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TAXATION AND CUSTOMS UNION DG
ITSM

SUBJECT:

FQP - Annex 22: Application Management

FRAMEWORK CONTRACT # TAXUD/2007/CC/088

DOCUMENT HISTORY

Edi.	Rev.	Date	Description	Action (*)	Pages
0	01	06/07/2007	First Draft	I	All
0	02	05/10/2007	Further implementation	I/R	As req.
0	03	08/10/2007	Further implementation	I/R	As req.
0	04	15/10/2007	Draft delivered for information to DG TAXUD	I/R	As req.
0	05	31/10/2007	Draft delivered for information to DG TAXUD	I/R	As req.
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0	07	10/12/2007	Further updates	I/R	As req.
0	08	01/04/2008	Further updates	I/R	As req.
0	09	07/07/2008	Consolidation after intermediate deliveries of processes outside of the scope of the FQP document	I/R	As req.
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1	02	01/02/2010	Sent for review to DG TAXUD after internal QC	I	All
1	03	05/02/2010	Re-sent for review to DG TAXUD	Complete RfA#76 implementation	As req.
1	04	22/03/2010	Delivered for acceptance to DG TAXUD	I/R	As req.

(*) Action: I = Insert R = Replace

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1.   Introduction

This document is an annex to the Framework Quality Plan, deliverable DLV 0.1.1 requested in Specific Contract 04 [A2] under Framework Contract (IT Service Management for DG TAXUD) [A1], Work Package WP.0.1.

This document presents the Level 1, 2 and 3 of the ITSM process FQP - Annex 22: Application Management.

2. Reference and Applicable Documents

This chapter presents two lists of relevant programme related documents. They are divided into reference and applicable documents.

2.1 Reference Documents

Id	Reference	Title	Date	Version
R1	ITS-IFQP-SC04-Framework Quality Plan	Framework Quality Plan	22/03/2010	1.04
R2	ITS-IFQP-SC04-Annex 9	ITSM Glossary	22/03/2010	1.13
R3	IITSM Internal procedures on CIRCA	https://circa.europa.eu/Members/irc/taxud/itsm/library?l=/internal_procedures&vm=detailed&sb=Title	N/A	N/A
R4	ITS-IFQP-SC04-Framework Quality Plan - Annex 23 Conformance Testing	CT Process	22/03/2010	1.04
R5	ITS-IFQP-SC04-Annex 18 Capacity Management	CAP Process	22/03/2010	1.04
R6	ITS-IFQP-SC04-Annex 12 Incident Management	IM Process	22/03/2010	1.04
R7	ITS-IFQP-SC04-Annex 13 Problem Management	PM Process	22/03/2010	1.04
R8	ITS-IFQP-SC04-Annex 15 Change Management	ChM Process	22/03/2010	1.04
R9	ITS-IFQP-SC04-Annex 19 IT Service Continuity Management	IT SCM Process	22/03/2010	1.04

Table 2-1: Reference documents

2.2 Applicable Documents

An applicable document is a document which content is binding for a contractor no matter what is mentioned in this FQP.

Id	Reference	Title	Date	Version
A1	TAXUD/2007/CC/088	Framework Contract	04/05/2007	N/A
A2	TAXUD/2008/DE/114	Specific Contract 04	30/06/2008	N/A
A3	QAC-SC01-FQP_TEM	Framework Quality Plan Template	N/A	1.01

Table 2-2: Applicable documents

Table 2-2: Applicable documents

3. Terminology

3.1 Abbreviations and Acronyms

A list of the abbreviations and acronyms used in the context of the ITSM Programme, and more specifically for this document is provided in Annex 9 ITSM Glossary [R2].

3.2 Interface with DG TAXUD

Where there is a non-specific reference to DG TAXUD, Directorate General Taxation and Customs Union DG or other similar descriptions, it means that the interface can be with any one of the following business threads of DG TAXUD:

- DG TAXUD A4/CPT;

- DG TAXUD A4/ISD;

- DG TAXUD A4/APM;

- DG TAXUD A3/TAX;

- DG TAXUD A3/EXC;

- DG TAXUD A3/CUST;

- DG TAXUD A3/LISO.

Where it is intended that a reference is to a specific business thread, one of the business threads above shall be stated.

