



WORLD CUSTOMS ORGANIZATION
ORGANISATION MONDIALE DES DOUANES

User Requirements for the design and development of the new WCO TRS Online System – Draft

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Revision History

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1. Introduction

1.1 Established in 1952, the World Customs Organization (WCO) is the only independent intergovernmental organization with competence in Customs matters. Its mission is to enhance the effectiveness and efficiency of Customs administrations and help them contribute to the achievement of national development objectives, particularly in the fields of trade facilitation, revenue collection, the protection of society and supply chain security. The WCO's 183 Member Customs administrations throughout the world are collectively responsible for processing 98% of global trade.

1.2 In the 1990's, the WCO developed a tool to measure the time required for the release of goods. The WCO Time Release Study (TRS) measures relevant aspects of the effectiveness of operational procedures that are carried out by Customs, other regulatory agencies and logistics operators in the standard processing of imports, exports and in-transit movements. It seeks to accurately measure the elements of trade and cargo flows so that related decisions to improve such performance can be well conceived and thereby carried out. Based on empirical and quantifiable data, the TRS tool can give an evidence-based assessment of the needs and priorities for facilitation interventions. TRS, as part of the monitoring process, also helps in assessing the effectiveness and success of new initiatives taken up for implementation of the WTO TFA, thereby supporting evidence-based management.

1.3 As per the WCO's methodology, analysing average time taken between the arrival of the goods and their release, can enable Customs and partner government agencies to find out both the areas posing challenges and potential corrective actions to increase their efficiency. The WCO had therefore developed a Guide and the TRS Online System in 2010 to help its Members carry out TRS exercises and to conduct subsequent data analysis.

1.4 The WCO, in consultation with Members, reviewed the TRS guide in the year 2018. The WCO Secretariat also received feedback from its Members and TRS field practitioners that the current TRS Online System was not able to meet the requirements of an automated digital atmosphere of import–export processing, including the Single Window environment and other modern technologies used by Customs / CBRAs, traders and logistics operators. The software requires significant manual effort in developing a survey questionnaire and for data input and analysis. The software does not facilitate linking the questions / steps to the process owners or process flows. It is not possible to electronically extract or automatically integrate relevant digitally time stamped data from Customs IT systems or Single Windows, using for example Application Programming Interfaces (APIs). Some of the limitations of the current software are discussed in detail in Annex - I (WCO unofficial document "Business case and potential scope of work for updating the TRS Online System").

1.5 To respond to the situation, during the 231st/232nd Sessions of the PTC, the WCO Secretariat submitted a proposal to the PTC to update the WCO TRS Online System. The proposal was discussed, and as a conclusion, the PTC:

- agreed that the TRS Online System was outdated, and supported the proposal to continue work on updating the WCO TRS Online System;
- agreed that further clarity was required regarding the potential scope, models, options and funding for this initiative; and
- agreed that interested Members and the Secretariat examine the possible funding and alternative models regarding the efficiency of release of cargo.

2. Purpose

2.1 The purpose of this document is to present a detailed description of the User Requirements for the design and development of the new WCO TRS Online System. It will explain the purpose and features of the Software solution, the interactions with data sources and what the Software will do. This document is intended for both the stakeholders and the developers of the solution and will be proposed to the WCO PTC for its approval after collecting feedback and further input from the Members and TRS experts. This document proposes the user requirements and functionalities of the TRS Online System as per the objectives of TRS; various phases of the TRS exercise and the TRS Guide ver. 3 (2018). Therefore, the TRS Guide ver. 3 (2018) should be referred to for a detailed understanding of the rationale of the suggested User Requirements. Based on this document, it is expected that the WCO would come to a decision about developing a modular, customised data warehousing / data analytics solution to assist Member administrations in carrying out TRS exercises. With the availability of the WCO developed TRS Online System, there would not be any need for Customs administrations to develop their own individual solutions.

