



PERMANENT TECHNICAL
COMMITTEE
- HYBRID MEETING -
-
235th/236th Sessions
-

PC0686Ea

Brussels, 07 February 2022.

TIME RELEASE STUDY (TRS)

Potential Development of a new TRS Online System

(Item VI. on the Agenda)

(“B” Item on the Agenda)

SUMMARY

Purpose of document

Considering the directives of the 233rd/234th Sessions of the Permanent Technical Committee (PTC), the purpose of this document is to provide the necessary information on the potential scope, estimated cost, models/options and funding aspects to develop a new TRS Online System.

It further aims to seek guidance and endorsement from the PTC on the way-forward to initiate the development of the new TRS Online System project.

Action required of the Permanent Technical Committee

The Permanent Technical Committee is invited to:

- discuss and endorse the outcomes of the intersessional work; and
- approve the initiation of the development of a new TRS Online System project based on the proposed approach and subject to funding availability.

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I. Background

1. To support the implementation of the Time Release Study (TRS), in 2003 the WCO developed an internet based software application (known as the TRS Software). The TRS Software was developed to provide Members with a tool to create questionnaires that are used in conjunction with the study, and to record and analyse data relating to border release/clearance processes in order to produce reports including average times and standard deviations for each step or for the whole clearance process including the interventions of all actors involved.
2. During the 231st/232nd PTC Sessions, the Secretariat presented a document (PC0655Ea) highlighting the importance of the TRS software, some of its current functionalities, the identified limitations and the resource requirements to update the software. The PTC endorsed the Secretariat's proposal to update the WCO TRS software and directed the Secretariat to facilitate intersessional work among interested Members. The PTC also agreed that further clarity was required regarding the potential scope, models, options and funding for this initiative; and tasked the Secretariat to work on it with interested Members and present it in the next PTC.
3. The intersessional work carried out by the interested Members facilitated by the Secretariat was reported to the 233rd/234th Sessions of the PTC seeking approval to grant more time. The time extension was sought in order to carry out further work aimed at compiling detailed and substantive information on the User/Functional Requirements (UR/FR) to develop a new TRS Online System. It was further noted that the UR/FR will be the primary basis to determine the potential scope, models, options and funding. The 223rd/234th PTC granted the time extension and also supported the suggestion to go for a new TRS Online System instead of updating the existing one, which is outdated and not scalable.
4. Based on the time extension granted, intersessional work was carried out by the Secretariat including IT personnel and in consultation with interested Members and a TRS Accredited Expert. Thus, the PTC will be invited to discuss and endorse the outcomes of the intersessional work as reflected in the document and compiled during the intersessional period.

II. Intersessional Work

5. After the 233rd/234th PTC sessions, a virtual intersessional meeting was held, facilitated by the Secretariat with the interested WCO Members and accredited TRS Technical and Operational Advisers (TOAs) in November 2021. The aim of this meeting was to finalize the draft TRS Online System User Requirements (TRS-UR) largely prepared by an accredited TRS TOA expert from India. Subsequently, a first draft of the UR for the development of a new TRS Online System was shared with WCO Members and interested stakeholder for input.
6. Overall, the Secretariat received valuable input from New Zealand, Iran (Islamic Republic of), the United Kingdom, the European Union, Morocco, Ghana, Guatemala, Brazil and the World Bank Group. In addition, high level technical input was also considered from the WCO Information Systems and Telecommunications Service (ISTS). Based on the input received, the draft TRS-UR was further updated and also took note of general comments and suggestions made.
7. Considering the updated version of the draft TRS-UR, the Secretariat initiated internal discussions with the WCO's ISTS requesting assistance for some cost estimates. Given

the nature and complexity of the proposed draft TRS-UR, the WCO's ISTS had to seek help from some private IT service providers. Three IT service providers were approached and cost estimates were requested based on the draft TRS-UR shared by the Secretariat.

8. In addition, as suggested by the Members at the 233rd/234th PTC sessions and during the intersession, the Secretariat also explored possible funding options with potential donors available within the WCO Secretariate.
9. The high-level outcome of all the intersessional work carried out after the 233rd/234th PTC sessions are given below and the in-depth details are provided in Annex I and II to this document (PO0686).

