Specifications for WCO e-learning Modules
SUMMARY

1. INTRODUCTION..................................................................................................................... 3
2. CONTEXT/AUDIENCE ........................................................................................................... 3
3. DISSEMINATION OF E-LEARNING COURSES .................................................................... 3
4. TARGET DEVICES................................................................................................................. 4
5. WCO TECHNICAL ENVIRONMENT....................................................................................... 4
   5.1. LMS......................................................................................................................................... 4
6. TECHNICAL SPECIFICATIONS............................................................................................. 4
   6.1. DEVELOPMENT TECHNOLOGY......................................................................................... 4
6.2. SCORM STANDARDS............................................................................................................ 4
   6.2.1. Version ........................................................................................................................ 4
   6.2.2. Packaging of the modules ......................................................................................... 4
   6.2.3. SCORM functions ........................................................................................................ 5
   6.2.4. Manifest ....................................................................................................................... 6
   6.2.5. Metadata ..................................................................................................................... 6
   6.3. SCREENS.......................................................................................................................... 6
   6.4. COMMON ELEMENTS........................................................................................................ 7
6.5. RUNNING THE MODULES................................................................................................... 7
6.6. LANGUAGE MANAGEMENT .............................................................................................. 7
7. FUNCTIONAL SPECIFICATIONS ............................................................................................ 8
   7.1.1. WCO logo .................................................................................................................... 8
   7.1.2. Navigation bar ............................................................................................................. 8
7.2. STRUCTURE OF THE DIFFERENT PARTS ......................................................................... 9
   7.2.1. Structure of the "Quiz" part ....................................................................................... 9
   7.2.2. Structure of the "Lesson" and "Case study" parts ...................................................... 10
8. GRAPHICS SPECIFICATIONS ............................................................................................. 11
   8.1. GENERAL .......................................................................................................................... 11
   8.2. INTERACTIVE ELEMENTS .............................................................................................. 11
   8.2.1. Buttons ...................................................................................................................... 11
   8.2.2. Other clickable elements ......................................................................................... 11
   8.3. OTHER GRAPHIC ELEMENTS ........................................................................................ 12
   8.3.1. Pop-ups ..................................................................................................................... 12
   8.3.2. Texts.......................................................................................................................... 12
   8.3.3. Animations ................................................................................................................. 12
1. Introduction

The purpose of this document is to achieve maximum standardization of the e-learning materials developed by the WCO, in order to provide the highest possible level of consistency between the various courses on offer.

This document will be issued to the service providers selected to develop each new project, and compliance with the instructions contained herein will be a prerequisite for validation of the material delivered by the service providers.

This document can also serve as training support for technicians from Member Customs administrations and WCO regional training centres which host the platform, as it will help them towards a better understanding of the structure and composition of the various training modules.

Additional information in regard to design, didactical approach, animations etc. are annexed in annex III: Brief guide for developing and updating e-learning courses and annex IV: WCO Corporate Identity Guidelines.

2. Context/audience

The e-learning courses proposed by the WCO are predominantly intended for Customs officers in WCO Member Administrations but also via the WCO Academy for private sector and academia. They may also be consulted by officials of other organizations or institutions which collaborate with Customs as part of their work.

The target populations are not necessarily very skilled in the use of information technologies. It is therefore essential that the modules developed be simple to use and attractive.

3. Dissemination of e-learning courses

The interested public may access the courses in two ways:
- by accessing the WCO’s e-learning platform online - the characteristics of this platform are set out below;
- by accessing their administration’s own LMS – their administration will have previously installed the modules provided by the WCO.

This second option means that the modules developed will be required to function in very different technical environments, in terms of both server operating system and LMS. A great disparity has also been exposed at the level of client consultation work stations. The tools and development methods should therefore allow a single version of the modules to be produced which guarantees that they can run in these different environments.
4. Target Devices

The modules shall be published targeting a consultation on computers but should be able to run on mobile devices as well with resizing and scaling. Due to the situation in countries with a low bandwidth, it is strongly necessary to limit the size of the modules and all of their elements by using any available compression and/or streaming/preloading method to ensure a proper and smooth running of the courses.

5. WCO technical environment

5.1. LMS

The WCO e-learning modules are operated on the LMS Moodle, version 3.0+.

The LMS and a number of demonstration modules may be viewed on http://clikc.wcoomd.org.

However, as mentioned above, other LMS may be used by the Member administrations. To maximize the integration options, the SCORM standard (see details below) must be used for the communication of the modules with the LMS.

6. Technical specifications

6.1. Development technology

The modules should be published in HTML5 format.

Articulate 360 (inclusive Storyline 360 and rise 360) or Adobe Captivate will be the preferred authoring tools.