3. Scope of User Requirements of the WCO TRS Online System

3.1 The scope of User Requirements / Functionalities Specifications of the TRS Online System should be in alignment with objectives of TRS as well as the various phases of the TRS exercise and the TRS Guide ver. 3 (2018). The proposed software product would be a Web-based application, hosted on a WCO server or on a cloud-based system. The application would enable Members to design the TRS exercise and create the data templates and questionnaire survey forms for use in TRS exercise. It would also assist with the data collection process, the analysis of data, the production of results/reports and for the monitoring of the implementation of recommendations. The software application would be accessible through access rights given by the Secretariat for specific TRS exercises and would ensure the confidentiality of the data residing on the server / cloud. Another option which can be explored is to develop the TRS Online System as a desktop application that could be used by Members for conducting TRS exercises as a downloadable utility. The WCO could be enabled to monitor its use through the provision of access rights by Members so that only authorised users can use it.

3.2 The User Requirements in this document have been defined considering the present trade regulatory and the logistic-commercial milieu of cross-border trade, which comprise of several activities involving commercial, logistical, regulatory and payment procedures and related data, information, document exchanges between the parties throughout its various steps. This may require the information, documents and goods to be processed by various parties involved like carriers, freight

forwarders, agents, banks, Customs, Other Governmental Authorities etc. The flow of information and the cargo might happen both in sequential steps as well as in parallel processes.

3.3 The Software should help in following the TRS methodology as per the WCO TRS guide ver. 3 (2018). The WCO guide recommends that “the Time Release Study should be divided into four core phases, to be followed in a sequential manner until the Study is concluded (leading to a new Study cycle in due course). The phases are an integral part of the Study and set out the methodology in full. They are described below:

Phase – I	Preparation of the study
Phase – II	Collection and Recording of Data
Phase – III	Analysis of Data and Conclusions
Phase – IV	Monitoring and Evaluation

3.4 Accordingly, the following objectives are identified for the TRS Online System:

- i. To provide an efficient, convenient and user-friendly Software for designing TRS exercises, data collection templates / questionnaires and linking various data sources;
- ii. To provide a modular system for facilitating collection and integration of data from various regulatory, commercial and logistics agencies impacting the trade flow; and
- iii. To provide a unified digital solution for analysing and generating conclusions and reports and monitoring implementation of recommendations of a TRS exercise for WCO Members.

3.5 The general requirements for the TRS Online System include design, development, implementation, and maintenance by the WCO and providing continuous technical support for the application, including capacity building, guidance, and training new customizations / requirement development. The WCO should also manage the underlying infrastructure for the Software that should be hosted on WCO server or a cloud. In line with the four phases of the TRS methodology recommended in TRS Guide ver. 3 (2018), the Software User Requirements are defined below, major activity-wise, in which the Software can assist Member administrations.

4. User Requirements - Designing the Data Templates / Survey Forms / Questionnaires

4.1 According to WCO TRS tool, the average release time of goods could cover the entire period from the arrival of the goods at the port and their final hand over to the trader after all regulatory clearances and logistics release, thereby covering activities and interventions of the Customs, all PGAs and logistics service providers. The TRS basically concerns the ‘at import’ or ‘live clearance and release’ stage. The national laws, regulations and the trade policies determine which agencies would have a role to play after the goods arrive at the port and through their clearance and physical release. Some of the regulatory agencies who have the mandate to provide

clearance or No Objection Certificate (NoC) to commodities or products of their concern, at the 'at import' stage are the Customs, Food Safety, Drug Controller, Animal Quarantine, Plant Quarantine, Wildlife Control, Textile Committee etc.

4.2 Therefore, the Software should provide an option to include all the activities of all regulatory, financial and logistics agencies in respect of the specific commodity / product in the clearance chain, vis a vis the regulatory information flow. The activities and processes to be included in the data templates should be available from the time the goods arrive at the port until the time the goods are physically handed over to the Agent or importer after all clearances. There are some regulatory processes that are carried out even before the actual landing of consignments as part of pre-arrival processing and, as a result, the clearance and release of cargo might get expedited on arrival. Such pre-arrival processes should also be studied to assess their impact on average release time.

