise Movement and Control System
EORI	Economic Operator Registration and Identification
EOS	Economic Operators' System
EU	European Union
GUM	Guarantee Management
ICT	Information and Communication Technology
ISA	Interoperability Solutions for European Public Administrations
ISCS	Information System of the Customs Service
IT	Information Technology
ITGS	International Trade in Goods Statistics

Abbreviation	Description
ITIL	IT Infrastructure Library
ITMS	Integrated Tariff Management System
MASP	Multi-Annual Strategic Plan for creation of a European electronic environment in accordance with the Council's Resolution of 05 December 2003 (Official Journal C 305)
MoF	Ministry of Finance
MRA	Mutual Recognition Agreement
NCTS	New Computerized Transit System
NICIS	National Integrated Criminal-Intelligence System
PN	Presentation Notification
PoUS	Proof of Union Status
RDBMS	Relational Database Management System
REX	Registered Exporters
RSS	Regular Shipping Service
SEED	System for Exchange of Excise Data - Excise Authorisation Verification
SMS	Specimen Management System
SOA	Service Oriented Architecture
SP INF	Special Procedures Standard Exchange of Information
UCC	Union Customs Code in accordance with Regulation No 952/2013 of the European Parliament and of the Council, dated 9 October 2013 (Official Journal L 269 of 10 October 2013)
TARIC	Tarif Intégré des Communautés européennes
TEMPO	TAXUD Electronic Management of Projects Online
UCC WP	UCC Work Programme
UUM&DS	Uniform User Management and Digital Signatures

One of the outcomes of IPA 2013 project *Technical Assistance for Establishing Institutional Framework for Implementation of Automated Import and Export Systems (AIS/AES)* was creation of reference documents for the Work Plan for Development and Usage of Electronic Systems of the Customs Service. The overview of reference documents is given in the Table 2.

TABLE 1: LIST OF DOCUMENTS CREATED THROUGH THE PROJECT TECHNICAL ASSISTANCE FOR ESTABLISHING INSTITUTIONAL FRAMEWORK FOR IMPLEMENTATION OF AUTOMATED IMPORT AND EXPORT SYSTEMS (AIS/AES)

Ref.	Title	Version	Date
R01	Governance Manual	1.00	02.09.2019
R02	Current State Analysis Report (AS-IS)	1.00	14.08.2018
R03	BPM Methodology	1.00	08.02.2019
R04	Architecture Principle Document	1.00	02.09.2019
R05	Architecture Vision Document	1.00	02.09.2019
R06	Architecture Definition Document	1.00	02.09.2019
R07	Requirement Specification Document	1.00	02.09.2019
R08	Implementation and Migration Plan	1.00	02.09.2019
R09	Solution Building Blocks	1.00	02.09.2019
R10	Architecture Building Blocks	1.00	02.09.2019
R11	Current status of the Information Security Report regarding SRPS ISO 27001:2013	1.00	20.12.2018
R12	Security needs assessment report	1.00	20.12.2018
R13	High-level Information Security Policy	1.00	20.12.2018
R14	Recommendation report for the introduction of ISMS in CAS/CAS IT	1.00	20.12.2018
R15	Draft SOA approach	1.00	02.09.2019
R16	Draft Overview of measures and activities for implementation of the Work Plan for development and usage of electronic systems of the customs service of the Ministry of Finance for the period 2020 – 2024	1.00	02.09.2019

## 2. CAS ICT STRATEGIC DOCUMENTS OVERVIEW

### 2.1 EU ICT Trends

As a contribution to the "e-government" programme, in July 2003, the European Commission published its communication on a paperless environment for customs and trade (COM/2003/452 of 24/07/2003) which provided a vision of a modern customs service communicating electronically with trade. This vision was endorsed by the Council Resolution of December 5, 2003 (see Official Journal C 305) which called for a Multi-Annual Strategic Plan (MASP) for the creation of a European electronic environment, consistent with the operational and legislative projects and developments already scheduled or underway in the areas of customs and indirect taxation. The MASP is defined necessary instrument for management, planning and overall governance of legal, business and IT-technical aspects of new IT projects in the area of customs, in accordance with the e-Customs decision<sup>1</sup>.

UCC was adopted in 2013 (Regulation (EU) No 952/2013) and entered into force on 30<sup>th</sup> of October 2013, although its substantive provisions were implemented from 1 May 2016. It is part of the Customs modernisation process and represents the new framework on Customs rules and procedures throughout the EU.

The use of electronic data-processing techniques and electronic systems will support the application of the UCC. In order to support the development of the electronic systems<sup>2</sup>, Commission Implementing Decision establishing the Work Programme for the Union Customs Code<sup>3</sup> has been adopted. The complete deployment of all of the electronic systems required by the UCC shall be carried out not beyond 31<sup>st</sup> of December 2025.

The European Commission regularly published a report for the progress of the negotiations with the candidate countries. In its 2018 annual report on Serbia's progress (April 17<sup>th</sup>, 2018), EU has stated in regards to Chapter 29, Customs Union, that:

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<sup>1</sup> Decision No 70/2008/EC of the European Parliament and of the Council of 15 January 2008 on a paperless customs environment for customs and trade, OJ 2008, N° L23, p. 21.

<sup>2</sup> The list of the systems is listed in the Action Plan for implementation of the Development Plan for electronic systems of the customs service, which is a constituent part of this document reference document Ro16

<sup>3</sup> Commission Implementing Decision (EU) 2016/578 of 11 April 2016 establishing the Work Programme relating to the development and deployment of the electronic systems provided for in the Union Customs Code



“Serbia is at a good level of preparation in the area of customs union. Some progress was made by streamlining some customs processes. In the coming year, Serbia should in particular:

- further upgrade the customs processing system by integrating risk management;
- further improve the national customs IT to enable integration with the EU system.“

In the annual progress report from the European Commission for Republic of Serbia for the year 2019, in respect to the Chapter 29 - Customs Union, it is stated that Republic of Serbia in the next year should invest in IT system for the national customs service and the integration with the EU systems.

## **2.2 Document relating to the development of information and communication technologies of the Customs Administration of 2011**

The original document relating to the development of CAS ICT of 2011<sup>4</sup> stated several options on how to proceed with future CAS Information System that was intended to be in line with then-EU proposed ICT solutions for European customs organization compatibility.

“There are several options available for the development/procurement of the future CAS Information System. Modification of the present CAS’s system (ISCS [Information System of the Customs Service]) is not a recommended solution to meet EU requirements. This statement is based e.g. on facts from 2008-10 period connected with the improvement of the ISCS (translation to the new, modern programming language). The requirements towards EU compatibility could probably be made, but required timing is expected to be long. Starting with new development would reduce the danger of inherited problems with the application.”

## **2.3 Document relating to the development of information and communication technologies of the Customs Administration of 2016 Update**

The first update of the 2011 Document relating to the development of CAS ICT was done in December 2016, which means that it had been updated before Development Plan of the Customs Administration of the Republic of Serbia for the period 2017-2020 was adopted.

The goals of this document are generally described and are related to the path toward EU accession, with interoperability and interconnectivity recognized as the main challenges in transition process. Three technology trends are recognized as CAS ICT system evolution enablers:

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<sup>4</sup> Director General’s Decision adopting the Development Strategy of Information System of the Customs Administration of the Republic of Serbia for the period 2011-2020 (document No 148-VI-091-01-19/2011 of 7 October ).

- High availability of the services and possibility of common functioning with external services (especially with DG TAXUD services [Directorate General for Taxation and Customs Union]);
- Long-term improvement and modernization of the ICT infrastructure;
- Orientation to the services to improve the poorly interconnected information systems.

CAS ICT vision is to transform its information system from proprietary platform into proven, available platform with multi-use, speedy, open and standardized components. It is identified that transformation requires Enterprise Service Bus (ESB) infrastructure.

## **2.4 Current Analysis Report**

The Current State Analysis Report<sup>5</sup> presents the AS-IS situation, taking in consideration the legal, institutional and organizational frameworks, financial aspects, the system infrastructure including the hardware, software, applications and modules with the functionalities of the applications (systems) and as well as the projects in pipeline.

The biggest emphasis is on the current system ISCS that covers the main functionalities for customs procedures, except the new NCTS, which is compliant with the EU standards and operational. The Report also comprises risks, challenges and constrains related with IT activities of CAS.

## **2.5 Functional Review of the Ministry of Finance**

The objective of the World Bank's 2016 Functional Review of the Ministry of Finance document was to strengthen the core public finance functions of the efforts of the Ministry of Finance. The MoF and the institutions that are under MoF were analysed prior to current structure and operations and reform options for enhancements in organization, systems and processes were provided, as well as the aim to increase the sustainability, fiscal discipline, operational and usage of the public resources.

Related to ICT Strategy, particular actions were recommended on the following topics:

- 1) Administration-wide key performance indicators (KPI) directly affected by ICT performance and mechanisms to monitor this relationship;
- 2) Detailed, lifecycle cost analysis of the development alternatives for the new systems architecture;
- 3) Guidance on procurement of system development services under EU procedures;
- 4) Best practice contract management provisions for system development services;

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<sup>5</sup> Reference Document RO2.

- 5) Cost estimate for strategy implementation;
- 6) External commercial/custom software that could be considered for acquisition;
- 7) Adoption of service management standards;
- 8) Change management strategy to support introduction of new ICT systems;
- 9) Medium and long-term IT skills requirements and HRM strategy.

## **2.6 Assertion Document**

As per the Assertion Document (European Union Common Position)<sup>6</sup> it is stated EU encourages Serbia to continue the process of harmonization and alignment with the acquis and its effective implementation and enforcement and declared that chapter 29 will be implemented by the date of accession to the EU. Subjects in regards to legislation, Customs Procedures and administrative and operational capacity are discussed and recommendations stated.

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<sup>6</sup> The Common Position of the EU on the accession negotiations with the Republic of Serbia (Brussels, 9 January 2014) [http://eupregovori.bos.rs/progovori-opregovorima/uploaded/General%20EU%20position\\_EN\\_2.pdf](http://eupregovori.bos.rs/progovori-opregovorima/uploaded/General%20EU%20position_EN_2.pdf).