Organizational structure
A WCO course consists of modules, which can themselves be divided into three independent parts (lesson (including clearly formulated learning objectives), quiz (including explanatory feedback), case study).

6.2. SCORM standards

6.2.1. Version

The modules developed must comply with the standard SCORM 1.2.

6.2.2. Packaging of the modules
For each of the modules, in each of the languages\(^1\), the following SCORM packages must be provided:
- An individual version of each of the parts, the summary appearing with the following structure\(^2\) (the executable element is underlined below):
  - **Course title**
    - Title of the module – Title of the part
  - An aggregated version containing all course modules.
    - **Course title**
      - Title of module 1
        - Title part 1
        - Title part 2
        - Title part 3
      - ...
      - Title of module n
        - Title part 1
        - Title part 2
        - Title part 3

### 6.2.3. SCORM functions

The following functions, which are part of the standard SCORM 1.2 and compatible with the WCO’s LMS, must be implemented in the modules:
- **Bookmarks**, allowing the user to resume the module at the point at which it was last exited.
- **Status**, showing the status of the lesson (variable cmi.core.lesson_status) which may contain the following values:
  - For a lesson or case study part
    - *Incomplete*
    - *Completed*
    - *Not attempted*
  - for a quiz part
    - *Not attempted*
    - *Passed* (Pass rate is 70%)
    - *Failed*
- **Length of the session** of consultation of the module.
- **Score**. The score will be out of 100, with no decimal places. For quizzes the score will reflect the actual answers of the users. For lessons and case studies, the completion rate of the module should be used as a score.

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\(^1\) Unless the technology used allows the development of multilingual SCOs, in which case the choice of language must be conditioned by that chosen for the LMS, without new intervention from the user.
\(^2\) In the language of the package content.
WCO I OMD Specifications for WCO e-learning Modules

6.2.4. Manifest

For each of the SCORM packages provided, the manifest (file imsmanifest.xml) must contain at least the following information. Unless otherwise stated, this does not rule out the addition of any other tag necessary to ensure the package works properly.

- Titles (see paragraph 5.1.1)
- Scorm Type (SCO)
- Resource (launch file path only)
- Mastery score (in the case of the quiz part – this is fixed by default at 70%)

6.2.5. Metadata

The SCORM packages provided must contain at least the following metadata in the file imsmetadata.xml.

- General
  - Identifier: Module code to be determined at the start of the project
  - Title: SCO title
  - Language: language(s) of the package
- Lifecycle
  - Version: date of last amendment of the files
  - Status: Final
  - Contribution:
    - Role: Author
    - vCard: WCO-OMD
- Educational
  - Typical learning time: estimated consultation time
- Rights
  - Copyright and other restrictions: yes
  - Description: Copyright © [Year] - World Customs Organization

6.3. Screens

Each part consists of a number of units – the screens. A screen contains, or may contain, the following:

- Navigational elements
- Explanatory texts
- Texts taken from official or legal documents
  - Displayed as pop-ups in PDF format.
- Photos
  - .jpg or .png format (only if transparency is needed)
- Videos
  - The videos must be loaded and played in stream mode
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- H.264 codec in MP4 format

- **Animations or illustrations**
  - External to the files which form the structure of the screen
  - Located in the "Training" directory

- **Sound commentaries**
  - .mp3 files (32kHz, 56Kb/s) if external
  - .mp4
  - They must be loaded and played in stream mode

### 6.4. Common elements

It is desirable, for reasons of maintenance and consistency, for all elements which may be re-used in several screens to be defined once and for all, as a library/template.

This applies, for example, to buttons, pop-ups, text zones, rollover bubbles, etc.

### 6.5. Running the modules

Modules should be able to be launched in:
- A "local" version for running a module on a stand-alone computer or USB-stick.
- An "online" version which can be run and exchanged via LMS.

### 6.6. Language management

As the WCO's modules are intended for use world-wide, it must be possible to translate them into any language (including in particular the Latin, European, Asian and Arabic languages), and modify them in that language.

As most of the modules are initially developed in English, it is advisable to take into account the greater length of further languages that could be added later when developing the layout of the screens of the modules.
7. Functional specifications

7.1.1. WCO logo

The WCO logo should appear on the top left of each module's screens.

7.1.2. Navigation bar

The navigation bar is located at the bottom of the screen. It provides the basic navigation functions.

The navigation bar is comprised of:

- A "Next" button, on the right-hand side. This button takes the user to the next screen. On the final screen, the "Next" button leads to the summary table on the platform.
- A "Back" button, to the left of the "Next" button. This button takes the user back to the previous screen. On the first screen, the "Back" button leads to the summary table on the platform.
- The "Instructions" bar. A content-sensitive text box providing all the information needed to perform the interactive tasks on that screen. Alternatively, instructions can be displayed directly on screen or in the voiceovers.

