

OWNER: CUST-DEV2	ISSUE DATE: 13/12/2010	VERSION: 1.01
<p>TAXATION AND CUSTOMS UNION DG</p> <p>SUBJECT:</p> <p>DLV-0.1-1_Configuration Management</p>		
<p>CUST-DEV2</p> <p>[REMOVED]</p>		

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
DOCUMENT HISTORY	

DOCUMENT HISTORY

Version	Date	Description	Action (*)	Pages
0.01	13/08/2010	Submitted for Information	I	All
0.02	09/09/2010	Submitted for Review	R	All
0.11	21/10/2010	Internal review after Implementation of review Comments	I/R	All
0.12	25/10/2010	Submitted for Information		
0.13	03/11/2010	Internal Review	I/R	All
1.00	15/11/2010	Submitted for Acceptance		
1.01	13/12/2010	Re-Submitted for Acceptance	I/R	All

(*) Action: I = Insert R = Replace

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
TABLE OF CONTENTS	

TABLE OF CONTENTS

DOCUMENT HISTORY	2
TABLE OF CONTENTS	3
LIST OF TABLES	4
1 INTRODUCTION	5
1.1 Scope	5
1.2 References	5
1.3 Acronyms and Abbreviations	5
1.4 Glossary	5
2 PROCESS OVERVIEW	6
2.1 Process Goal	6
2.2 Configuration Management Boundaries	6
3 ROLES AND RESPONSIBILITIES	7
4 CONFIGURATION MANAGEMENT	8
4.1 Planning	8
4.2 Identification	8
4.3 Configuration Control	10
4.4 Status Accounting	13
4.5 Verification and Audit	13
5 TOOLS AND TECHNIQUES	14
5.1 SCM Tools & Techniques	14
5.2 Specific Tools Used	14

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
LIST OF TABLES	

LIST OF TABLES

Table 1-1: Reference documents..... 5

Table 3-1: Roles and Responsibilities..... 7

Table 4-1: Documentation Format and Tools 11

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
INTRODUCTION	

1 INTRODUCTION

1.1 Scope

The scope of this document is to provide the target audience with a description of the Configuration Management process as it is currently applied by CUST-DEV2. Given CUST-DEV2's role on the project, this process will be described from an Application Development and a Trans-European Systems Maintenance point-of-view.

In this context, CUST-DEV2 will develop a Configuration Management Database (CMDB) to ensure that only authorised items, referred to as Configuration Items (CIs) are used in the IT environment. It includes the processes responsible for maintaining information about Configuration Items required to deliver the CUST-DEV2 services, including their relationships, in a structured manner. This information is managed throughout the CI's lifecycle and relies on the coherency and consistency of the CMDB.

1.2 References

RD#	Title	Originator	Version	Date
[RD1]	TEMPO - Glossary of Terms (tmp-gen-gls)	DG TAXUD/R4	2.04-EN	10/08/2007
[RD2]	TEMPO - Application Development Configuration Management (tmp-tec-cfm)	DG TAXUD/R4	2.10-EN	09/02/2009
[RD3]	Framework Quality Plan	CUST-DEV2	00.02.00	13/08/2010

Table 1-1: Reference documents

1.3 Acronyms and Abbreviations

Please refer to the 'Annex 19 – Acronyms and Abbreviations'.

1.4 Glossary

No specific terms are used in this document.

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
PROCESS OVERVIEW	

2 PROCESS OVERVIEW

2.1 Process Goal

Configuration Management will significantly improve the performance of other service management functions and will:

- Facilitate the monitoring and controlling of IT assets with software being offered in shorter release cycles and more frequent upgrades;
- Facilitate performance of Change and Release Management tasks by providing information that helps these processes determine the impacts (such as software requirements or software conflicts) associated with making changes in the IT environment;
- Facilitate the resolution of problems and incidents by Incident and Problem Management, through the Service Desk, when these processes utilise the CMDB as a research tool (for example, reduces applications downtime);
- Facilitate the activity of Availability Management by tracking CI status.