### 3. CAS ICT DEVELOPMENT PLAN KEY OBJECTIVES

Development Plan of the Customs Service of the Republic of Serbia for the period 2017-2020<sup>7</sup> with the corresponding Action plan <sup>8</sup> were adopted by the Government of Republic of Serbia in 2017. Customs Administration will upgrade its ICT functionality and infrastructure over next 5 years in a manner that will effectively support its business goals following global technology and customs operations trends.

As stipulated in the “Development Plan of the Customs Service 2017 – 2020” in the Strategic Goals chapter, these are the key defined CAS general business strategic goals:

- 1) EU integration and strengthening of international cooperation;
- 2) HR management and development;
- 3) Effective customs procedures and controls;
- 4) Efficient revenue collection;
- 5) Strategic management, modernization and reforms;
- 6) Strengthening the integrity, anti-corruption policies and prevention measures;
- 7) Improving working conditions;
- 8) Developing information and communication technologies.

Future development of the Customs Administration information systems has to be adjusted to best support the Organization and Work Improvement Business Plan of the Customs Service of the Ministry of Finance for the period 2020-2024 with recognized and defined business strategic goals, as follows:

- 1) Efficient revenue collection;
- 2) Effective customs procedures and controls;
- 3) EU integration and strengthening of international cooperation;
- 4) Developing information and communication technologies;
- 5) Strategic management, modernization and reforms;

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<sup>7</sup> Government’s Decision 05 number: 021-11436/2017 („Official Gazette of the RS”, No 108/17).

<sup>8</sup> Government’s Decision 05 number: 483-12607/2017 („Official Gazette of the RS”, No 116/17).

6) HR management and development;

7) Improving working conditions.

To achieve CAS goals, the key general strategic aims are foreseen to be:

- Reducing burden of Customs procedures within the next 5 years, by reducing the number and streamlining of procedures and promoting change of laws to simplify customs procedures;
- Increase effectiveness and efficiency of clearance by reducing the time, the number of documents and costs for customs procedures.

In order to fulfill the aforementioned key objectives, it is required to create key goals and measures relating to the Work Plan for Development and Usage of Electronic Systems of the Customs Service, as follows:

1. Developing a modern, integrated and coherent CAS information system by using SOA approach:

- 1.1. Developing a unique information system of the CAS;
- 1.2. Developing IT systems in accordance with EU MASP requirements;
- 1.3. Implementation of Anti-fraud information system (AFIS);

2. Promote further modernization of CAS for all business processes, including those not initiated by the EU integration:

- 2.1. IT system for all support processes, such as human resources, procurement, finance, ERP etc;

3. Improve IT support to business processes of CAS and external users:

- 3.1 Improving support to business processes of the customs service,
- 3.2 Allocating funds for improvement of infrastructure,
- 3.3 Developing a data safety, security system and emergency disaster recovery capacity;

4. Update strategic IT documents, supporting legal framework and security policies:

- 4.1 Enterprise architecture framework;

5. Improve IT skills and IT staff retention:

- 5.1 CAS employees possess required IT skills.

The Key Performance Indicators (KPI) to be used to measure the efficiency and/or effectiveness of implementation of the above Key Strategies are provided in Table 3.

TABLE 3: THE KEY PERFORMANCE INDICATORS

<b>Key Strategy</b>	<b>Key Performance Indicator (KPI)</b>
Develop a modern, integrated and coherent information system	Level of applied guidelines of interoperability and interconnectivity into the new systems.
Promote further modernization of CAS for all business processes, including those not initiated by the EU integration	Number of systems developed to increase the efficiency to support business community needs. Number of systems used by/from governmental bodies and/or business community.
Improve IT support to business processes of customs administration and external users	Efficiency, number of reported problems and decrease the time for the customs procedures. IT Systems in all business areas. Number of automated reports in real time.
Update strategic IT documents, supporting legal framework and security polices	Implementation in percentage of the governance in strategic planning and ad-hoc changes. Delays in implementation according to planning.
Improve IT skills and IT staff retention.	Quality & number of training programs, ICT staff retention level.

Based on this, and the relevant documents described in Chapter 2 (Overview of Strategic Documents of CAS ICT) of this document <sup>9</sup>, the following objectives should be implemented in order to meet the key strategies:

- 1) Due to its nature of business, CAS will provide through ICT most of its key business functions at 24x365 level of service, across the country;
- 2) The principle of on-line, real time access from anywhere to key CAS business functions must be maintained using adequate capacity communications; this includes ability to access various reports and ad-hoc graphics from cloud-based access on mobile devices (example: Power BI);
- 3) CAS must upgrade its ICT hardware/software and communication facilities to the level which can support the above functionality and access to business functions from anywhere;
- 4) Over the next 5 years, ICT must be able to both upgrade its current applications and introduce new ones, as dictated by EU customs technology standards;

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<sup>9</sup> Current Analysis, documents relating to CAS ICT development from 2011 and 2016, and Functional Review of the MoF, World Bank 2016.

- 5) CAS must resolve the needs for further applications development and implementation, operations and support, either by augmenting its current HR base within ICT, or outsource part of it, especially the development of either cloud or service-based applications;
- 6) CAS IT must strive to upgrade all of its current and future systematic data exchanges with other institutions to fully telecommunications based ones;
- 7) CAS IT must define, as per this strategy, its future approach to the choice of methodologies, both for the new development and operations and support;
- 8) CAS IT must take steps to unify or at least make compliant all of its systems, both with EU regulations and between themselves, while observing the Interconnectivity and Interoperability Strategies of DG TAXUD;
- 9) Above all, CAS, using documented, convincing arguments/data, has to present its Work Plan for Development and Usage of Electronic Systems of the Customs Service financial case to the financial authorities, in order that all necessary IT action items from this Strategy are covered in time to ensure the Republic of Serbia customs can effectively be included into EU customs at the time of accession.

## Financial Estimates for Implementation of Key ICT Development Goals 2020-2024

Financial Estimates for Implementation of Key ICT Goals 2020-2024 were calculated based on both best estimates (Table 4) provided by qualified CAS staff and also estimates given by other relevant institutions, such as World Bank, within their reviews of CAS operations and future needs in this period.

Table 4: Financial Estimates

IT Area	2020	2021	2022	2023	2024	Total (EUR)
512 – New Infrastructure: servers, storage, workstations, printers, communications	4,120,872	1,099,139	1,139,503	2,786,504	2,786,504	11,932,522
423 & 425 - Support: servers, storage, workstation, printers, communication, HW/SW support	2,856,260	3,309,325	2,833,562	2,999,716	2,999,716	14,998,579
423 & 515 National Customs Systems: new development	1,214,583	650,000	600,000	600,000	600,000	3,664,583
423 National Customs Systems: Maintenance	1,777,321	872,189	601,536	1,083,682	1,083,682	5,418,410
423 – Project Management and Technical Assistance	1,000,000	600,000	100,000	100,000	100,000	1,900,000
512 – EU Customs Systems Development: Hardware procurement	1,550,000	1,500,000	600,000	1,000,000	350,000	5,000,000
423 & 425 EU Customs Systems Development: Hardware support and service	1,000,000	1,130,000	1,370,000	1,370,000	1,130,000	6,000,000
423 & 515 EU Customs Systems Development: Software procurement	550,000	2,900,000	4,250,000	3,550,000	2,250,000	13,500,000
423 EU Customs Systems Software Maintenance	0	0	0	900,000	2,010,000	2,910,000
<b>Total</b>	<b>14,069,036</b>	<b>12,060,653</b>	<b>11,494,601</b>	<b>14,389,902</b>	<b>13,309,902</b>	<b>65,324,094</b>



## 4. APPLICATIONS SCOPE AND DIRECTIONS

### 4.1 Key Directions

The existing ICT system covers most of the business processes in the CAS, further continuous development and service upgrade of the existing customs declaration processing system, as well as the customs management system are necessary, in order to fully computerize customs procedures and connect with the correspondent EU information systems of the EU.

ISCS is operational since 1994. Initially implemented information system was composed of number (more than 100) regional and local servers installed in regional Customs Offices- and border/inland Customs Posts. The result of the implementation of the strategy is in continuous reduction of the number of regional servers. NCTS was developed to fulfil the requirements for common transit and it is operational since 2016.

CAS stakeholders are enjoying a range of applications that are enabled by the system, and ISCS has become a vital piece of infrastructure. However, technologically, the ISCS solution is proprietary and complex, leading to a long wait for new applications, high development and maintenance costs. Improvements and innovation are needed to achieve effective and efficient operations. Three technology trends have been identified that could enable the evolution of ISCS:

- The first is to make services widely available and interoperable with the external ones, particularly EU information systems. The added value of CAS is no longer in hard-core technology, but in combining different components in a smart way, focusing on added value for the stakeholders;
- The second, long standing trend is pointing on the ISCS infrastructure. New paradigms in the CAS everyday work will be enabled with increased bandwidth and computing power;
- The third and final trend is service orientation which will enable the development of more loosely coupled information systems.

The transformation options require an off-the-shelf *Enterprise Service Bus (ESB)* infrastructure to replace today's proprietary solution and a standardized CAS environment to host the ESB and possible other shared components

A solid Enterprise Application Integration architecture will allow platform independent interoperation. A cohesive set of screens or web pages may still feel like an application to the user, but the back-end may combine parts from different systems.

Application Architecture goals are:

- Meet business needs;
- RASP: Reliability, Availability, Scalability, Performance;
- Usability/Reusability;

- Extensibility;
- Freedom from defects;
- Low cost and rapid delivery;
- Layered architecture, where each layer has a clear, focused purpose (high cohesion), and layers are cleanly separated and independent (low coupling);
- Channel independence - use the same components for Internet, fat-client, voice response units, wireless, etc ;
- Consistent data and rules across all channels;
- Interoperability between platforms, languages, applications, systems etc;
- Portability;
- Highly secure applications;
- Ease of updates.