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4. ITSM Process model

4.1 Level 0: Process flows

ITSM Service Support processes	ITSM Service Delivery processes	ITSM Working processes	
Service Desk (WP.8.1.1)	Service Level Management (WP.8.2.1)	Application Development (WP.7)	Security Management (WP.8.5)
Incident Management (WP.8.1.2)	Capacity Management (WP.8.2.2)	ICT Infrastructure Management (WP.8.6)	Application Management (WP.8.4) – Incl. CT & Testing
Problem Management (WP.8.1.3)	Service Continuity Management (WP.8.2.3)	CSIP (WP.8.7)	Business Perspective (WP.8.3)
Configuration Management (WP.8.1.4)	Availability Management (WP.8.2.4)	Demand Management (WP.0)	
Change Management (WP.8.1.5)			
Release Management (WP.8.1.6)			

Figure 4-1: ITSM Process Model

4.2 Level 1: Application Management

Conformance Testing is part of Application Management, but has been defined as an independent process due to its importance and complexity; please see Annex 23 ITSM Conformance Testing [R4] for a complete description of the ITSM CT process.
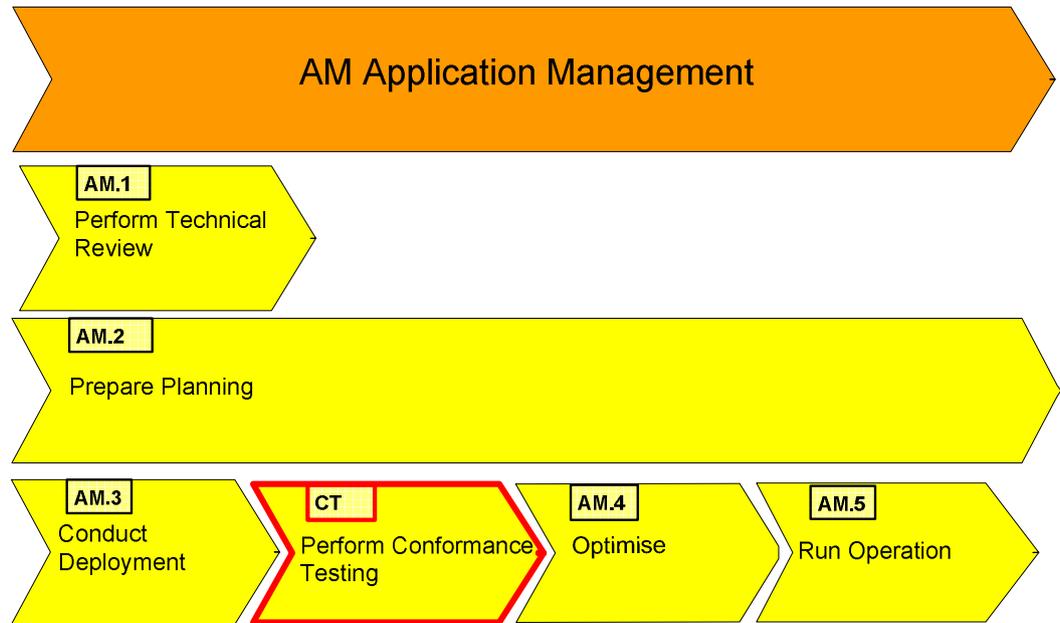
Figure 4-2: AM Application Management sub-processes