User Requirements - Phase – I Preparation of the study		
SI No.	Activities	User Requirements
i.	User Profile Management Module	The module should have user registration information and user profile; relevant roles; applicable privileges/ access; and should be built on Rule and Role-based access control (RBAC) principles.
ii.	Designing the Data Templates / Survey Forms / Questionnaires.	The TRS Online System should provide a full list of data elements to be selected for the TRS study in accordance with defined objectives. The nomenclature and definitions of data fields must be in alignment with the WCO Data Model.
		The list of data fields in the Software should cover agencies and supply chain stakeholders involved; Customs stations to be covered; regulatory treatment like dutiable / non-dutiable; the type of goods /commodities to be studied; the mode of transport;procedures like transshipments & coastal movements; postal and express courier traffic for e-Commerce etc.
		Along with the option to select data fields from the list available in the Software, the TRS Working Group should also have the choice to add a new data field in the list as per the requirements or scope of the study. The nodal officers at different Customs stations should have the flexibility to add or delete a data field from the data template finalised at the national level, depending on the local context. The application should produce a complete data set covering all steps / processes including pre-arrival processes, under the scope of TRS in Excel or other convenient file types / modes available by agency, by logistics operators, by theme, by process / subprocess, by objective and in preferred chronological order.

		The data templates may be separately designed based on a process, sub-process, a theme or a particular agency. The application should have the facility to produce process flow maps or charts depending on the steps / activities / processes/ events selected for the study. Based on the agreements on design and the complete scope of the study, integrated comprehensive data templates and business process mapping should be available for reference purposes.
iii.	Elements of Data Template	The software should provide flexibility to design the questionnaire in a manner that reflects both linear / sequential as well as parallel processes.
		The data template designed in the software should be downloadable in different formats like Excel, MS Word, CSV, Pdf, text, image formats (jpeg, png, tiff), PowerPoint, rtf (rich text format), xml, HTML, adobe formats (illustrator, photoshop, etc), compressed files (zip, rar, etc), .Doc, .xlsx, .Mdb- ms access etc.
		It should be possible to generate separate data templates for both automated data collection and manual processes.
		The software should also provide a comparative analysis of the current year data templates with previous TRS exercises, if available, to appreciate and follow a cyclical approach for comparative analysis.
		In addition to including timestamps in the questionnaire, the software should refer to actors / owners of the timestamps.
		Users should have the option to save the data template in draft mode. Files should be continuously auto-saved; in case the connection is lost or the page refreshes then the user should not be required to fill in the entire form again.
		The software may also suggest the most common and standard data elements to be included in a TRS to facilitate automatic comparison of TRS results across Members and within a Customs administration across different stations and over time, as well as benchmarking at sub-regional and regional levels.
iv.	Data Source and Collection Methodology	Once the Data Template is designed, provision should be available to put in the respective source of the time stamps or the data custodian; how it would be collected for each data field and the official responsible along with specific role. The software may provide a possible list of data sources / custodians, which may include Customs, port terminals, shipping lines, airlines, freight forwards, transporters, Customs agents, PGAs, PCS, ICDs, LCSs etc. The application may also provide a list of Nodal persons from the respective agency or station for