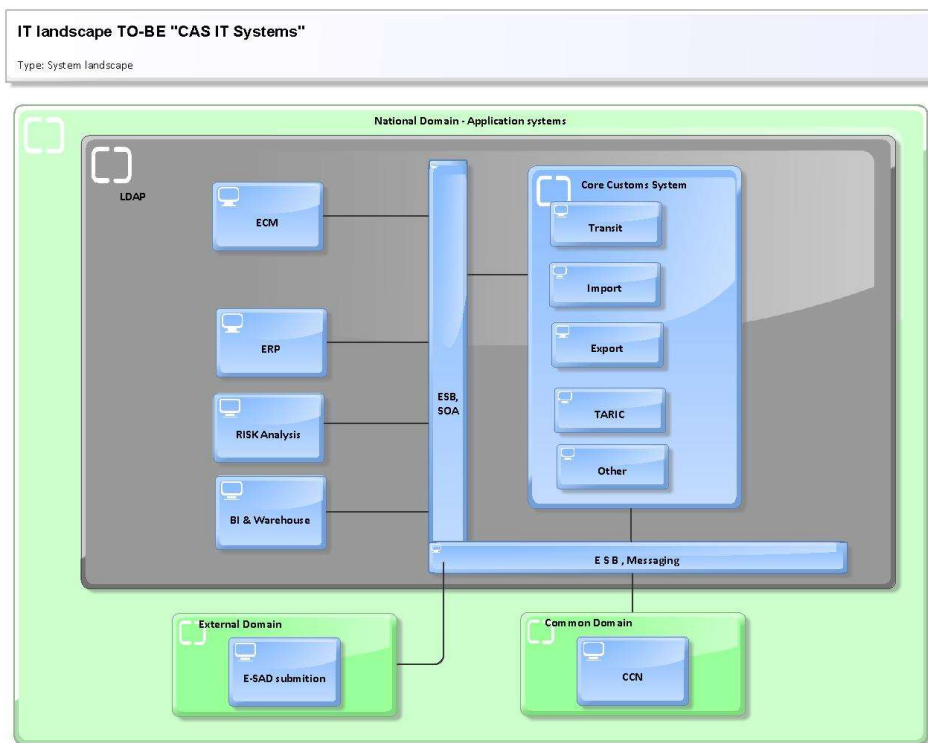


FIGURE 1: IT LANDSCAPE TO-BE 'CAS ICT SYSTEMS

The new system to support the growing business and technological requirements will be built on Enterprise Service Bus (ESB) technology. Under IPA 2013 Project Support to further modernisation of the Customs Administration and improved border management in the Republic of Serbia, ESB solution has been delivered. Further steps are to put ESB into operation and to build accordingly the connections with current and new systems.

The ICT strategic decision in regards to the ICT applications development, operations and maintenance of software and hardware are following:

- 1) Applications development policy: CAS will develop ICT software applications up to predefined amount (a limit in terms of value) or up to predefined man-

days (limit in sense of effort); over this limit, projects should be subcontracted according to the national and/or international procurement rules. It is also clear that IT department currently does not have sufficient capacity to develop modern, service-based applications;

- 2) Operations and Maintenance policy: CAS will operate old ICT systems in house (data centre location staff), and outsource some of them, depending on estimated costs and available manpower;
- 3) Helpdesk policy: CAS will have internal first and second line support internally and the third line support will be subcontracted for the new Customs Applications, according to the national and/or international procurement rules, while internal Help Desk, for Customs Officers, may be organised using in house resources.

The ICT Systems of the CAS are constantly being modified and developed. Until now, all objectives regarding ICT implementation have been accomplished by establishing modern, stable, integrated systems, which include all work processes and data essential for functioning of the customs system as a whole, in real time.

Main principles of the CAS in present and future implementing are:

- Service orientation;
- Interconnectivity and interoperability with EU systems;
- Business project managing <sup>10</sup>;
- Security.

Further system development and upgrade of existing solutions are conditioned by needs for modernization (and paperless environment) and priorities regarding interoperability and interconnectivity with the EU, regional and national systems.

As the capacity of the ICT staff (both human resources and knowledge) is not sufficient to perform all the tasks, a lot of ICT activities would have to be outsourced to external partners, e.g.:

- Hardware maintenance and service;
- Application development and maintenance;
- Customs applications installation and configuration;
- E-mail service and Internet connectivity provisioning;
- Electronic processing of customs documents from the traders to the customs systems.

The model of outsourcing used is usually a combined insourced-outsourced approach. An outsourcing policy it is recommended to be established in order to define the strategic decision for the areas and activities to be outsourced, as well the common service level agreements principles.

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<sup>10</sup> As per chapter 6. **Error! Reference source not found..**

Depending on the human resource availability and staff competence improvement, the areas and activities designated as outsourced should be changed from mostly expertise oriented to mostly time consuming.

The combined approach of outsourcing should remain the same, but a stronger control mechanism of the quality and quantity of the work performed should be established in order to protect the stability and availability of the IT environment. CAS should be strategically oriented towards engaging of long-term, verified partners which primarily have to meet the criteria of reliability.

#### **4.2 EU Requirements for connectivity and communication of ICT**

All systems that have to be developed to meet EU requirements would be developed and deployed in related time frame. In this way, it is possible to combine application in one or more projects, depending on the scope and deadlines.

The Multi-Annual Strategic Plan (MASP) is a management and planning tool drawn up by the European Commission in partnership with Member States to ensure effective and coherent management of ICT projects by setting down both a strategic framework and milestones<sup>11</sup>.

The Commission is to draw up a work programme relating the development and deployment of the electronic systems <sup>12</sup>. The UCC Work Programme provides a high level description of projects, their legal bases related to provisions of the UCC, key milestones for the completion of stable technical specifications and the envisaged dates for systems entering into operation.

The two strategic documents are linked. The projects contained in the UCC WP are a selection of projects inscribed in the MASP and are subject to the same approaches applicable to any other projects detailed in the MASP. The UCC Work Programme is priority-based to plan and manage the development of the electronic systems related to UCC and the regular updates to be taken into account.

The possible approaches for the implementation of the new systems are:

- Central Development - All functionalities of the system is developed by DG TAXUD. National impact Central development is to develop interfaces to the central system.
- Distributed development – some components of the system for supporting facilities are designed and developed by DG TAXUD. The core functionality (national components) has to be implemented by member states. Common technical specifications are provided by the DG TAXUD.

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<sup>11</sup> Article 8(2) of the Decision No 70/2008/EC of the European Parliament and of the Council of 15 January 2008 on a paperless customs environment for customs and trade, OJ 2008, N° L23, p. 21.

<sup>12</sup> Article 280 of the UCC

- National development – Member states have to develop all required functionality in the national systems. The system functionality is agreed with DG TAXUD.
- Hybrid development - It refers to the development which gives MS the choice to either use the centrally developed and centrally operated system, or to develop and operate some of the components on their own national domain.

Following the main customs business processes, the information's systems can be grouped:

- Systems for the tariff environment: ITMS [Integrated Tariff Management System] (TARIC 3 [Tarif Intégré des Communautés européennes], Quota, Surveillance, SMS, EBTI [European Binding Tariff Information], BOI etc);
- Systems for the main business processes: NCTS [New Computerized Transit System], AES/ECS [Automated Export System/Export Control System], AIS [Automated Import System, PN, AN, SP INF, PoUS, CCI;
- Systems for the control and risk management: CRMS [Customs Risk Management System], COPIS;
- Systems for economic operators: EOS-EORI2 [Economic Operators' System-Economic Operator Registration and Identification], EOS-AEO [Authorised Economic Operator] and MRA, RSS, REX [Registered Exporters], Customs Decisions, UUM&DS, GUM;
- Facilitating and additional systems: CS/RD2, CS/MIS;
- Other (excise) systems: EMCS [Excise Movement and Control System], SEED (EU);
- Distribution of books on A and B accounts;
- Convention on the use of information technology for customs purposes (CIS)<sup>13</sup>;
- ITGS (International trade in Goods Statistics) - Extrastat and Intrastat;
- National Integrated Criminal Intelligence System (NICIS).

### **4.3 National Level Applications**

CAS has started the integration of the existing systems through ESB, but necessary changes have to be made due to legislation changes or new interfaces with internal or external systems in the future.

The automation of the import business processes is a national development, but there will be enhancement in the system taking account the new system developments and interfaces, new requirements at the national level, changing in the legislative procedures and data sets. The changes in the declaration processing system will impact

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<sup>13</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A51997IP0060> (pdf).

the Revenues Payment System, Guarantee Management System and possibly Risk Management System, if the new areas are involved in the risk profiles. The data set and formats changes will affect the electronic exchange with trade sector, reporting system, data warehouse and interfaces with external systems.

As per the above sections, the decision is to replace the main system ISCS with new system, as the system is legacy and has huge maintenance cost and risky new development. ESB will be used to replace functionality by functionality as it will be stated in the Enterprise Architecture documents<sup>14</sup>.

Single Window project is also one of the national projects, that is still not part of the EU requirements, and CAS has strategic decision to continue with the implementation of the project in the next five years.

The main new systems to be developed are presented in the Table 5.