4.3   Level 2: Application Management

AM.1 Perform Technical Review

The goal of this sub-process is to perform reviews on documents (from 3rd parties like x-Dev teams) requested by DG TAXUD A3 and/or A4 (via its QA contractor). The severe defect notification is communicated to DG TAXUD directly with QAC in copy.
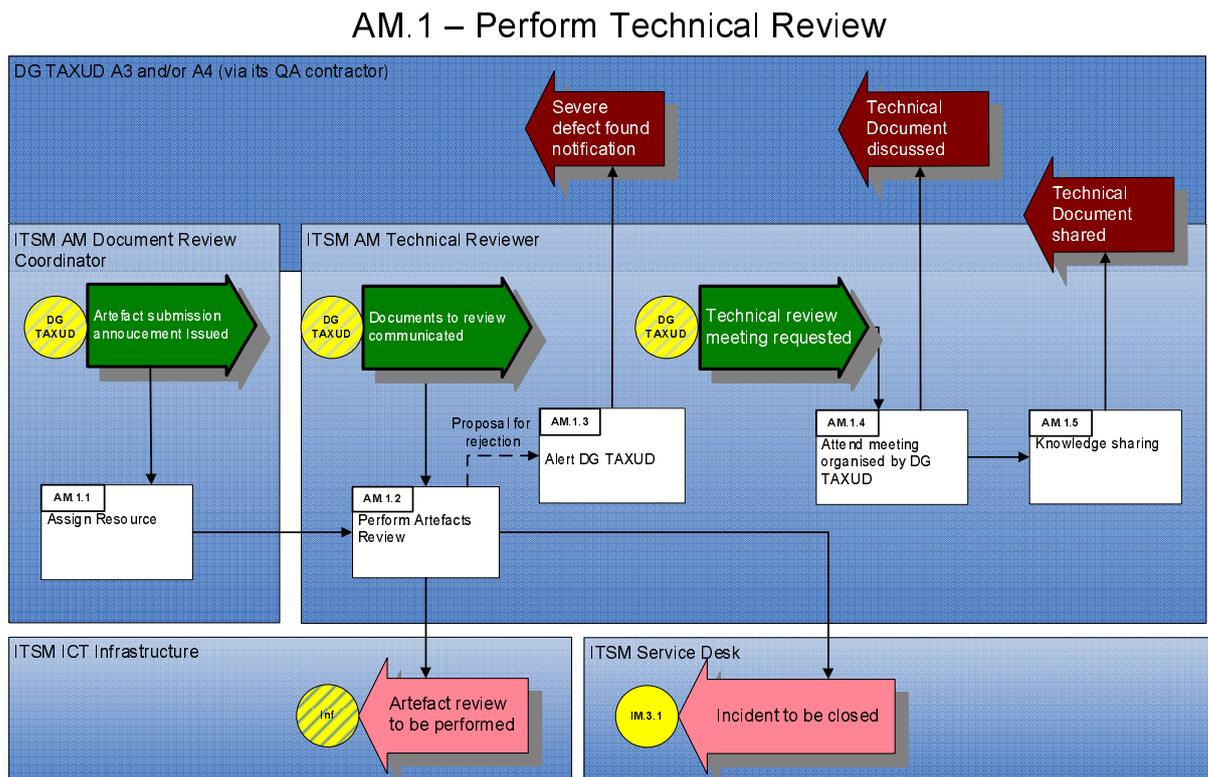
Figure 4-3: AM.1 Perform Technical Review

AM.2 Prepare Planning

The goal of this sub-process is to have at all time an up-to-date planning for all activities linked to the deployment of applications.