		<p>contacting in case there is a need vis a vis each data set.</p> <p>For auto data collection, the Software should be able to exploit the growing use of ICT by Customs, other government agencies and private sector stakeholders (e.g., electronic processing systems, Single Window, Smart-Phones, RFID seals, GPS enabled track and trace including accept automated uploads of data from defined public and private electronic systems).</p>
v.	Deciding the TRS and Data Collection Period	<p><u>TRS Period:</u> The software should specify the TRS period as per the Guide 2018, which is normally 5 or 7 consecutive working days for data collection or the timeframe decided by the Customs Administration. The 5 or 7-day period is defined by all the declarations filed during that period.</p> <p><u>Data Collection period:</u> For a declaration filed in that week, vessels would have arrived before the start of the 5 or 7-day period and clearance could have been given after the 5 or 7-day period.</p> <p>Accordingly, the software should highlight, as per the scope of the study, the time stamp for all activities starting with the arrival of goods (e.g. berthing of the vessel). This implies that the actual period of data collection would include days before and after the specified TRS week.</p> <p>Similarly, many declarations filed during the TRS period might be pending for clearance and release even after the specified 7 days. Therefore, the software should indicate that the time stamps until at least 30 days after the TRS may be captured.</p> <p><u>Exclusions / Outliers:</u> If declarations are not cleared within the period demarcated as per the defined statistical standard deviation of the data, then the Software should consider such consignments as outliers for the TRS. These should not form a part of the statistical analysis, but could be looked at as case studies.</p>
vi.	Business Process Mapping from Data template and vice versa	<p>On the basis of the data templates finalised, the software should produce process flow charts / maps for easier understanding by relevant stakeholders. The software should produce an integrated process flow chart covering all steps / processes under the scope of TRS with good visual impacts. It should also produce process maps per agency / location / transport mode / theme / process / subprocess/ objective etc. based on</p>

		<p>different chronological sequences selected for the data elements. The process maps generated should be produced keeping in mind that the regulatory clearance is not linear as PGAs play a parallel role. In addition, the release process also might have logistics processes running in parallel, such as shipping line delivery order issuance and the movement of containers to ICDs.</p> <p>Similarly, the Business Process Map designed on the software should automatically generate corresponding questionnaires / data templates.</p> <p>Consolidated views as well as individual views for data templates; process maps; reports etc. should be available through simple tab clicks.</p>
vii.	Sampling	<p>The software should have capabilities to suggest statistically valid TRS sample size with random sampling or with a well-defined selection probability. In cases where a study of sub-processes like scanning; physical examination; PGA intervention, LCL cargo, dutiable / non-dutiable or other procedure treatments, sub-populations etc., a stratified random sampling method should be used, where collected data is arranged into separate samples for each theme of the study. The software should link the data sets related to various agencies, themes & sub-studies to develop a resultant sampling method. In case all the Customs, PGA & logistics processes are managed in ICT systems, it should be possible to collect data for all declarations filed during the TRS period of 7 days or defined TRS period.</p> <p>System should provide a sampling algorithm to help Members develop their own statistically valid sample size with identified margin of error or confidence level, based on their operational environment and other relevant factors.</p>
viii.	Test Run	<p>The software should enable review of the data template based on feedback. During a test run, the software should highlight the data elements which are not available.</p>
ix.	Notifications	<p>Send E-mail and SMS notifications at various stages of the TRS process.</p>

4.3 Most of the Member Administrations have standard national legislation to provide for the regulatory procedures and also follow the WCO RKC and the WTO TFA, which requires adoption of harmonised formalities throughout the Member administration's territory. Therefore, a general national business process mapping can be designed and a resultant standard data template may be developed. However, the template would need to be adjusted to align with national / local practices depending on the infrastructure and the Customs station based trade notices. The Core Team constituted should develop a full list of data elements based

on the field experiences and the WCO Data Model. Some of the core events, which are normally covered by all TRSs worldwide are the – Arrival of goods at the port/airport of entry and land border post; discharge of the goods (where needed), filing of declaration; assessment by Customs; examination by government agencies; duty payment; clearance and final release of goods. A well-structured data template designed by the Core Team would give a clear picture of how the time stamps will be collected, and what the logical sequence of events would be in the entire clearance and release process.

4.4 The selection of data fields for the study may be dependent on various TRS objectives, such as performance measurement, evidence-based policy making, stakeholder engagement, and Business Process Analysis to study the impact of a particular new policy or to assess the efficiency of a newly introduced technique / technology etc. Measurement of average release times, helps in assessing the performance of the Customs and PGA activities in relation to trade facilitation at seaports, airports, LCSs and ICDs.