TABLE 5: NEW SYSTEMS TO BE DEVELOPED

System / Project	Start	End	Duration (Months)	Comment
<b>PROJECTS PHASE I</b>				
IAM System and Traders portal (Framework) with registration services	Jan 2020	Jan 2023	36	
National Customs Decisions Management System	Jan 2021	Jan 2022	12	
Risk Management System	Jan 2021	Jan 2023	24	
Import Systems	Jan 2021	Jan 2024	36	It includes National Import system; REX; Special procedures for import, INF – National Component; Presentation notification and Arrival notification for import, Temporary Storage; integrations
Export systems	Jan 2022	Jan 2024	24	It includes AES; ECS; Special procedures and Presentation notification for export;
NCTS phase 5	Oct 2020	Oct 2022	24	
Financial system in CAS	Apr 2022	Apr 2024	24	It includes Financial Module (Customs debt), Traditional own resources; Budget and accounting; Interfaces
Guarantee management system	Jul 2022	Jan 2024	18	
Help Desk System	Jan 2022	Jan 2023	12	
Customs Data Warehouse system – phase 1	Jul 2022	Jun 2024	24	Including System and Network monitoring tool

<sup>14</sup> EA: Implementation and Migration Plan, Solution Building Blocks and Architecture Building Block

System / Project	Start	End	Duration (Months)	Comment
Single Window	May 2019	April 2024	60	
<b>PROJECTS PHASE II</b>				
Economic Operators registration systems and reference data management	Jan 2023	Jan 2024	12	It includes CS/RD2 and National reference data; EORI2; AEO and MRA; National CRS.
Integrated TARIFF environment in CAS (ITMS)	Jan 2023	Jan 2025	24	It includes National Components of TARIC 3, Quota 2, Surveillance 3, BTI, BOI; as well as Valuation and Calculation
ICS 2	Jan 2023	Jan 2025	24	
CCI	Jan 2023	Jan 2025	24	
NCTS phase 6	Jan 2024	Jul 2025	18	
Post control and audit	Jan 2025	Jan 2027	24	
HR Management system	Apr 2025	Jan 2026	9	
Customs Data Warehouse system - phase 2	Jan 2026	Jan 2027	12	
Excise Management Systems	On hold			The excise duty responsibilities are split between customs and tax administrations of Serbia at the moment. When there is national decision about entire management of the excise duty activities, including these into the country, this project has to be updated

## 5. TECHNICAL INFRASTRUCTURE DIRECTIONS

### 5.1 Technology Strategic Directions

In respect of technology directions, the driving forces of CAS toward developing, implementing and maintaining agile, open, reusable and standardized technology are:

- Provide secure and high quality ICT services to beneficiaries in Serbia that support the Customs policies and CAS specific administrative processes;
- Assure continuity of operation of the ICT functions in case of failures;
- Provide office automation services and advice;
- Develop and operate the infrastructure allowing interoperability between CAS and EU, partner countries and other institutions in Serbia as well as with the business community;
- Manage efficiently installation and operation of the related equipment and networks.

The renovation of all ICT equipment is an important task for the administration, since the technical infrastructure has to include the new modern technologies, meeting the requirements of the new ICT systems. In order to implement this, it is necessary to create the 5-year strategic plan for ICT equipment update, using the “ever-greening” principle, with same quantity of replacement every year, thus ensuring smooth, constant costs, without over-burdening the budget. The costs for hardware maintenance have to be also considered in ICT equipment planning.

The current technology expertise that CAS possess remain without incorporating different brands on changing technology which will have big impact on the maintenance cost and effectiveness of the services provided. This is mainly for the communication equipment, servers, operating systems and database.

The list of AS-IS situation concerning the technical infrastructure (including hardware and software) is listed in the Current Situation Report Document <sup>15</sup>, and it is recommended be updated annually.

### 5.2 Data Centre and Servers

At the moment the core customs system is running on combined centralized-distributed environment. It consists of the central server and local servers. Production servers, including, central server and local serves are renewed in last 3 years, which lead to the appropriate level of the business functionality. With this consolidation the CAS achieves significant rebuilding and rationalisation of the data centre that provide information-based services. The results of this consolidation are savings in cost and energy consumption, improvement of the service. The new ICT infrastructure is more resilient, reliable and far better equipped to recover quickly from major incidents with

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<sup>15</sup> Current State Analysis Report (AS-IS) -reference documentRO2.



minimal disruption to service. In view of the new applications development the CAS should continue step by step with the process of the centralization of the existing data centres, considering the scalability and performance, availability and security, energy efficiency and maintenance.

Taking into account that major part of the customs information systems works 24/7 it is important to implement strategic document for business continuity, as well as plan for the building of disaster recovery center.

### **5.3 Communications**

#### **LAN**

At the moment, all CAS locations are connected in a LAN through three segments, which needs to be consolidated to one domain.

CAS has started the migration of all users to the CARINA segment. This project requires a number of changes to the network and server infrastructure, consolidation of all workstations, as well as improving the security of the information system. In this way, the user will access all necessary services available on one computer.

#### **WAN**

All CAS locations are connected through WAN to the CAS ICT department (data centre). From topology view, the network is set up in star-type, which connects central server with locations.

In order to satisfy future needs, both LAN and WAN capacities will have to expanded, to allow for increased traffic and ever-expanding number of applications, in line with TAXUD requirements.

#### **CCN/CSI**

The CCN/CSI (Common Communication Network/Common System Interface) provides a communication infrastructure to DG TAXUD and all customs and/or taxation administrations, for supporting all applications in the sector of Customs and Taxation. DG TAXUD has implemented CCN2, a new interoperability infrastructure to support service oriented architecture and to ensure location independent access to services and services that are backwards compatible with existing customs systems. CAS is connected to CCN/CSI platform as member of the Common Transit Convention <sup>16</sup> In the future CAS has to be connected to CCN2 platform depending on the particular systems developed according EU accession requirements.

Current network resources might be considered as sufficient for provisioning of the existing services near to the acceptable level. Introducing new services and responding to the ever growing user requirements for connectivity and availability could

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<sup>16</sup> Law on Ratification of the Convention on a common transit procedure (“Official Gazette of the RS – International Treaties”, No 13/15)

not be met with the current network infrastructure. In the network area the CAS has to reach the follow objectives:

- Availability – provisioning of uninterrupted network service with enough bandwidth to provide the normal everyday work;
- Security – implementing secured communication among the customs offices with clear separation of network zones, access to services, traffic filtering and intrusion prevention;
- Manageability – providing the necessary procedures and tools to monitor and control the network activity, resource usage, configuration changes and security incidents;
- Effectiveness – expertise knowledge should be reused to streamline the communication.

#### **5.4 CAS ICT Security**

CAS ICT Security is defined in line with national common regulations on data security for state institutions, and should be revised every few years, covering the following key topics:

- 1) Physical security of the ICT equipment;
- 2) Software security and antivirus;
- 3) Network content filtering/intrusion prevention;
- 4) Remote access;
- 5) Usage of data transfer devices;
- 6) Level of privileges.

IT is recommended that CAS raise the level of security of ICT systems in line with the legislation and international standards. It is necessary to take appropriate technical and organizational measures, which ensure the prevention of incidents, as well as prevention and minimization of damage from incidents that threaten the exercise of jurisdiction and performance of activities.

It is necessary for CAS in the following period to lay down the documents on the adoption of ICT security system establishing protective measures, principles, methods and procedures to achieve and maintain an adequate level of security of the system in accordance with changes in the environment and in the ICT system.

CAS 2011 ICT development document's update has raised a number of issues related to ICT Security, and proposed 28 measures for protection of ICT systems. These measures should be again reviewed, and actions taken, where necessary, taking this time into consideration the new EU GDPR regulatio<sup>17</sup>.

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<sup>17</sup> Regulation (EU) No 2016/679 (*General Data Protection Regulation*), „Official Journal EU”, No L119/2016.

CAS should make itself compliant to the new EU Data Protection Regulation (GDPR) which started in force on May 25<sup>th</sup> 2018. GDPR is by far the most comprehensive data protection directive that EU has brought to life so far; it deals with many aspects of the data protection issue, at all levels, including organizational measures, new professional positions, definitions of various necessary players in the field, and, not the least important, potential heavy punitive measures to be taken against perpetrators of this regulation.

## **5.5 Peripherals**

The CAS has started the renewal of the work stations, but the process has to continue with significant investments in peripheral computer equipment, considering that in the longer period of time, funds for the replacement of depreciated equipment were not provided. For example, 970 out of 2350 working stations are completely outdated and NCTS cannot be executed on them, at the same time 1300 working stations are older than 10 years.

On a security level, CAS will ensure the principles and constantly improve PC administration and maintenance through implementation of:

- Antimalware;
- Encryption;
- Strong authentication;
- Management agent.

Technical considerations for the selection of an appropriate hardware platform it is recommended to cover the following:

- The volumes of transactions, reports and statistics which are required on a daily/weekly/monthly basis. The accuracy of this volumetric analysis is fundamental to the determination of scalability;
- the processing and storage capacities (disks, RAM sizes, CACHE memories), necessary to process the volume of transactions;
- compatibility with the technical architecture, Open Systems principles and international quality standards;
- operational quality standards;
- flexibility, including the ease of expansion, upgrading and enhancements.

## **5.6 Operating Systems**

Selection of the operating system should provide the framework for communication, operation of RDBMS and architectural integration, therefore these aspects have to be considered also. The selection of a unique operating system for servers is strongly recommended, thus minimizing the problems with the operation and

maintenance and usage of the CAS staff expertise with the current ones, which will reduce the effectiveness cost for maintenance.

### **5.7 Databases**

The Work Plan for Development and Usage of Electronic Systems of the Customs Service defines the platform for managing and archiving the processed data. The database platform should provide the following features:

- support the relational data model;
- assure data integrity;
- high availability;
- support client-server technology;
- standard interface for the integration with other tools and packages;
- assure the information security at the information access level;
- standard database maintenance capabilities (backups and monitoring).

The Work Plan for Development and Usage of Electronic Systems of the Customs Service does take a stand on technology platforms and/or products to be used for systems implementation. It is recommended to use the already used one, with the newest versions where applicable.

## 6. ICT ORGANIZATION AND MANAGEMENT

The achievement of the IT strategic goals and coordination with business plans will be met by CAS with application of the IT organization and methodologies in practice. Considering the size and complexity of all IT projects, the dependencies and relations with business and procedures tasks, it is crucial for CAS to apply such kind of methodologies, that cover variable aspects such as: Project Management, Architecture, IT Service Management and Project organization.

CAS will plan very carefully the implementation of all electronic customs projects within a time-frame in order to implement previously agreed business priorities and needs, IT Architecture and management of the projects. In this relation CAS will have a clear vision for the applied methodology to achieve the project results depending on the complexity and expected duration of the particular project.

With a used project management methodology, CAS will reach the development of the customs information systems that effectively meet business objectives, while assuring implementations that are high quality, on time according to schedule and within planned resources.

The consecutive approach applied by CAS for building the Enterprise Architecture will result in flexible and modular software applications that can adapt easier to changes.

CAS Enterprise Architecture (EA) is built according to TOGAF (The Open Group Architecture Framework) methodology and framework. The EA is described in the set of 7 documents <sup>18</sup>, as well as, modelled within the CAS' instance of the [ARIS software](#).