AM.2 – Prepare Planning
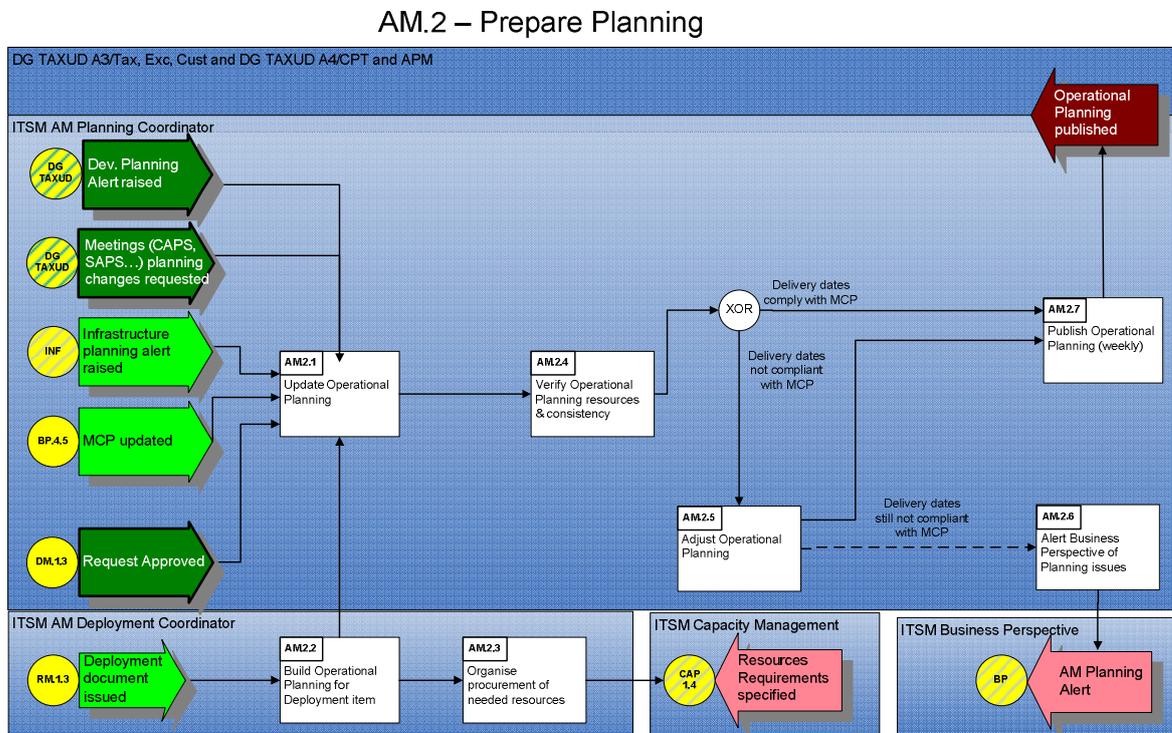
Figure 4-4: AM.2 Prepare Planning

AM.3a Conduct Deployment of applications

The goal of this sub-process is to implement all activities concerned with the deployment of applications.
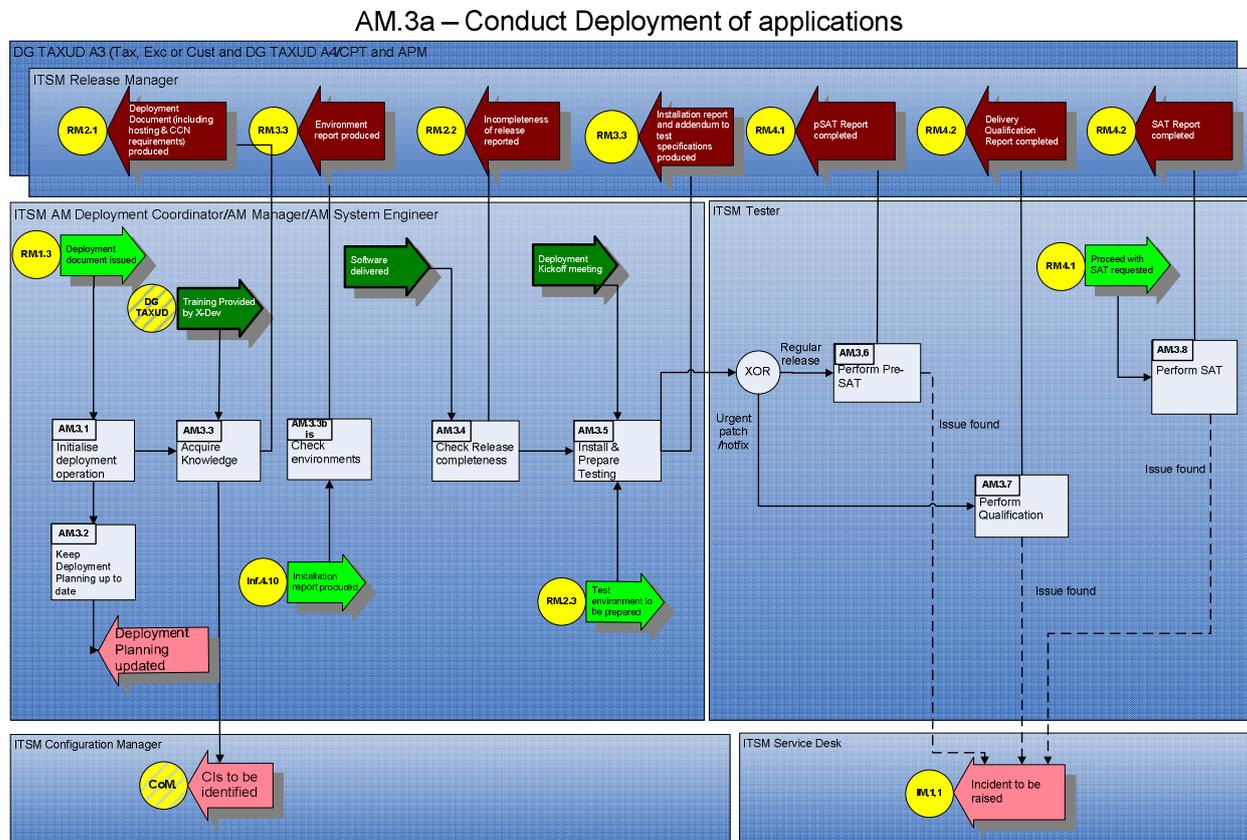
Figure 4-5: AM.3a Conduct Deployment of applications