4.5 In case of land Custom stations, it might also be relevant to have collaboration with the neighbouring Member administrations to carry out a joint study. The design of the software would be formulated accordingly. It should be able to equally support carrying out a TRS in specific trade corridors, especially in respect of the movement of consignments from seaports to hinterlands in landlocked countries, including transit through other countries.

5. User Requirements - Data Collection and Recording of Data

5.1 The TRS Online System should provision a document with business rules and logic to guide the Customs administration to provide read only access to the TRS Online System for collection of raw data from the ICT system database of Customs, PGAs and logistics operators, by way of defining a standardised view or additional logical / virtual tables based on the WCO Data Model. The Software can also provide a module for recording or collecting time-stamps for activities that are carried out as part of pre-arrival processing.

User Requirements - Phase – II Data Collection and Recording of Data		
SI No.	Activities	User Requirements
i.	Data Collection from various agencies' ICT systems	The TRS Online System should be able to extract data from the ICT systems of Customs, partner trade agencies and logistics service providers based on the data templates designed. There might be various sources of data such as electronic processing systems, Single Windows, Blockchain based systems / processes, smart phones, RFID seals, GPS-enabled track and trace technologies, NII equipment etc. The mechanism of data collection by the software from ICT systems may be through a SQL query, data exchange, APIs, EDIs, triggers, push, pull or any other electronic mode.

		The Software should provide unique identifiers to each questionnaire, survey form or EXIM transaction for survey traceability and data verification.
ii.	Integration of data based on different reference points	Diverse agencies might be using different ICT systems. The Customs systems would be functioning around the movement of the declaration number, but the PCS system might be focusing on the IGM / EGM or container number. In such cases, the data has to be collected by separate system queries from different systems in such a manner that different data sets have common reference points for aligning the time stamps for a particular consignment. Later on, all the data sets collected have to be aligned and integrated into a single data set. Therefore, for collecting the data directly from ICT systems, the software should identify and point out the common reference points in different forms / templates, which would help in aligning and integrating the data later on during analysis. The data collection and integration will be a 2-way channel, wherein the reference point information can be passed onto the agency's existing system and the relevant time stamps, as per the data template, can be received by the TRS Online System.
iii.	Recording of manual data	The WCO TRS Online System can provide a module in the form of a mobile app, which may allow the official granting "go ahead" at a particular desk or the agent, to record the time of the respective step. The App may have relevant prior available header information. The Software may also have a facility for manual data entry or by uploading Excel spreadsheets, MS Word, CSV or any other commonly available file type / format like text, image formats (jpeg, png, tiff), PowerPoint, rtf (rich text format), xml, HTML, adobe formats (illustrator, photoshop, etc), compressed files (zip, rar, etc), .Doc, .xlsx, .Mdb- ms access etc. Bar code readers and smartphones can also be used for capturing manual processes and the software should be able to pull the time-stamps or accept the push of data.
iv.	Integration with Systems generated data	It should be ensured that convergence and desired integration of data collected from IT systems and manually, is seamless for a holistic analysis. The software should have strong capabilities to align, assemble & integrate data collected from various sources like electronic processing systems, EDIs, Single Windows, smart phones, RFID seals, GPS-enabled track and trace technologies, NII equipment etc., in a well-

		structured manner for facilitating efficient and effective analysis and comparisons.
v.	Elements of Data Collection	The 24-hour clock in format ddmmyy:hh:mm or yymmdd:hh:mm should be used for capturing and recording time. Standard international codes for ensuring data quality (like HS code; WCO Data Model) should be used.

6. User Requirements - Analysis of Data and Conclusions

6.1 There would be huge volumes of data produced at multiple points during the entire journey of the TRS exercise. The Software should have strong analytical capabilities to examine and analyse large data sets collected related to movement, release and clearance of goods. It should carry out data analysis as per different processes, sub processes, agencies and themes. It should cover parallel dimensions of regulatory clearance as well as the physical logistics movement of cargo. The Software should have the capability to analyse these data points and generate insights that can then be proposed to the relevant stakeholders to enhance and improvise the overall process and policies.