CAS is going to develop the information systems according to international standards, therefore allowing future interfaces with the systems of other countries.

The modernization of the CAS, new technologies and service-oriented architecture usage lead to more complex information systems and increasing of the number of the users. This factor pays a serious attention to the daily operations. To reduce this risk, CAS will apply the best approach for IT service management for Service support and Service delivery, including Service Desk, Incident Management, Problem Management, Configuration Management, Change Management and Release Management.

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<sup>18</sup> Reference documents R04, R05, R06, R07, R08, R09 and R10.

More details for the methodologies and standards mentioned above are presented in the Annex 3 of the The Work Plan for Development and Usage of Electronic Systems of the Customs Service. Selection of the methodology for each project will be done prior of starting the project. Depending of the project requirements different methodology might be more suitable. The decision will follow the Governance Manual decision process<sup>19</sup>.

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<sup>19</sup> Reference document RO1.

## 7. REFERENCES

### Related National Strategies

- Public Administration Reform Strategy („Official Gazette of the RS”, No 9/14, 42/14 – correction and 54/18);
- Multi-country Indicative Strategy Paper for 2014-2020 (Brussels, 31<sup>st</sup> May, 2018, European Commission website);
- Strategy on Development of Electronic Communications in the Republic of Serbia for the period 2010-2020 („Official Gazette of the RS”, No 68/10);
- Strategy for Integrated Border Management in the Republic of Serbia (2017-2020), with Action Plan for the implementation („Official Gazette of the RS”, No 9/17);
- Indicative Strategy Paper of the European Commission for the Republic of Serbia – IPA II (2014-2020) (Brussels, 10<sup>th</sup> August 2018, European Commission website);
- Republic of Serbia e-Government Development Strategy 2015-2018 and Action Plan for implementation of the Strategy 2015-2016 („Official Gazette of the RS”, No 107/15);
- Strategy for the development of information society in Republic of Serbia until 2020 („Official Gazette of the RS”, No 51/10);
- Republic of Serbia Information Security Development Strategy 2017-2020 („Official Gazette of the RS”, No 53/17).

### Other National References

- Revised National Programme for the Adoption of the Acquis 2014-2018. (July 2014, <http://www.mei.gov.rs/srl/dokumenta/nacionalna-dokumenta/npaa>);
- Negotiating Position of the Republic of Serbia for the Intergovernmental Conference on Accession to the European Union for Chapter 29 – Customs Union (Brussels, 20<sup>th</sup> June 2017, European Commission website);
- Annual progress reports for Serbia by the European Commission;
- Screening reports for the Negotiating Chapter 29 – Customs Union and other negotiation chapters in which CAS takes part;
- National priorities of international assistance for the period 2014-2017, with projections through 2020 (Belgrade, 28<sup>th</sup> January 2014, Ministry of European Integration);
- EU Common Position, Chapter 29: Customs union (Brussels, June 15, 2017 recognized by the Government’s Conclusion 05 No: 337-525/2017 of 24 January 2017);
- Serbia restructuring and rightsizing project - Vertical functional review of the Ministry of Finance, by World Bank, June 2016

### EU Related References

- Taxud e-Customs Progress Report 2016 (Brussels, 10<sup>th</sup> July 2017, European Commission website);

- MASP (Electronic Customs Multi-Annual Strategic Plan) 2017 REVISION, Version 1.4 (Brussels, 30<sup>th</sup> November 2017, European Commission website);
- IT Mission report in the Customs Administration of the Republic of Serbia (Brussels, 3-4 June 2014, European Commission website);
- DG TAXUD IIS Monitoring Mission in Serbia for the area of implementation of interconnectivity and interoperability , CAS (Brussels, 10 November 2015, European Commission website);
- EIS, European Interoperability Strategy ([http://ec.europa.eu/o8oFC7A1-18CB-4DEB-B399-0773306F5EE6/FinalDownload/DownloadId-45A8FDD8B1F8Doo8CBB7CABo8E8781FC/o8oFC7A1-18CB-4DEB-B399-0773306F5EE6/isa/strategy/doc/annex\\_i\\_eis\\_en.pdf](http://ec.europa.eu/o8oFC7A1-18CB-4DEB-B399-0773306F5EE6/FinalDownload/DownloadId-45A8FDD8B1F8Doo8CBB7CABo8E8781FC/o8oFC7A1-18CB-4DEB-B399-0773306F5EE6/isa/strategy/doc/annex_i_eis_en.pdf));
- EIF 2.0, European Interoperability Framework 2.0, ([http://ec.europa.eu/o8oFC7A1-18CB-4DEB-B399-0773306F5EE6/FinalDownload/DownloadId-B758E7AFCDFB3EF1D1F53D7F67F6E629/o8oFC7A1-18CB-4DEB-B399-0773306F5EE6/isa/strategy/doc/annex\\_ii\\_eif\\_en.pdf](http://ec.europa.eu/o8oFC7A1-18CB-4DEB-B399-0773306F5EE6/FinalDownload/DownloadId-B758E7AFCDFB3EF1D1F53D7F67F6E629/o8oFC7A1-18CB-4DEB-B399-0773306F5EE6/isa/strategy/doc/annex_ii_eif_en.pdf));
- REGULATION (EU) No 952/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 October 2013 laying down the Union Customs Code;
- REGULATION (EU) No 1294/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 establishing an action programme for customs in the European Union for the period 2014-2020 (Customs 2020) and repealing Decision No 624/2007/EC;
- Decision No 70/2008/EC of the European Parliament and the Council of 15 January 2008 on a paperless environment for customs and trade;
- COMMISSION IMPLEMENTING DECISION (EU) 2016/578 of 11 April 2016 establishing the Work Programme relating to the development and deployment of the electronic systems provided for in the Union Customs Code;
- REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance);
- <http://www.opengroup.org/architecture/togaf8-doc/arch/>;
- [http://ec.europa.eu/isa/strategy/index\\_en.html](http://ec.europa.eu/isa/strategy/index_en.html);
- [http://ec.europa.eu/taxation\\_customs/index\\_en.html](http://ec.europa.eu/taxation_customs/index_en.html);
- The Commission Enterprise IT Architecture framework – CEAF;
- TEMPO – TAXUD’s Electronic Management of Projects Online;
- Trans-European Systems Reference Manual, DG TAXUD, (Brussels, 16 May 2018, Брисел, 16. мај. 2008. године, сајт Европске комисије).

Annex 1 (Interconnectivity and Interoperability Strategy), Annex 2 (ICT Organization and Management) and Annex 3 (Gantt Chart of Overview of measures and activities) represent an integral part of this Plan.



## 8. FINAL PROVISIONS

CAS shall present to the Government annual reports on fulfilling objectives from this Plan.

Overview of measures and activities is an integral part of this Plan.

## **Annex 1: INTERCONNECTIVITY AND INTEROPERABILITY STRATEGY**

The purpose of the Annex 1 is to define the scope of the interconnectivity and interoperability activities of CAS for fulfil the EU Accession requirements in the customs IT area.

The Annex is based on the strategic documents of DG TAXUD, mainly Electronic Customs Multi-Annual Strategic Plan 2017 REVISION, Version 1.4 (MASP) and COMMISSION IMPLEMENTING DECISION (EU) 2016/578 of 11 April 2016 establishing the Work Programme relating to the development and deployment of the electronic systems provided for in the Union Customs Code (UCC WP). The MASP and UCC WP are updated annually and the relation between two documents leads to their harmonisation in the same time. The future releases and updates of the documents have significant impacts to this Annex and CAS will make necessary changes, taking into account up to date achieved progress.

### **1. Interconnectivity**

CCN/CSI and CCN 2

CCN/CSI is closed secured network, consisted of a series of physical computers – the "gateways". The CCN/CSI is built in the way that all National Administrations use a harmonized method of access to the European Commission and every National Administration systems and the exchange of information among National Administrations is facilitated.

CCN 2 is an evolution of the current CCN architecture and services, which will provide a full set of value-added services to support the evolution to new application developments. CCN2 will be delivered in several releases in order to minimise risks. The first release is focused on enabling SOA and security and is in operation since October 2017.

CAS is connected to the production CCN/CSI, as a Member of the Convention on the Common Transit Procedure. The transition to CCN2 will be planned according national plans and developments.

### **2. Interoperability**

#### **2.1 Systems for the tariff environment - Integrated Tariff Management System**

The main purposes of the TARIC 3 are:

- to provide to the MS the Community data needed (interpretation, integration and codification) for automated customs clearance and
- to provide the business community with the up-to-date tariff and commercial legislation applicable at Community level, via the DDS

The purpose of Surveillance system is the collection and transmission of declaration data taken from the declarations by traders who wish to import or export

certain products into/out of the European Union. MS Administration are responsible for collection and transfer of the data, European Commission (DG TAXUD) is responsible for creating and maintaining surveillance definitions within the TARIC database.

The purpose of ECICS is to ensure a consistent and harmonised classification of chemical products in the EU and help customs authorities to identify chemical products.

The purpose of EBTI is to ensure the correct issuing of all BTI and to have a database of all applications and issued BTIs. It obliges the holder to mandatorily use a BTI reference when declaring the covered goods.

Most parts of the Integrated Tariff Management System are national developments and the plan for their realisation will be aligned with national plans.

The Work Programme includes “UCC Binding Tariff Information (BTI)” project and main goals of it are upgrade of the existing trans-European EBTI-3 system and Surveillance 2 system to ensure alignment of the EBTI-3 system to the UCC requirements and extension of the declaration data under-surveillance. The project will be implemented in two phases. The first phase provides the functionality to receive the UCC required declaration dataset and fulfil the obligation of BTI usage control on the basis of the newly required declaration dataset and the alignment to the customs decisions process. The second phase will implement additional functionality, the electronic form of the BTI application and decision and provide electronic communication for the economic operators. The UCC BTI project will be developed centrally and the system will operate in the same way.

Another WP Project is “UCC Surveillance 3” which is related with an upgrade of the Surveillance 2+ system to ensure its alignment to the UCC requirements such as the standard exchange of information by electronic data-processing techniques and the establishment of adequate functionalities needed for processing and analysing the full surveillance dataset obtained from Member States. This project will be developed centrally and the system will operate in the same way.