AM.3b Conduct Deployment of Trans-European systems

The goal of this sub-process is to implement all activities concerned with the deployment of Trans-European systems.
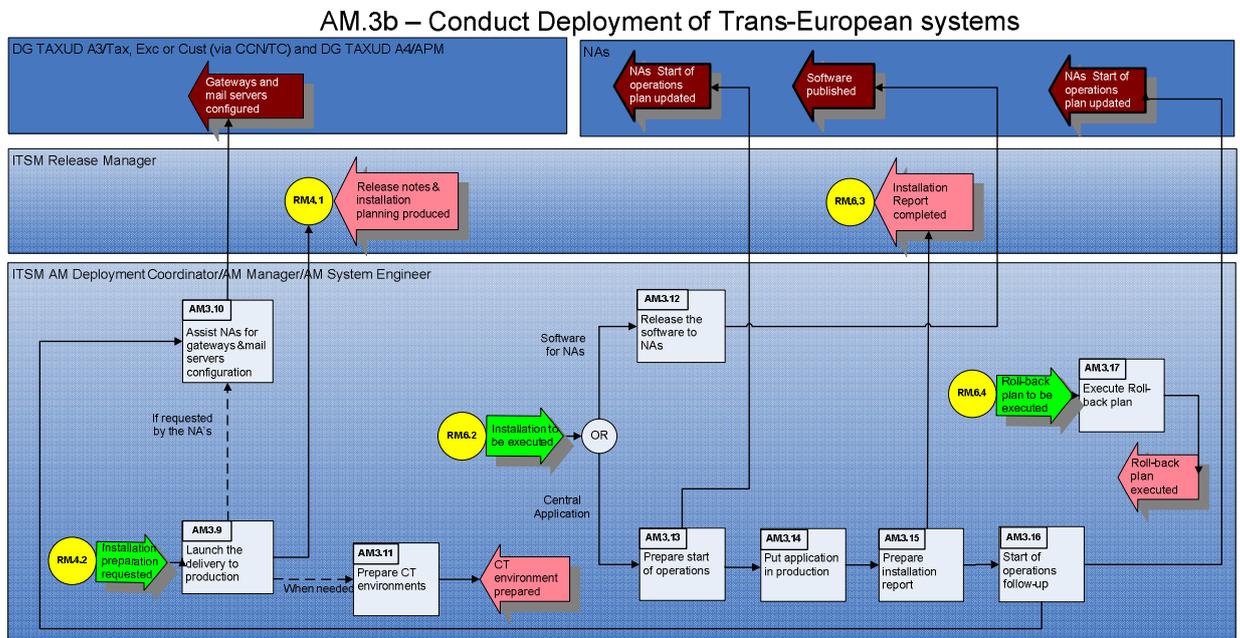
Figure 4-6: AM.3b Conduct Deployment of Trans-European systems