2.2 Configuration Management Boundaries

Configuration Management includes:

- Accounting for all components, from units and subassemblies to the configuration items, including their versions, constituent components and relationships;
- Providing a sound basis for all related technical and managerial processes (e.g. change management, release management or problem management);
- Ensuring the historical trace of all changes implemented to the configuration items;
- Enabling the identification, production, inspection, delivery, operation and maintenance of all components in an efficient manner. Each version of a configuration item is identified with a baseline that describes its structure.

Configuration Management excludes:

- The activities related to Change Management, which are discussed in the Change Management plan (see Annex 01 to the FQP [RD3]);
- The activities related to Release Management, which are discussed in the Release Management plan (see Annex 05 to the FQP [RD3]).

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
ROLES AND RESPONSIBILITIES	

3 ROLES AND RESPONSIBILITIES

Role	Responsibility
CUST-DEV2 Configuration Manager	<p>The Configuration Manager is responsible for operating this process on a daily basis. This includes:</p> <ul style="list-style-type: none"> • Establish a project schedule for Configuration Management activities with the Project Manager, Portfolio Managers; • Maintain and communicate the Configuration Management Plan and Configuration Management standards and procedures to all team members and stakeholders; • Ensure all CUST-DEV2 team members are involved in Configuration Management and receive training on how to use Configuration Management tools; • Identify Configuration Items to be managed under the Configuration Management process; • Maintain the integrity of all CIs by monitoring the status of CIs; • Manage the CMDB; • Conduct audits of Configuration Management activities, including performing a baseline audit; • Report and communicate Configuration Management status to the project manager.
CUST-DEV2 CI Owner	<p>For each new Configuration Item (CI), an owner will be identified. They are responsible for changes to the CIs and for the update/maintenance of the CMDB with the latest version of the CI.</p>
CUST-DEV2 PMO	<p>PMO will work with the Configuration Manager for planning the deliverables submission due dates according to the Project QTM planning.</p>

Table 3-1: Roles and Responsibilities

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
CONFIGURATION MANAGEMENT	

4 CONFIGURATION MANAGEMENT

The Configuration Management process is composed of 5 main activities:

- Planning;
- Identification;
- Control;
- Status Accounting;
- Verification and Audit.

4.1 Planning

During the planning phase, a Configuration Management Plan will be established and that will cover in details the next 3 to 6 months and should give an overview of the next 6 to 12 months. This plan should be reviewed at least twice a year and should contain at least the following details:

- Identify configuration items (CIs) to be managed under Configuration Management (CM) processes;
- Create, manage, maintain, and communicate the CM Plan and any CM standards and procedures to all stakeholders;
- Ensure that all project team members involved in CM receive training on their roles, how to perform their activities, and how to use CM tools;
- Make updates to the CM Plan, as appropriate, and only after approval by the Change Control Board;
- Ensure that any updates to the CM Plan are communicated to appropriate project team members;
- Establish the project schedule for CM activities with Project Manager;
- Form and manage a CM team (if necessary);
- Conduct performance reviews for members of the CM team (if necessary).

4.2 Identification

The Configuration Identification includes the selection, identification, labelling and recording of all CIs. CIs should be recorded at a level of detail justified by the business need.

4.2.1 Configuration Items

A Configuration Item is defined as a work product that will require configuration control. A CI may be a single piece of work or a group of files that together form the basis for a system, application and/or document.

The Configuration Manager will establish the items that will be placed under the control of Configuration Management. These CIs will be maintained in the CMDB and include:

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
CONFIGURATION MANAGEMENT	

- All project management documents, not including confidential documents containing financial or other confidential information. This involves Monthly Progress Reports, Meeting Minutes, Quality Review documents, Notes and more;
- All technical documentation related to the different systems and applications maintained and developed in the context of the CUST-DEV2 project. These documents will be issued to DG TAXUD on a quarterly basis, at least;
- All source and configuration files for all applications. The configuration management tool allows for parallel and distributed development. Therefore a patch can be quickly released even if the development of a new functional version is in progress. The released versions of these files will be issued to DG TAXUD on a quarterly basis, at least;
- Test plans and test data sets for all applications. They will be issued to DG TAXUD on a quarterly basis, at least;
- Software implemented in the CUST-DEV2 environment;
- Licenses for software implemented or used by CUST-DEV2;
- Maintenance contracts.