## **2.2 Systems for the main business processes**

### **2.2.1 New Computerized Transit System (NCTS)**

The Republic of Serbia is a Member of the Convention on the Common Transit Procedure and from 1 of February 2016 the common transit procedure is operational. The common transit procedure provides the opportunity for participants in the customs procedure to transport goods between Contracting Parties to the Convention: EU, EFTA countries as well as the Republic of Turkey and the Republic of North Macedonia on the basis of a single electronic declaration and a single guarantee which are valid throughout the transit operations. NCTS automates this procedure and provides a control of the movements under the TIR procedure within EU. The NCTS phase 4 additionally includes processing of safety and security data at entry and at exit.

According MASP the next phases 5 and 6 of the NCTS aim to implement UCC requirements and to establish additional interfaces with other systems. CAS will plan the implementation of the next phases in the national transit system accordingly.

### **2.2.2 Automated Export System/Export Control System**

The objective of AES is to ensure that export transactions started in one MS can be finalised electronically in another MS without re-submission of data. This includes the exchange of electronic messages related to the different stages of the operations amongst the various actors (customs, traders and other governmental administrations).

The existing Export Control System phase 2 (ECS 2) automates the current Export procedures and Exit formalities including safety and security features and also covers electronic lodgement of the declarations.

AES is further enhancement of the existing ECS 2 with fulfilment of the UCC requirements, the coverage of simplified procedures, split exit consignments and centralised clearance for export. The development of the harmonised interfaces with another systems (NCTS, EMCS) is also in the scope. ECSS 2 is both developed and operated in a distributed way, based on specifications that are created by DG TAXUD, this approach will be maintained for the evolution of ECSP2 into the UCC AES.

The project in the UCC WP consists 2 components:

- Component 1 ‘Trans-European AES’: covers parts to be developed centrally and nationally.
- Component 2 ‘National Export Systems upgrade’: covers adaptation of the national export systems for implementation of the specific national elements related to export and/or exit formalities, which are not in the scope of the common domain.

### **2.2.3 Automated Import System**

The objective of the AIS is the electronic support of import processes and mainly to ensure that import operations starting in one MS can be completed in another MS without re-submission of the same information. This includes the exchange of electronic messages related to the different stages of the operations amongst the various actors (customs, traders and other governmental administrations).

Implementation of all process and data requirements deriving from the UCC is under “UCC National Import Systems upgrade” project. The project relates to the national import domain covering the national customs declarations processing systems as well as other systems such as national accountancy and payment systems.

### **2.2.4 UCC Notification of Arrival, Presentation Notification and Temporary Storage**

The goal of this project is to harmonise processes and the data exchange with trade for Notification of Arrival, Presentation of the goods (Presentation Notification) and Declaration for Temporary Storage as described in the UCC across the Member States. The project covers the automation of processes and data requirements for the external domain at national level.

### **2.2.5 UCC Centralized Clearance for Import**

This project aims to allow for goods to be placed under a customs procedure using centralised clearance, allowing economic operators to centralise their business from a customs viewpoint. The processing of the customs declaration and the physical release of the goods should be coordinated between the related customs offices. It concerns a trans-European system containing components developed centrally and nationally.

The "UCC Centralized Clearance for Import" project will have big impact on the National Systems and will require organisational and technical modifications, due to necessary adjustments or changes in the national legislation, or due to the extension of functionalities and the introduction of new concepts. Therefore, the implementation of the project will be planned very carefully, taking into account dependencies and linked projects and systems.

### **2.2.6 Import Control System**

The existing Import Control System phase 1 (ICS) automates customs formalities on the entry of goods into the Union customs territory with regard to safety and security risk analysis.

The "UCC Import Control System upgrade" project aims to strengthen the safety and security of the supply chain for all modes of transport and especially air cargo, by means of improving data quality, data filing, data availability and data sharing as regards the entry summary declaration and related risk and control information. The project will also facilitate the collaboration amongst Member States in the process of risk analysis.

### **2.2.7 UCC Proof of Union Status (PoUS)**

The project aims to provide an electronic means to endorse and store proofs of Union status of goods and to allow presentation of proof and validation of the status of the goods when goods are re-entering the Customs territory of the Union. An additional functionality of the system will be implemented in order to provide the possibility for traders to submit the PoUS data.

The scope of the project and the development method are on-going.

### **2.2.8 UCC Information Sheets (INF) for Special Procedures**

The new central developed system under this project will support and streamline the processes of INF data management and the electronic handling of INF data in the domain of Special Procedures. The expected benefits of the implementation of the INF SP IT System are an improvement of the cooperation between MS, increased efficiency of the Special Procedures monitoring and control and a reduction of paper-based transactions.

This is first aspect for completed implementation of special procedures align to the legal provisions defined in the UCC. This project will be implemented with realisation of the central services for the management of the standardised information created to the inward and outward processing procedures.

## **2.2.9 UCC Special Procedures**

The project is second part of the practical implementation of the UCC Special Procedures and consists national IT developments for the harmonisation of the special procedures and alignment to the UCC provisions, related to customs warehousing, end-use, temporary admission, inward and outward processing. This project will be implemented in two parts:

- Component 1 — ‘National SP EXP’: provide the required national electronic solutions for the export related special procedures activities.
- Component 2 — ‘National SP IMP’: provide the required national electronic solutions for the import related special procedures activities.

Both components will offer benefits to the MS by providing harmonisation of the approach for Special Procedures across the EU and clear points in the process where the status of the goods changes and an electronic solution for related data.

The project might also impact the related national systems/implementations National Systems and would require organisational and technical modifications.

### **2.2.10 UCC Guarantee Management (GUM)**

The automation of the processes of the effective and efficient management of the different types of guarantees is in the scope of this project. The objective of the project is to ensure that the data of guarantees used for import and export that affects more than one MS must be made electronically accessible to MS where the customs declarations are lodged and accepted. The Guarantee Management system will allow the registration, verification of existence and validity as well as release of individual and comprehensive guarantees valid throughout the customs territory of the Union (except for Transit).

The project consists two parts:

- Component 1 — ‘GUM’: The trans-European system will cover the management of the comprehensive guarantees that may be used in more than one Member State and the monitoring of the reference amount for each customs declaration, supplementary declaration or an appropriate information of the particulars needed for the entry in the accounts for the existing customs debts for all customs procedures as provided for in the Union Customs Code, except Transit which is handled as part of the NCTS project.
- Component 2 — ‘National Guarantee Management’: national developed system for management of the guarantees valid in one Member State and data exchange between traders and customs authorities.

Both components might also impact the related national systems/implementations National Systems and would require organisational and technical modifications.

## **2.3 Economic Operators Systems**

### **2.3.1 Economic Operators Registration and Identification (EORI2)**

The purpose of the EORI number is to have one unique identification code that should be recognised by all Community customs authorities. The EORI IT system allows to manage centrally the identification and registration data of the Economic Operators, to store the data at the central level, to replicate them to MS's and to provide online service for consultation. The system was implemented as “hybrid development”

The EORI2 project aims to update the existing EOS/EORI system and the EOS webservice in order to implement the legal changes. The EORI 2 is in operation since March 2018.

### **2.3.2 Authorised Economic Operators (AEO), MRA**

The concept of Authorised Economic Operators (AEO) has been introduced by the security amendments to the Community legislation. The AEO IT system allows the MS competent customs authorities to manage centrally the AEO applications, from the acceptance to the rejection or the issue of the AEO authorisation, their whole life-cycle, including the suspension, revocation, suspension withdrawal, revocation annulment, revocation suspension, revocation suspension withdrawal and re-assessment.

The purpose of the MRA subsystem exchanges AEO information between EU and partner countries and allow AEOs to benefit from simplifications with regard to customs controls relating to safety and security in opposite party (partner country or EU).

The AEO IT system was implemented as “hybrid development”, but MRA subsystem was “central development”.

The objective of the “UCC Authorised Economic Operators (AEO) upgrade” project is to improve the business processes related to AEO applications and authorisations taking into account the changes of the legal provisions of the UCC.

### **2.3.3 Registered Exporters System (REX)**

The objective of the Registered Exporters system is to make available up-to-date and complete information on registered exporters established in third countries concerned with the export of goods to the EU enjoying preferential tariff rates based upon compliance with the applicable rules of origin.

Member States interact with REX by sending all changes of their local REX Authorisations and by obtaining REX Authorisations from EU Member States, Beneficiary Countries and other Partner Countries from the EU system. The registered exporters are in one central database and there is possibility for National Systems for Customs Declarations to verify automatically the REX numbers from the declarations against that central database.

### **2.3.4 Customs Decision System**

The project aims at harmonising the processes related to the application for a customs decision, the decision-taking and the decision management through standardisation and electronic management of application and decision/authorisation data across the Union. The project relates to national and multi-Member State decisions defined by the UCC and covers system components developed centrally at Union level and integration with national components where opted for by Member States. This trans-European system facilitates consultations during the decision taking period and the management of the authorisations process. The system consists of an EU trader portal, a customs decisions management system and a customer reference system and was implemented as “hybrid development”.

### **2.3.5 Uniform User Management and Digital Signature (UUM&DS)**

The UUM&DS system allows traders to access new EU-wide services, including central services, in line with the security policies, legal provisions and operational responsibilities. The Uniform User Management and Digital Signature is integrated in the portals of the concerned systems and includes support for identity, access and user management compliant with the necessary security policies.

The UUM&DS system is being implemented in phases. The UUM&DS Release 1 which is currently in operations since October 2017 has enabled the implementation of User-to-System (U2S) connectivity for Economic Operators to customs information systems starting with the Customs Decisions system.

## **2.4 Systems for the control and risk management**

### **2.4.1 Customs Risk Management System (CRMS)**

The ultimate goal of CRMS2 is to provide an integrated and performant platform to EU Custom's officers in all the MSs to easily, quickly and securely exchange information about potential risks and so to be able to take the necessary measures. The CRMS2 application will provide a support to collaborate between MS Customs offices, and with the European Commission about potential or actual risks and will replace the current CRMS1 system.