AM.4 Optimisation

The goal of this sub-process is to provide information to DG TAXUD regarding possible application optimisation.
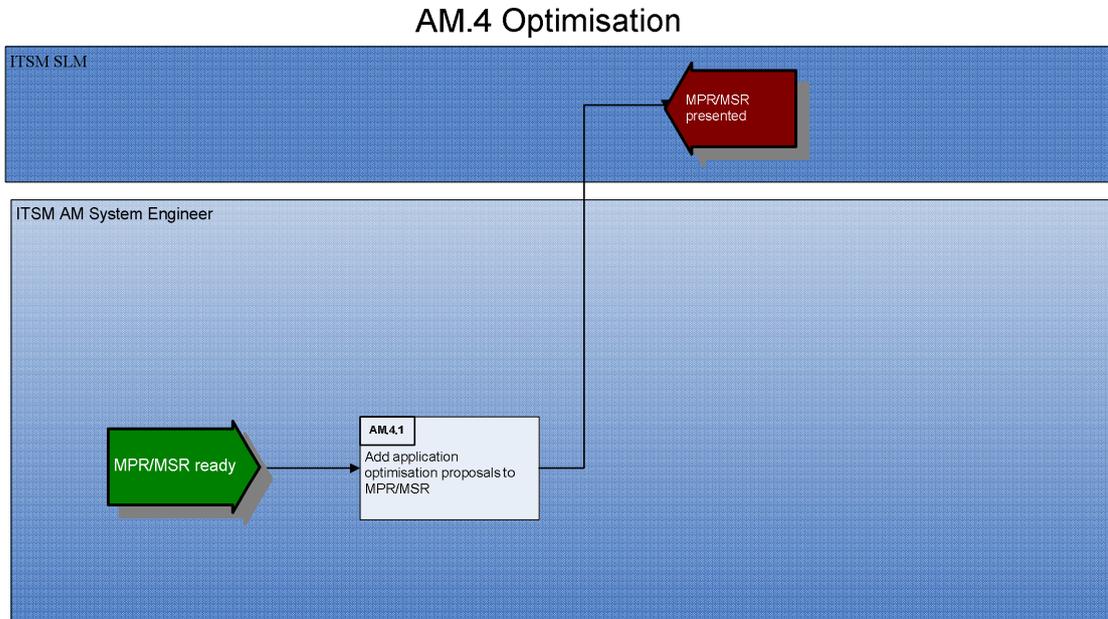
AM.4 Optimisation

Figure 4-7: AM.4 Optimisation

AM.5 Application Management - Operation

The goal of this sub-process is the recurrent operation of the applications.
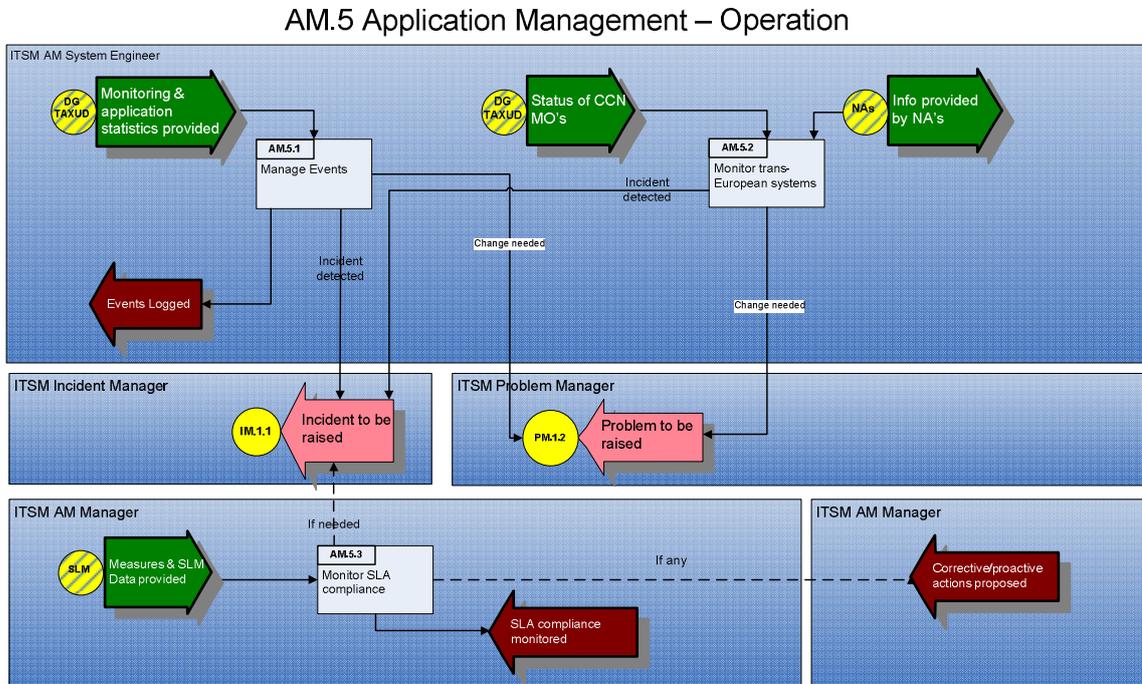
Figure 4-8: AM.5 Application Management - Operation