4.2.2 Levels of Configuration Management Control

CUST-DEV2 applies different levels of CM control to each CI Category based on the relative frequency of change and critical nature of the CI. Two examples are outlined below and will be further detailed with the relevant CIs for this project.

4.2.2.1 Lower Levels of CM

Meeting minutes and status are read-only files and maintained by the individual leads.

4.2.2.2 Higher Levels of CM

Source code is stored in the projects CM library

4.2.2.3 Contractual Documents of CM

Documents like Licences, Maintenance Contracts or other legal documents are maintained using the project SharePoint; they do not require a strict follow up at the same granularity level. However, using SharePoint does guarantee that versions are applied to any change of the documents.

4.2.3 Configuration Management Database

The CUST-DEV2 team will use the Rational ClearCase Configuration Management repository as the internal CMDB. This CMDB will list the following information about each Configuration Item:

- CI Name;
- Description;
- Owner;
- Location of CI;

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
CONFIGURATION MANAGEMENT	

- CI Category (either the portfolio, the family, the system, application, type of document);
- Status (SfR, SfA, Accepted by DG TAXUD, Accepted by Member States);
- Date Placed under Configuration Management control (optional);
- Comments (optional).

4.2.4 Baseline Management

A baseline is a set of Configuration Items that has been formally reviewed and agreed upon, which then serves as the basis for further development, and can be changed only through the formal Change Management process (discussed in Annex 01 to the FQP [RD3]).

This baseline is used for the regular static view of the CMDB state.

Usually similar Configuration Items are grouped in the same baseline, e.g. all of the completed pilot documentation being a part of a pilot conversion baseline.

Baselines will follow the high-level milestones that have been defined in the CUST-DEV2 project plan. Configuration Items will by default be “open” as long as the baseline/milestone has not been passed. After this point the Configuration Item should ideally be finished and be placed under Change Control. Delayed Configuration Items will not be under Change Control until they have reached Revision (RevA stage) version.

4.3 Configuration Control

4.3.1 Documentation Control

The documents are also managed in the Configuration Management tool. The documents pertaining to a system or an application are kept with the system/application components. Documents not pertaining to a specific system or application are kept in the project management environment.

4.3.1.1 Format and Tools

CUST-DEV2 uses IBM Rational ClearCase to store all documents under Configuration Management. The following file formats and tools will be used in the scope of CUST-DEV2:

Type	Format	Tool
Text documents	MS Word 2003 compatible PDF	MS Word 2003 or higher Adobe Acrobat Reader
Tables/Calculations	MS Excel 2003	MS Excel 2003 or higher
Presentation	MS PowerPoint 2003	MS PowerPoint 2003 or higher
Drawings	MS Visio 2003	MS Visio 2003 or higher

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
CONFIGURATION MANAGEMENT	

Type	Format	Tool
Plan (Gantt Chart)	MS Project 2003	MS Project 2003 or higher
Review database	MS Access 2003	MS Access 2003 or higher

Table 4-1: Documentation Format and Tools

Other tools will be defined during the execution of the contract according to the requirements and with the agreement of DG TAXUD. This concerns for example the tools and formats for the Business Process Modelling.

4.3.1.2 Documentation identification

All documentation created in the context of the CUST-DEV2 contract must be uniquely identifiable and placed under configuration control.

The unique identification of each document facilitates the performance of all the tasks related to document management within the scope of the CUST-DEV2 project.

To help identify documents in a file server or in the configuration management tool, the following file naming convention is used, where [] denotes optional fields. The following naming convention is used for documents:

CUD2-<CONTRACT>-<ORDER>-<DTM REFERENCE>-<TITLE>-<VERSION>.<EXT>

- <CONTRACT>:
 - o “FC” in case the document pertains to the Framework Contract;
 - o “SCnn” in the event that the document pertains to a Specific Contract (e.g. SC01 for Specific Contract 1).
- <ORDER> is in upper case and depends on the ordering mechanism used:
 - o For the ordering directly through the Specific Contract <ORDER> is the two characters “FP”;
 - o For the ordering via the On Demand Mechanism, <ORDER> is the two characters “OD” followed by the sequence number in three digits of the On Demand request (e.g.: “OD005”);
 - o For the ordering via the Request for Action ordering mechanism, <ORDER> is the three characters “RFA” followed by the RFA number in three digits (e.g.: “RFA755”).
 - o For the ordering via the Quoted Time and Means ordering mechanism, <ORDER> is the three characters “QTM” followed by the QTM number of the QTM Action in three digits (e.g.: “QTM010”).
- <DTM REFERENCE> is the reference in the DTM (e.g. “DLV-0.1-1”).
- <TITLE>:

Examples are “Deliverable Tracking Matrix”, “Monthly Progress Report”, etc. This title should also include information about the date if necessary (e.g. YYYYMMDD for meeting minutes, YYYYMM for Monthly Progress Reports).
- <VERSION>:

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
CONFIGURATION MANAGEMENT	

Aimed at keeping a clear overview of the status of documents, the following versioning conventions apply:

For client deliverables, the following version format applies:

vXX XX XX

- o When creating a new version of a document, only the last 2 ciphers are adapted (e.g. vXX XX 01 -> vXX XX 02);
- o When a document is submitted for acceptance to the client, the middle 2 ciphers are adapted and the last 2 ciphers are set to 0 (e.g. vXX 00 03 -> vXX 01 00);
- o When a document has been formally accepted by the client, the first 2 ciphers are adapted and the last 4 ciphers are set to 0 (e.g. v00 01 00 -> v01 00 00).

For internal deliverables, the following version format applies:

vXXX

- o This is updated incrementally with each new version (e.g. v099 -> v100).

- **<EXT>:**

The field <ext> is the standard file extension naming as given by the tools used to produce the document, i.e. “doc” for MS Word documents, “ppt” for MS PowerPoint presentations, or “xls” for MS Excel files.

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
CONFIGURATION MANAGEMENT	

4.4 Status Accounting

The Configuration Manager will report the status of Configuration Management activities to project management on a weekly basis in the same way as other teams on the CUST-DEV2 project. Status reporting will contain the following information:

- Progress since last reporting for Configuration Management work;
- Expected progress for next reporting for Configuration Management work;
- Configuration Management risks and issues;
- Outcomes from audits.

4.5 Verification and Audit

The Configuration Manager will carry out audits that tie into project milestones when needed. Audits can be formal and informal and target different Configuration Items. They are conducted to verify quality in the (Configuration Management) process and in all CIs.

Audits are typically conducted by the Configuration Manager prior to key project milestones (= baselines). Ideally an audit is performed before each new baseline is established. New baselines are taken only if the results of the audit are successful.

Examples of areas to be investigated during an audit are:

- All CIs can be physically identified;
- All CIs follow agreed naming standards;
- All Requests for Change (RfC) open against any CI are in an appropriate status (e.g. closed, deferred, rejected);
- Verification of content in CMDB;
- CMDB's integrity (completeness, correctness, and consistency).

Audit results need to be reported. Audited items that are not in compliance with the configuration management standards must be reported and tracked until they are resolved. The auditor will continue to report the status of an audit continuously until all discrepancies are resolved. The audit results will be reported to the affected teams, CI owner and project management.

CUST-DEV2	REF: [REMOVED]
CONFIGURATION MANAGEMENT	
TOOLS AND TECHNIQUES	

5 TOOLS AND TECHNIQUES

5.1 SCM Tools & Techniques

This Accenture Delivery Tools (ADT) Software Configuration Management (SCM) playbook provides guidance for different project scenarios so that ADT can be used effectively to manage software artefacts during the development lifecycle. The guidance specifically focuses on effective use of IBM Rational ClearCase Unified Change Management (UCM) to manage artefacts that are stored in their respective repositories.

Other tools will be defined during the execution of the contract according to the requirements and with the agreement of DG TAXUD.

5.2 Specific Tools Used

Rational ClearCase is used for Configuration Management. Furthermore, Rational ClearCase and Rational ClearQuest are integrated which ensures traceability (for linking Change Management with Configuration Management)

- Rational ClearCase provides configuration management and version control facilities. All the versions of programs and customisation changes are managed through IBM Rational ClearCase. This tool stores the previous versions of a program/customisation change and the previous versions can be retrieved on request.
- Rational ClearQuest which enables Change Management and Incident Management processes.

As a result, all processes are activity oriented, so the changes are allowed only by issuing corresponding activities (Change Requests).