### **2.4.2 System for Protection of Intellectual Property Rights (COPIS)**

The COPIS System (central developed) was deployed in production on 01.01.2014, aiming to enhance Intellectual Property Rights (IPR) protection by improving the cooperation and sharing of information between right-holders and MS Customs Administrations and between all the Customs offices of the MS. The system is accessible by all MS, thereby simplifying and reducing the workload of Customs administrations and European Commission.

## **2.5 Excise Systems**

The excise duty responsibilities are split between customs and tax administrations of Serbia at the moment. When there is national decision about entire management of the excise duty activities, including these into the country, this section has to be updated.



### **2.5.1 Excise Movement Control System (EMCS)**

EMCS (Excise Movement and Control System) is the computerised system for monitoring movements of excise goods under suspension of excise duty within the EU, i.e. for which no excise duties have yet been paid. The system has been implemented in phases and main functionalities are: electronic monitoring of movements of excise goods under duty suspension; automatic forwarding of movement information by consignors to consignees via respectively the competent authorities; automatic exchange of messages between economic operators and Member State Administrations for the reporting of exceptional situations, the automation of requests for information and replies and mandatory and optional exchanges of data, integrated with the movement control system's processes and data.

The long-term vision and the synchronisation and transparency between all the parties involved in the EMCS project are presented in the project Master Plan.

### **2.5.2 System for the Exchange of Excise Data (SEED)**

The SEED platform consists of the central SEED and the national SEED Applications. The central SEED is located in the Common Domain and provides management and dissemination services regarding the registration information of Economic Operators and of EMCS reference data.

The national SEED is located in the National Domain and enables the mirroring of the central SEED repository of economic operators and EMCS reference data at the national level. The national SEED provides suitable interfaces for accessing these data at the national level.

The SEED register provides the means for maintaining the state and history of authorised warehouse keepers, registered consignees, registered consignors, tax warehouses, and temporary consignees. SEED maintains the state and history of excise categories and products and list of common codes relevant to the excise business.

## **Annex 2: ICT Organization and Management**

### **1. Project Management Methodology**

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. When there is a group of related projects the project management exists in a broader context governed by program management.

Usage of selected project management methodology will provide CAS with greater control of resources, and the ability to manage business and project risk more effectively. It should be a generic, tailorable, simple to follow method, to cover how to organise, manage and control projects. It should be aimed at enabling successful delivery of the right products, on time and within budget. It will help to manage risk, control quality and change effectively, as well as make the most of challenging situations and opportunities that arise within a project.

The CAS will make use of DG TAXUD's TEMPO project management methodology. The CAS has insufficient resources to implement the methodology in its entirety, but will adopt all key components.

A Project will be divided into several phases:

- Pre-Study Phase;
- Tender Process Phase;
- Inception Phase;
- Elaboration Phase;
- Construction Phase;
- Transition Phase.

The Pre-study Phase defines the business problems to be addressed and possible high-level solutions, rather than focus on a specific technical solution. Furthermore, the main goals of the Pre-Study are to establish the feasibility of the project and (if feasible) to create clear objectives, scope and constraints to be observed by the project team and business management in carrying out subsequent solution development. This phase will consist of Working Group that will analyse the challenge and the main results of the Pre-study phase are Feasibility Report (if applicable) and Pre-study report.

The Tender Process Phase will follow the national the public procurement procedure if the project is funded by national budget. If the projects are funded under external aid programme procurement procedures will follow the programme's tender process and subsequent evaluation of tenders.

In any case, the necessary tender documentation will be prepared to describe the project objectives, the background, requirements and the detailed aim of the current phase.

In most cases of software development projects, the project lifecycle consists of the next four phases – Inception, Elaboration, Construction and Transition:

**Inception.** The goal is to identify the initial scope of the project, a potential architecture for the system, and to obtain initial project funding and stakeholder acceptance.

**Elaboration.** The goal is to prove the architecture of the system.

**Construction.** The goal is to build working software on a regular, incremental basis which meets the highest-priority needs of project stakeholders.

**Transition.** The goal is to validate and deploy your system into production environment.

In order to achieve the overall objective, the specific objectives and the expected results, the CAS should apply the methodological frameworks managing mechanism (TOGAF and TEMPO) which ensures both the adapted and combined application of the two methodological frameworks, thus avoiding potential collisions in their implementation throughout the lifetime of the implementation of the specific project.

## **2. Enterprise Architecture Methodology**

The Open Group Architecture Framework (TOGAF) is a framework for enterprise architecture that provides an approach for designing, planning, implementing, and governing enterprise information technology architecture. The usage of TOGAF is fully aligned with strategic documents and methodologies of the DG TAXUD (CEAF The Commission Enterprise IT Architecture Framework, IPCIS SOA Reference Architecture, BPM Levelling Guideline Methodology).

The basic approach to building Enterprise Architecture is the implementation of Service Oriented Architecture (SOA), i.e. business activities are presented as services. The services are business functions or components that provide the operation of functionally independent elements of the business process, presenting business logic.

The definition of the Enterprise Architecture will create the foundation of the information systems portfolio of the CAS, comprised of loosely coupled components i.e. architecture building blocks and service building blocks. In accordance with SOA paradigm any service created for the system functionality may be in the future re-used and extended to support also national CDPS and other e-Customs systems. Loosely coupled modular components architecture of each of mentioned systems will be technically independent, communicating with each other and with the legacy CIS systems by means of Enterprise Service Bus platform with XML messages using standardized data formats. The design of the implementation solution must ensure that in the future each system (component) could be replaced with the new technological solution while retaining all other existing components. These loosely coupled components (services) will be registered in Service Repository will the definition of each service according to the specification of the EA (TOGAF).

### **3. IT Service Management Methodology**

ITIL is the most widely accepted approach to IT service management in the world. ITIL provides a cohesive set of best practices, drawn from the public and private sectors internationally. It is a consistent and comprehensive documentation of best practice for IT Service Management. Used by thousands of organizations around the world, a whole ITIL philosophy has grown up around the guidance contained within the ITIL books and the supporting professional qualification scheme. It provides a systematic and professional approach to the management of IT service provision. Adopting its guidance offers users a huge range of benefits that include:

- reduced costs
- improved IT services through the use of proven best practice processes
- improved customer satisfaction through a more professional approach to service delivery
- standards and guidance
- improved productivity
- improved use of skills and experience
- improved delivery of third party services through the specification of ITIL or ISO 20000 as the standard for service delivery in services procurements.

### **4. Standards and Methodologies**

The following standards are referred to as applicable to the projects to use, managed by CAS:

- ISO 9001:2008 - Quality management systems – Requirements;
- ISO 19011:2011 - Guidelines for auditing management systems;
- ISO 20000-1:2011 - Information technology -- Service management -- Part 1: Service management system requirements;
- ISO 20000-2:2012 - Information technology -- Service management -- Part 2: Guidance on the application of service management systems;
- ISO 27001:2005 - Information technology -- Security techniques -- Information security management systems – Requirements;
- ISO 27002:2005 - Information technology -- Security techniques – Code of practice for information security management;
- ISO 27005:2011 - Information technology - - Security techniques - Information security risk management;
- CEAF (Commission Enterprise Architecture Framework);
- BPM@EC Modelling Convention;

- SMP Service Modelling Practice Guide for EC;
- IPCIS SOA Reference Architecture;
- TOGAF - The Open Group Architecture Framework;
- TEMPO - TAXUD's Electronic Management of Projects Online.

## 5. Programme and Project Organization

The monitoring and coordination of all pre-accession processes and related IT projects for fulfilment of the EU requirements and necessary national activities would be managed by Programme Steering Committee. The organization and management of particular project will be below the Programme Steering Committee.

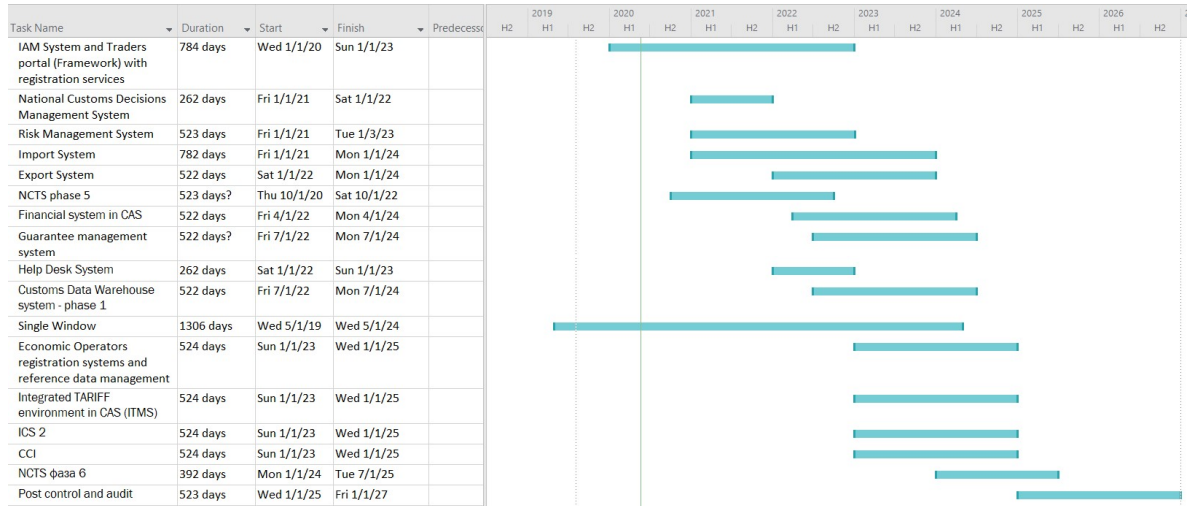
More details for programme and project organization and management, as well as description of roles, responsibilities can be found in Governance Manual<sup>20</sup>.

## 6. CAS ICT Division Structure



<sup>20</sup> Reference document Ro1.

### Annex 3: GANTT CHART OF OVERVIEW OF MEASURES AND ACTIVITIES FOR IMPLEMENTATION OF ELECTRONIC SYSTEMS OF THE CUSTOMS SERVICE OF THE MINISTRY OF FINANCE 2020-2024



## OVERVIEW OF MEASURES AND ACTIVITIES

### 1. Introduction

Overview of measures and activities is a document that is an integral part of the Work Plan for Development and Usage of Electronic Systems of the Customs Service of the Ministry of Finance for the period 2020 – 2024 (hereinafter The Work Plan for Development and Usage of Electronic Systems of the Customs Service) over the next five years.