III. Outcomes (high-level)

10. While determining the potential scope, estimated cost, models/options and funding required to develop a new TRS Online System, the following documents were the main basis taken into consideration:
 - WCO Guide to measure the Time Required for the Release of Goods, Version 3, 2018
 - User Requirements for the design and development of new WCO TRS Online System attached as Annex II to this document (Draft)
 - WCO and World Bank Group (WBG) proposed TRS Software Solution Upgrade (Draft)

Potential Scope

11. Based on the above documents, a high level scope has been determined as presented in the table below (not an exhaustive list, for a detailed scope refer Annex I and Annex II to this document):

Key Areas	High-Level User Requirements
Business Process Management framework	<ul style="list-style-type: none"> - Use business process modelling and mapping capability to present a visual representation of national and/or cross-border processes. - Provide a library of standardized business processes, to facilitate cross comparison of TRS studies - Allow customised business processes to be added, to facilitate Country specific processes - Generating questionnaires automatically as an output of the business processes. - Provide an interface which allows a focus on analysing and optimizing mapped processes. - Use business process ownership to facilitate automated reporting of actor efficacy.
Events/Procedures Based Approach	<ul style="list-style-type: none"> - Include a comprehensive description of all the events/procedures in the clearance chain. - Configure to allow for an important environmental characteristic of a border clearance process.
Integration, Platform, Compatibility and Accessibility	<ul style="list-style-type: none"> - Be fully browser based (without plugins)/Web-based application. - Have an automated easy to learn intuitive user interface. - Be integrated into Excel (or similar analytical tool), to enable collected data to be imported directly into the tool for data analysis. - Be compatible with other relevant software applications - Accessible through access rights via secure web applications ensuring the confidentiality of the data.

	<ul style="list-style-type: none"> - Establish prepared interfaces with international systems for ease of receipt of data points e.g. Asycuda, E-phyto
Collection of Information/Data	<ul style="list-style-type: none"> - Multiple and dynamic data source options and collection methodology. - Accept automated uploads of data from defined public and private electronic systems and the world wide web - including customs, partner agencies and other government agencies data bases, trade databases, statistical databases, carrier databases, public records etc. - Collect time and TRS required information/data using mobile technology/apps to the greatest extent possible. - Collect time and TRS required information/data using user portal, or direct connect where required. - The mechanism of data collection from ICT systems may be through intermediary software's such as APIs, EDIs, SQL or any other electronic mode/solutions. - Capabilities to align, assemble and integrate data collected from various sources in a structured manner for facilitating efficient and effective analysis and comparisons.
Reporting, Monitoring and Evaluation	<ul style="list-style-type: none"> - Automate the tools for process mapping, data collection, collation, and reporting. - Have reporting functionality built directly on top of Excel (or similar analytical tool), allowing users to instantly generate a variety of pre-built reports. - Have functionality that allow users to create customized report templates. - Be capable of producing statistical, management, and business reports and link and match any data contained in the TRS Online System. - Be capable of producing national, regional, and international level statistically valid reports. - Have features for a greater visualization in an automated manner, using algorithms and data analytics tools. - 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. - Have digital repository/content management system, search engine and trade facilitation implementation monitoring module. - Capability to support countries to measure the impact of identified border reforms and the WCO or other agreed party(s) to publish global statistics.
Database and Data Analysis/Analytics	<ul style="list-style-type: none"> - Have a TRS database capable of storing multiple years of TRS data. - Have the ability and features to perform more complex statistical analysis and/or data analytics in multiple/flexible ways. - Comparative and centralised analysis capability as well as disaggregated analysis. - Measures all processes and sub-processes for all stakeholders and also produce consolidated analysis. - Enable analysis along key performance indicators, time gaps, delays/bottlenecks at various steps/stages/phases in the process of goods and information flow. - Database: System generated aggregation, Version management, Trial/Test TRS database, Transfer Trial/Test survey into the 'live' system, 24 hour clock.
Data Templates, Forms and Questionnaires.	<ul style="list-style-type: none"> - Dynamic and flexible data elements and fields - Provide flexibility to design the questionnaire in a manner that reflects all types of processes. - Generate separate data templates for both automated data collection and manual processes.