User Requirements - Phase – III Analysis of Data and Conclusions		
SI No.	Activities	User Requirements
i.	Verification of Data	The software should be capable of facilitating or carrying out data verification in terms of its completeness, quality, accuracy, error-free, consistency and factual representation. It should also indicate missing data entries and the degree of data sufficiency to carry out analysis for meeting study objectives.
ii.	Data Analysis	There should be provision for both centralised analysis as well as disaggregated analysis. The analysis should bring out the average time taken by various activities, events, processes and steps depending on the Study objectives – both at the transactional level as well as at the aggregate level. The total release time would indicate the average time taken by all agencies and logistics operators together in clearance and release of goods. It should measure an average release time, standard deviation, quartile, median, and outlier for all processes and sub-processes for all stakeholders i.e. cross-border regulatory agencies, traders and logistics service providers, involved in the release and clearance process and also produce consolidated analysis for all processes together. The Software should have the ability to do further (more complex) statistical analysis/data analytics in different ways.

		<p>It should enable analysis along key performance indicators, time gaps, delays at various steps/stages/phases in the process of goods and information flow.</p> <p>It should analyse the consignments which take minimum time and the initiatives enabling it. The related analysis should project a structured and standard set of performance indicators for clearance/release of goods.</p> <p>Similarly, it should help identify the consignments which take maximum time and the circumstances causing it.</p> <p>It should be useful in carrying out comparative analysis of different sub-activities of the business process, as well as benchmarking with, and analysis of, the previous TRS results at national, regional or global level.</p>
iii.	Data Visualisation	<p>The Software should have features for robust visualization in an automated manner, using algorithms and data analytics themes.</p> <p>It should also produce visual reports with effective colour representations for example tables, graphs, pie charts, box plots, infographics, pictures, Line Charts, Area charts, Bar Charts, Column Charts, Combo Charts, Doughnut Charts, Gauge Charts, Dashboards, Radar charts, Map, Matrix charts, Tree Map, Scatter plot, Box & Whisker plot, bullet graph, cartogram map, circle view chart, dot distribution map, Gant chart, Heat Map, Highlight Table, Histogram, Network, Polar Area map, Radial Tree, Stream graph, Text Tables, Timeline, Wedge stack graph, Venn Diagram, Error bar, Trend graphs, Combo chart, Stepped Area chart, etc.</p> <p>It should also help visualise trends, patterns and insights, as well as generate related graphics.</p> <p>It should help in producing pictorial comparisons for standardization of processes across ports to bring uniformity and making them more simplified, predictable and transparent.</p> <p>The software should produce graphical timelines showing the duration of all processes studied, with parallel processes shown as sub-timelines and displayed proportionally in parallel to the master timeline along with depiction of hrs / minutes and calculation method. Users should also have the option to choose processes to be included in the timeline or the calculation method (mean, median etc.).</p> <p>The software should have further flexibility and provision to include specific additional graphics as suggested / desired by Members.</p>