The following image illustrated an example wireframe.
7.2. Structure of the different parts

7.2.1. Structure of the "Quiz" part

The “Quiz” part of a module is structured as follows:

- An introductory screen (numbered as 1 on the chapter-by-chapter bar).
- A screen where the quiz questions are displayed one after the other (numbered as 2 on the chapter-by-chapter bar).
- A final screen displaying the trainee’s score and a comment appropriate to that score (numbered as 3 on the chapter-by-chapter bar).

Introductory screen
This consists solely of a text specifying the objectives of the quiz.
Questions screen
The “Quiz” kinematics are as follows. When the user enters the Questions screen, the first question and clear instructions are displayed. The user must answer the question by clicking on a “Validate” button. Until this has been done, the user can change his answer. When the "Validate" button is clicked, it changes to “Next question”. At the same time, a graphic shows the trainee whether he gave the correct answer or not. A comment is also displayed – its content depends on the answer given by the user. Clicking on the "Next question" button allows the user to continue with the quiz. After the final validation (last question), the "Validate" button changes to “Result”.

The questions should be displayed in random order. The total number of questions available should exceed the number of questions posed.

Results screen
This screen displays the user’s score, as a percentage. This score is sent to the LMS in compliance with the SCORM standard when the user exits the screen.

7.2.2. Structure of the "Lesson" and "Case study" parts
The structure of these parts is as follows:
- An introductory screen (numbered as 1 on the chapter-by-chapter bar) in the form of a text setting out the objectives to be attained and outlining the content of the module.
- Content screens, of which there may be any number (numbered as 2 to XX on the chapter-by-chapter bar).
- A conclusion screen (numbered as XX+1 on the chapter-by-chapter bar) which summarizes the knowledge acquired and invites the trainee to continue along his training path.
8. Graphics specifications

8.1. General

The graphics style must be streamlined and well-spaced, avoiding excessive detail and overloading. For illustrations, photo-style treatments should be preferred to drawings where possible.

WCO is an international organization with more than 180 Member states with various cultural backgrounds. Cultural sensitivity is key for the success of our e-learning courses. This must be reflected in the design of a course.

To improve the learning journey of the users, WCO expects a didactical approach which is in line with the current state of the art in educational research.

In the interests of overall harmony on screen, it is better to avoid very strong divisions between the different zones on screen (the use of frames and boxes, for example).

The design specifications of the WCO brand identity are explained in annex IV: WCO Corporate Identity Guidelines. The specifications of the design when it comes to user experience as well as the level of interactivity of WCO e-learning courses is explained in annex III: Brief guide for developing and updating e-learning courses

8.2. Interactive elements

8.2.1. Buttons

All buttons must have the same design, which must be consistent with the remainder of the graphics charter, on all the screens within a single course.

The buttons may be in any one of three states:
- Not clicked
- Rolled over
- Clicked

These three states must be identified by a graphic effect which distinguishes them from each other (colour change, 3D effect …).

8.2.2. Other clickable elements

Other interactive elements (part of an image or animation, elements to be drag-and-dropped…) must be identified by an effect when they are rolled over. Other graphic effects (framing, flashing…) should not be used to draw attention to them.
Where possible, it is helpful to indicate the “clicked” status of these elements using a graphic effect (shading, for example).

8.3. Other graphic elements

8.3.1. Pop-ups

This is a common element (see §5.4) which must, nevertheless, be adapted to suit the use being made of it on the various screens.

Pop-ups must be of an appropriate size for the text they contain. They must be moveable and must have a title bar.

When a pop-up is open, the elements beneath it must be deactivated. Also, if a pop-up incorporates interactions, the instructions in the Instructions box must be changed accordingly when the pop-up opens.

It is not advisable to use more than two levels of successive pop-ups.

8.3.2. Texts

Texts displayed on screen should be in Lato or Arial font, except where special circumstances require the use of a different font (e.g., illustrations), which will then be embedded in the screen during publication and provided along with the sources on delivery of the course.

As far as possible, all text should be displayed in the same font size.

It is important to ensure that text is well spaced out and make it as legible as possible, through appropriate formatting (line break between paragraphs, use of bullet points for lists, titles in bold, etc.)

While the underlying development language is English, it is essential to consider that other commonly used languages (in particular French and Spanish) are generally less concise.

8.3.3. Animations

No “passive” animation should figure as the only element on a screen, without there being a “run animation” button to avoid the need to run the entire animation in order to access the next part of the screen or the following screen.