RACI Table for AM

	Activity	ITSM Application Manager	ITSM AM System Engineer	ITSM AM Deployment Coordinator	ITSM AM Document Review Coordinator	ITSM Reviewer	ITSM Tester	ITSM Planning Coordinator	ITSM Release Manager	ITSM Service Desk	ITSM Change Manager	ITSM Capacity Management	ITSM ICT Infrastructure	ITSM Business Perspective	DG TAXUD A4/CPT	DG TAXUD A4/ISD	DG TAXUD A4/APM and related ITSM AM SPOC	DG TAXUD A3/Tax	DG TAXUD A3/Exc	DG TAXUD A3/Cust	DG TAXUD A3/LISO	3rd parties (Dev,DIGIT,CCN,NAs, …)
AM 1.1	Assign resource	A	I	R		C	I						I	I								
AM 1.2	Perform Artefacts review		I		A	R				I												
AM 1.3	Alert DG TAXUD	A			I	R									I	I	I	I	I	I	I	
AM 1.4	Attend meeting organised by DG TAXUD	I			A	R				I												
AM 1.5	Knowledge Sharing	A	I	I	R	I	I	I		I	I	I	I	I								
AM 2.1	Update Operational Planning	C	C	C			C	AR	C		C		C	C	I	C	C	C	C	C		
AM 2.2	Build Operational Planning for Deployment item	I	R	AR			I	C	I		I	C	C	I	I	C	C	C	C	C	C	

AM 2.3	Organise procurement of needed resources	I	C	AR				I			I	R	R	I	R	R	I	I	I	I	I	C
AM 2.4	Verify Operational Planning resources & consistency	A	C	R			C	C	C		I	I	C	I	I	I	C	C	C	C	C	
AM 2.5	Adjust Operational Planning	I	C	AR			C	C	C		I	C	C	I	I	I	C	C	C	C	C	C
AM 2.6	Alert Business Perspectives of planning issues	I	I	AR			I	C	I		I	I	I	I	I	I	I	I	I	I	I	
AM 2.7	Publish Operational planning (weekly)	A	I	R			I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
AM 3.1	Initialise Deployment Operations	I	C	AR			I	C	C	I	I	I	I	I		I	I	I	I	I	I	
AM 3.2	Keep Deployment Planning up-to-date	I	C	R			C	C	C		I	I	I	I	I	C	C	C	C	C	C	
AM 3.3	Acquire Knowledge	A	R	R			R	I	R	R	I	I	I	I		C	C	C	C	C	C	C
AM 3.3bis	Check environments	A	R	R			I		I			C	C	I		I	I	I	I	I	I	
AM 3.4	Check release completeness	A	R	R			R	I	R		C	C	C	I	I	C	C	C	C	C	C	I
AM 3.5	Install & Prepare testing	A	R	R			C	I	I				R	I	I	C	C	C	C	C	C	
AM 3.6	Perform Pre-SAT	A	C	R			R	I	I				I	I	I	I	I	I	I	I	I	
AM 3.7	Perform Qualification	A	R	R			R	I	I				I	I	I	I	I	I	I	I	I	
AM 3.8	Perform SAT	A	R	R			R	I	I				I	I	I	I	I	I	I	I	I	
AM 3.9	Launch the delivery to production	A	R	R			C	I	C	I	C	C	C	C	I	C	C	C	C	C	C	