iv.	Developing insights and diagnostics	<p>The Software should have capabilities to support incorporating AI and assist in predictive analysis, developing insights, diagnostics and support data / statistical modelling and business process modelling based on TRS results to continuously improvise trade facilitation mechanisms.</p> <p>It should also help in projecting trends, patterns and generate related outcome reports.</p>
v.	Suggesting Recommendations	<p>It should also show the correlation among various explanatory factors and the dependent time variables. It should help in identifying underlying reasons and explanations for the analysis outcomes.</p> <p>The Software should have provisions to categorise the recommendations based on various improvements to be carried out like the legislative amendments, policy measures or procedural and operational streamlining or better coordination among agencies or infrastructural improvements.</p>
vi.	Drafting of the TRS Report	<p>The Software should assist in drafting the TRS Report by showing potential linkages between the decided objectives and the relevant analysis outcomes. In case of a national study, there might be numerous analysis points and locations and sub-studies. The Software should highlight themes that are applicable to the majority of the national trade volume, which can be included in the main study to present overall findings of national relevance and it can assist with sub-studies or location wise details. The Software should enable easy substantiation of recommendations in the study with data and evidence extracted from the study showing a positive correlation or the causal relationship between the recommendation and the improvement it is expected to bring. The Software may specially present a detailed stage-wise analyses to give insights into the impact of statutory and policy initiatives and the behavioural response of the trade, for inclusion in the Report. The Report should be presented with inter-temporal comparisons, making comprehensive analysis and to the point recommendations for reform. It should highlight good practices at specific stages in import / export procedures which make the flow of trade smooth. The Software should help in effective organisation of the above-mentioned activities.</p> <p>As per TRS Guide ver. 3 (2018) recommendations, the Software may provide a draft outline for a typical TRS Report, which may include the objectives of the Study, the methodology used, the number and names of stakeholders involved, the analysis of data, the findings, and the recommendations for improving the process flow of cargo, considering the scope of the Study. The TRS</p>

		<p>Report outline may also suggest an Action Plan with timelines on the recommendations to be implemented. It can show the trade facilitation measures to be implemented vis a vis the specific provision of the WTO TFA.</p> <p>The Software may also provide a draft Press Release outline.</p>
vii.	Reports Generation	<p>Some of the reports that can be standardised in the software –</p> <ol style="list-style-type: none"> Port wise and national level average cargo release time. Average time related to all government agencies and logistics processes involved. Identification and cataloguing of bottlenecks responsible for higher dwell-time. Correlation between events / interventions having the potential to enhance transaction costs like consignments suffering detention, demurrage, issues relating to excess / short landing, penalties etc. and the corresponding average time taken for further trade cost assessments. Commodity wise analysis by HS Code. Impact/ efficiency of specified new policy or technique / technology. <p>There should be option for provisioning more standard reports in the Software depending on the objectives of the TRS.</p>
		<p>System should provide the capability to download and print defined datasets in desired formats and all reports including graphics, charts, and reports in Excel, Word, PDF and other convenient formats / types like text, image formats (jpeg, png, tiff), PowerPoint, rtf (rich text format), xml, HTML, adobe formats (illustrator, photoshop, etc), compressed files (zip, rar, etc), .Doc, .xlsx, .Mdb- ms access etc.</p>

7. User Requirements - Monitoring and Evaluation

7.1 The cycling nature of TRS enables Customs and partner government agencies to find both the problem areas and potential corrective actions to increase their efficiency. TRS serves as an important tool for measurement and enhancements, enabling periodical introspection and data driven decision making leading to improvements in the functioning of all border agencies. National Trade Facilitation Committees (NTFCs) oversee the continuous monitoring and evaluation of the implementation of trade facilitation in a particular territory. NTFCs should be provided regular updates to coordinate national efforts, towards further improvements in efficiency and effectiveness of the trade regulatory and logistics environment. The WTO also recommends its members to share their experiences in carrying out release time measurements with the WTO Trade Facilitation Committee

in relation to methodologies used, best practices, bottlenecks identified in trade flows, and any impact of such measurements on the efficiency of Customs and other agencies. This would help in the sharing of best practices and peer learning among Member administrations.