The Work Plan for Development and Usage of Electronic Systems of the Customs Service, as a document of strategic significance for the Customs Administration of Serbia (hereinafter CAS) in this area, defines key objectives that have to be fulfilled:

- 1) Developing a modern, integrated and coherent CAS information system by using SOA approach;
- 2) Promote further modernization of CAS for all business processes, including those not initiated by the EU integration;
- 3) Improve IT support to business processes of CAS and external users;
- 4) Update strategic IT documents, supporting legal framework and security policies;
- 5) Improve IT skills and IT staff retention.

The aforementioned key objectives are directly linked to the CAS general business goal, which is “development of information and communication technologies” as stated in the Development Plan of the Customs Service of the Republic of Serbia 2017-2020. Besides, the Work Plan for Development and Usage of Electronic Systems of the Customs Service presents measures that have to be taken to meet the forthcoming challenges, and provide basis for further, more detailed planning of necessary actions.

Overview of measures and activities describes promotions, improvements and changes that have to be implemented during its lifecycle. This document shall enable CAS to direct its efforts to achieving specific, defined short-&long-term goals in this period.

## 2. Abbreviations

Table below provides the abbreviations used in the Overview of measures and activities accompanying the Work Plan for Development and Usage of Electronic Systems of the Customs Service of the Ministry of Finance for the period 2020 – 2024.

Скраћеница	Опис
AEO	Authorised Economic Operator
AES	Automated Export System
AIS	Automated Import System
AFIS	Anti-fraud information system
AS-IS	Current State Analysis Report
BPM	Business Processes Modelling
BTI	Binding Tariff Information
CDPS	Customs declaration processing system
CEAF	Commission Enterprise IT Architecture Framework
CIS	Convention on the use of information technologies for customs purposes (CIS)
CRMS	Customs Risk Management System
CPD	Passenger customs declaration
CRS	Customer Reference Service
DG TAXUD	Directorate General for Taxation and Customs Union
EA	Enterprise architecture
EBTI	European Binding Tariff Information
ECICS	European Customs Inventory of Chemical Substances
ECSP	ECS 2
ECSS	ECS 2
EMCS	Excise Movement and Control System
EORI	Economic Operator Registration and Identification
EOS	Economic Operators' System
ERP	Enterprise Resource Planning
ESB	Enterprise Service Bus
GDPR	General Data Protection Regulation
HR	Human Resources
IAM	Identity and access management
ICS	Import control system
INF	Information Sheets
IPCIS SOA	Interoperability Platform for Corporate Information Systems SOA
IPR	Intellectual Property Rights
ISMS	Information Systems Security Measures
IT	Information Technology
ITIL	IT Infrastructure Library
ITMS	Integrated Tariff Management System
KPI	Key Performance Indicators
MASP	Multi-Annual Strategic Plan for creation of a European electronic environment
NCTS	New Computerized Transit System



NICIS	National Integrated Criminal-Intelligence System
PCCS	Post-clearance Control System
PCSG	Proof of Customs Status of Goods
PMM	Project Management Methodology
REX	Registered Exporters
SLA	Service Level Agreement
SMP	Practical Guide on Service Modelling for European Commission
SOA	Service Oriented Architecture
SP EXP	National Special Procedures Export
SP IMP	National Special Procedures Import
TARIC	Tarif Intégré des Communautés européennes
TOGAF	The Open Group Architecture Framework
TIR	Transport International par la Rout
UCC	Union Customs Code
CAS	Customs Administration of Serbia

4. Measures and Activities

Measures	Activities	KPI	Timeframe	Budget	CAS competent unit
<b>Strategic goal 1: Developing a modern, integrated and coherent CAS information system by using SOA approach</b>					
1.1. Developing a unique information system of the CAS	1.1.1 Implementing a unique information system of the CAS	A unique information system is fully operable. New services upgrades are operable.	31.12.2024	There are no costs incurred. The measure is performed within regular activities.	Information and Communication Technologies Division
1.2. Developing IT systems in accordance with requirements of EU MASP for creation of EU-wide electronic environment	1.2.1 Developing AIS/AES in accordance with MASP requirements	IT system is fully operative	31.12.2023	9,000,000 €	Information and Communication Technologies Division
	1.2.2 IAM System and Traders portal (Framework) with registration services Project	IT system is fully operative	1.1.2023	1,500,000 €	Information and Communication Technologies Division
	1.2.3 Unique Risk Management System Project	IT system is fully operative	1.1.2023	900,000 €	Information and Communication Technologies Division
	1.2.4 NCTS phase 5 Upgrade Project	IT system is fully operative	1.10.2022	2,000,000 €	Information and Communication Technologies Division
	1.2.5 Unique Help Desk System Project	IT system is fully operative	1.1.2023	150,000 €	Information and Communication Technologies Division
	1.2.6 Guarantee management system Project	IT system is fully operative	31.12.2023	1,350,000 €	Information and Communication Technologies Division

Measures	Activities	KPI	Timeframe	Budget	CAS competent unit
	1.2.7 Technical assistance for MASP Projects	Technical assistance for MASP Projects is provided	Continuous process	5,000,000 €	All organizational units
1.3. Implementation of AFIS	1.3.1 Anti-fraud information system (AFIS) is in use in CAS	IT system is fully operative	31.12.2023	There are no costs incurred. The measure is performed within regular activities <sup>21</sup>	Information and Communication Technologies Division
<b>Strategic goal 2: Promote further modernization of CAS for all business processes, including those not initiated by the EU integration</b>					
2.1. IT system for all support processes, such as human resources, procurement, finance, ERP etc.	2.1.1 Financial systems in CAS Project	IT system is fully operative	1.4.2024	1,400,000 €	Information and Communication Technologies Division
	2.1.2 ESB systems integration Project	IT system is fully operative	1.1.2021	900,000 €	Information and Communication Technologies Division
	2.1.3 Migration of all users to the CARINA segment Project	All users have migrated to the CARINA segment	1.1.2021	There are no costs incurred. The measure is performed within regular activities	Information and Communication Technologies Division
	2.1.4 Post-clearance control system development Project	IT system is fully operative	1.1.2021	50,000 €	Information and Communication Technologies Division

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<sup>21</sup> European system is used.

Measures	Activities	KPI	Timeframe	Budget	CAS competent unit
	2.1.5 Customs procedures in postal traffic and CPD processing Project	IT system is fully operative	1.1.2021	183,000 €	Information and Communication Technologies Division
	2.1.6 HR system development Project	IT system is fully operative	1.1.2021	366,000€	Information and Communication Technologies Division
	2.1.7 Archive system (Registry Office) development Project	IT system is fully operative	1.1.2021	375,000 €	Information and Communication Technologies Division
	2.1.8 Electronic declaration submission, reporting and control systems development Project	IT system is fully operative	1.1.2021	244,000 €	Information and Communication Technologies Division
	2.1.9 NIKOS development Project	IT system is fully operative	1.1.2021	150,000 €	Information and Communication Technologies Division
	2.1.10 Learning management (e-learning) system development Project	IT system is fully operative	Continuous process	775,000 €	Information and Communication Technologies Division
	2.1.11 Developing IT system for electronic certification and verification of proofs of origin	IT system is fully operative	1.11.2021	100,000 €	Information and Communication Technologies Division

Measures	Activities	KPI	Timeframe	Budget	CAS competent unit
	2.1.12 Developing IT system that supports overall business process of issuing BTI within e-customs	IT system is fully operative	31.12.2020	50,000 €	Information and Communication Technologies Division
	2.1.13 Developing IT system for National Single Window	IT system is fully operative	15.12.2025	7,370,000 €	Information and Communication Technologies Division
<b>Strategic goal 3: Improve IT support to business processes of CAS and external users</b>					
3.1. Improving support to business processes of the customs service	3.1.1 Customs Data Warehouse system – phase 1 Project	IT system is fully operative	1.7.2024	1,200,000 €	Information and Communication Technologies Division
3.2. Allocating funds for improvement and maintenance of infrastructure	3.2.1 Improvement and maintenance of infrastructure	Improvement of infrastructure meets the standards as per ICT Strategy	Continuous process	10,000,000 €	Information and Communication Technologies Division
3.3. Developing a data safety, security system and emergency disaster recovery capacity	3.3.1 Introduction of ISMS in line with SRPS ISO 27001: 2005	SRPS ISO 27001: 2005 has been introduced in IT Division Applied protection measures in accordance with the Law of Information Security; The Information Security Act of CAS ICT Systems and SRPS ISO/IEC 27001: 2005 standard. Enhanced, controlled and secure access to the IT system (locally and remotely).	31.12.2022	350,000 €	Information and Communication Technologies Division

Measures	Activities	KPI	Timeframe	Budget	CAS competent unit
	3.3.2 All systems function in high availability regime	„High availability” has been implemented for all systems	31.12.2025	There are no costs incurred. The measure is performed within regular activities	Information and Communication Technologies Division
	3.3.3 Emergency disaster recovery capacity	Emergency disaster recovery capacity is fully operative	31.12.2025	3,156,250 €	Information and Communication Technologies Division
<b>Strategic goal 4: Update strategic IT documents, supporting legal framework and security policies</b>					
4.1. Enterprise architecture framework	4.1.1 Enterprise architecture framework has been described in CAS	Enterprise architecture framework is used as mandatory tool in each IT project for CAS (both for external suppliers and internally developed systems). Set of models and documents of enterprise architecture framework meets CAS needs.	Regular process throughout implementation of each project	There are no costs incurred. The measure is performed within regular activities	Information and Communication Technologies Division
<b>Strategic goal 5: Improve IT skills and IT staff retention</b>					
5.1. CAS employees possess required IT skills	5.1.1 IT staff training in line with Training needs Analysis / Training Plan relating to IT	Number of training sessions throughout the course of a year Number of staff attending training sessions	Continuous process on yearly basis	1,000,000 €	Information and Communication Technologies Division