	- Common and standard data elements all across in order to facilitate automatic comparison of results at all levels.
Other high-level requirements	- User Profile Management Module: On-board, manage and off-board users within the scope of the identified policy - Security: Inclusion of roles/responsibilities within the system security matrix. - Automate workflow processes using an integrated set of graphical tools that allow for the creation of workflows, active forms (TRS Questionnaire), system integrations, dashboards, and reports without writing code. - Others

Options

12. Procurement decisions need to consider and balance the benefits of customisation against the cost of increasingly commoditised offerings. The emergence of cloud computing as an ICT sourcing and delivery model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (including software) also require consideration.
13. Most organisations adopt principles or guidelines intended to optimise their software expenditure by first leveraging existing solutions, typically followed by consideration of commercial off-the-shelf (COTS) solutions (including both corporately produced and open source) before any decision to invest in a bespoke or custom-built solution.
14. As general information, the typical options available in the marketplace today to buy business system/software are;
 - Implement an on-premises solution by undertaking custom or bespoke development
 - Implement an on-premises solution by licensing proprietary software
 - Implement an on-premises solution by adopting open source software
 - Utilise an Application Service Provider (ASP) or Outsourcer
 - Subscribe to a Software as a Service (SaaS)
15. However, in the context of developing a new TRS online system, the following potential options could be considered given the high-level requirements drawn at this point and also noting that it is premature to provide definite options:
 - WCO to explore COTS solutions where applicable (for example: business process management system are available in the market) and if feasible, further customize it considering all the additional requirements. **OR**
 - WCO to undertake custom-built solutions or bespoke development. **OR**
 - To let an external company or organization/agency (anyone interested), develop and manage the TRS Online System either independently or in collaboration with the WCO. Development to be based on the standards and guidelines formulated by the WCO and agreement drawn with the WCO mainly on the data accessibility, reliability, availability and security.

Estimated Cost and Project Period

16. Based on the high-level user requirements developed and also taking into consideration other available resources as listed under paragraph 11 above, the WCO's ISTS sought

cost estimates from three IT companies/vendors. The following table shows the respective cost estimates received:

Cost Estimate Source	Estimated Quotes (Euro)	Remarks
IT Company/Vendor – A	800,000	<ul style="list-style-type: none"> - For Quotes A and B, it is to be assumed that since the requirements being high-level at this point, it may include a risk margin between 30% to 40%. - The lowest quote amounting to 141,000 Euro may have only considered minimal implementation of core functions, whereas the higher quotes (A and B) envisage adding complete/fuller features. - Scope of the quotes are only for the project itself and for the feasibility study, development and the first year of maintenance. For the corrective maintenance, it will depend on the Service Level Agreement and it is difficult to estimate it at this point.
IT Company/Vendor – B	630,000	
IT Company/Vendor – C	141,000	
AVERAGE ESTIMATED COST	523,667	

17. It is also envisaged that the development of a new TRS online system would take approximately 15 to 18 months to complete the development of the entire product and to get to the go-live point.

Funding Options

18. At the 233rd/234th PTC Sessions, as well as from input received during the intersessional period, it was suggested to also explore the funding options from WCO's internal sources in addition to an external donor. Accordingly, the WCO Secretariat approached the internal funding sources for their potential support.
19. Delegates at the 233rd/234th Sessions of the Committee supported the funding option with the World Bank Group (WBG) on the basis that the proprietary rights as well as data security, accessibility and confidentiality rights to the TRS Online System lies with the WCO. The Committee had also instructed the Secretariat to initiate discussions with the WBG regarding their potential funding support. Accordingly, the Secretariat discussed the funding option with the WBG and confirmed that the proprietary rights of this eventual partnership on the TRS Online System would lie with the WCO and that there would be alignment with the high-level policy related to data security, accessibility and confidentiality, where no data of any individual Member could be used, disclosed or published against the interest and/or without prior authorization of the respective Government.

IV. The Approach

20. TRS is an important tool of Customs and the proposed scope to develop a new TRS Online System is substantive so it would be beneficial to initiate this project, if approved by the PTC, in phases. It is thus suggested to split the project into two main phases presented below:

Phases	Main Activities	Estimated Cost	Time Period
Phase – I: Feasibility Study	<ul style="list-style-type: none"> - Business analysis by the WCO - Finalize the scope and requirements specifications both from functional, non-functional and/or technical aspects. - Study and analyse the extent of its feasibility from practical and technical perspective. - Carry out detailed planning 	<p>523,667 Euro</p> <p>(Total estimated average cost and out of which, Phase I might cost between 50,000 Euro to 75,000 Euro)</p>	<p>15 to 18 Months (Approx.)</p>
Phase – II: Development	<ul style="list-style-type: none"> - Start the development based on the finalized Phase I activities. - Consider an agile development approach 		

V. Action required

21. The PTC is invited to:

- discuss and endorse the outcomes of the intersessional work; and
- approve the initiation of the development of a new TRS Online System project based on the proposed approach and subject to funding availability.

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