User Requirements - Phase – IV Monitoring and Evaluation		
SI No.	Activities	User Requirements
i.	Reporting and Dashboard	The Software should provide each identified stakeholder with specific reports and dashboards on various aspects and also have the flexibility to build ad-hoc reports as per their requirements. The Software must provide MIS Reports in an easy to use Excel table format, allowing analysis capabilities like drill down.
ii.	Digital Repository / Content Management System	A document repository should be available in the Software for every Member, which may contain documents like data templates and conclusions, reports for stations for which TRS is conducted; agencies for which data is collected etc. that should be tagged and attached to the relevant fields in new templates and reports. This database facility should allow the Member to save all its documents online and use them as and when required. Users should have the option to reuse data templates, process maps and other documents from previous TRS exercises and flexibility to edit them as per the objectives of a new Study. The Software may leverage cloud-based storage facilities to act as a document repository or build a new document repository of its own. The content should be positioned in a logical manner to enhance the overall user-experience.
iii.	Trade Facilitation implementation monitoring module	The performance measurement and monitoring of implementation of trade facilitation as per the TRS cycle can be carried out at a national level or at port level. The Software should show progress on a standard set of performance indicators for clearance/release of goods at various ports to highlight the distance from National Trade Facilitation Action Plan targets. It should show deviations at different ports and for various steps, from standard processes determined, during subsequent TRSs.
iv.	Search Engine	The Software should have a strong built-in search engine to assist users in finding the right set of information / data / reports that they are looking for.

		The Software should also facilitate easier access of data to the research teams and policy makers.
		Gauge the differences in methodology and identify aspects that could be studied in future TRSs to be conducted.
v.	Peer Learning: International success stories in TRS	The Software should enable Members to share their TRS results for analysis and for greater awareness among the border management agencies for performance measurement. The Software should have capability to produce aggregated data results and enable producing national, regional, and international level statistically valid reports on release times.

8. General Requirements

- 8.1 The Software should comply with the applicable information technology and data protection laws, standards & regulations (including but not limited to ISO 27001, ISO 27017, Data Protection Bill, GDPR, as applicable and enacted from time to time) and all other mandatory rules, regulations and requirements laid down and applicable to the WCO.
- 8.2 The Software should be built on an appropriate security architecture in order to protect the confidentiality and integrity of the information submitted, stored or processed, at all times.
- 8.3 Periodic security audit and regular checks should be conducted to monitor for and respond to security breach incidents.
- 8.4 The Software should have automated easy to learn intuitive user interface with in-built training database. The WCO will be required to provide necessary training and User documentation guidance and operational support to designated staff of the agencies using the Software.
- 8.5 It should be ensured that the application code does not build a dependency on any proprietary software, particularly, through the use of proprietary 'stored procedures' belonging to a specific database product. It should be technology/system agnostic.
- 8.6 The list of user requirements / features/ functionalities/ modules/ requirements mentioned throughout this document is NOT exhaustive in nature and the final list of user requirements / features/ functionalities/ modules/ services will be decided in consultation with Members.
- 8.7 There should be minimum manual labour involved to create and update any documentation, activity on the Software without the need of writing codes.
- 8.8 The application should have the capability to be multi-lingual with the default language being English. Languages can be native as well as global languages (French, Spanish, Russian, Portuguese, Arabic, etc.). Both field level name as well as static content of the system should be available in different languages.
- 8.9 Modules should support both time and text type input / output.
- 8.10 It should pre-fill the data wherever possible and all duplicate fields' requirements should be auto-populated from Customs IT Systems / Single Window, to the extent possible.

- 8.11 It should provide a dashboard to the user to view the TRS process status.
- 8.12 The design of the solution should be such that it is able to quickly add new agencies seamlessly and effortlessly for data collection exercises. The infrastructure of the solution should also have the ability to handle voluminous data processing. The software should be user-friendly so that a non-IT specialist can use the system without the need of writing codes.
- 8.13 The Software should be fully browser based, without the need of any plug-in, add-on or extension software for making use of it's functionalities.
- 8.14 The WCO should establish the governance, finance and operator model for the proposed TRS Online System Systems. It should ensure that data ownership, access and use and data archiving standards are clearly defined and addressed.

9. References

- 9.1 WCO TRS Guide ver. 3 (2018); WCO TRS Online System manual; communications of the WCO Secretariat and the documents highlighting the discussions at the WCO PTC in 2021 meeting on the update of the TRS Online System.