AM 3.10	Assist NAs for gateways & mail servers configurations	A	R	R			I	I					I	I	I	C	C	C	C	C	C	
AM 3.11	Prepare CT environments	A	R	R		R	I	I	I		I	C	C	I	I	I	I	I	I	I	
AM 3.12	Release the software to NAs	A	R	R			I	I	I	I		I	I	I	I	C	C	C	C	C	
AM 3.13	Prepare start of operations	A	C	R			C	C	I	C		C	C	I	C	C	C	C	C	C	
AM 3.14	Put application in production	A	R	R			C	C	C	I	C	C	C	C	I	C	C	C	C	C	C
AM 3.15	Prepare installation report	A	R	R			I	I	I		I	I	I	I	I	I	I	I	I	I	
AM 3.16	Start of operations follow-up	A	C	R				I	I	I			C	I	I	C	C	C	C	C	
AM 3.17	Execute Roll-back plan		I	I			AR	C		I				I		I	I	I	I	I	
AM 4.1	Add application optimisation proposals to MPR/MSR	I	AR																		
AM 5.1	Manage Events	I	AR																		
AM 5.2	Monitor Trans European Applications	I	AR																		
AM 5.3	Monitor SLA Compliance	I	CI	AR																	

Table 4-1: AM RACI Table

Communication interfaces with DG TAXUD

Interface description communication with DG TAXUD	Direction	Format
AM 1 Perform Technical reviews		
DG TAXUD (or 3rd party approved by DG TAXUD) announces artefact submission	Incoming	E-mail
DG TAXUD (or 3rd party approved by DG TAXUD) sends documentation to be reviewed	Incoming	E-mail
DG TAXUD (or 3rd party approved by DG TAXUD) invitation to meeting	Incoming	E-mail, Phone
Alert if severe defect found	Outgoing	E-mail
Log and comments	Outgoing	E-mail, ITSM SMT
AM 2 Prepare Planning		
CAPS, SAPS, SMM, … Meetings	Incoming	Minutes
Detailed Operational Planning (ITOP)	Outgoing	E-mail, ITSM Web Publishing Platform
AM 3 Conduct Deployment		
Application submitted for deployment by x-Dev	Incoming	E-mail, ftp server
Environment Acceptance Report in preSAT (DLV.8.4.3.1.1.3.1)	Outgoing	CIRCA
Addendum to Test Plan (DLV.8.4.3.1.1.6)	Outgoing	CIRCA
Daily presSAT report (DLV.8.4.3.1.1.3.2)	Outgoing	E-mail
PreSAT report (DLV.8.4.3.1.1.3.3)	Outgoing	CIRCA
PreSAT acceptance	Incoming	E-mail
Environment Acceptance Report in SAT (DLV.8.4.3.1.1.4.1)	Outgoing	CIRCA
SAT report (DLV.8.4.3.1.1.4.3)	Outgoing	CIRCA
Daily SAT report (DLV.8.4.3.1.1.4.2)	Outgoing	E-mail
SAT acceptance	Incoming	E-mail
Delivery Qualification Report (DLV.8.4.3.1.1.5)	Outgoing	CIRCA
Delivery Qualification Report acceptance	Incoming	E-mail
ITSM Release Notes for users	Outgoing	E-mail
Installation plan (DLV.10.5.1)	Outgoing	CIRCA
Installation authorisation	Incoming	E-mail
Installation report (DLV.10.5.2)	Outgoing	CIRCA
NAs start of operations plan	Outgoing	CIRCA

Table 4-2: AM Communication interfaces with DG TAXUD

4.4   Level 3: Application Management

Procedure	
	... covers the following: ... ws of the artefacts ... ... planning (AM.2); ... ew software, new ... ... (AM.4); ... ... cific structure has been ... roles[1] created.
	<u>AM.1 Perform Technical Review</u> **AM.1.1 Assign Resources** ITSM is notified from the DTMs received by e-mail from the x-

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[1] For Key roles definition, please consult Section 4.6.2 of the FQP main document.

AM.1.1 Assign Resource	Dev teams. Furthermore the planned DLVs for the next month can be discussed in the monthly coordination meetings (SMM) with DG TAXUD A3/Tax, Exc or Cust. The Service Desk creates a ticket in the ITSM SMT each time a review is requested to ITSM AM by the QA contractor of DG TAXUD A3/A4. The ITSM AM Document Review Coordinator, with the support of the ITSM AM Team Leaders, checks the resource availability and assigns a resource for the Technical Review. This is done by communicating the review tasks received from the QA contractor of DG TAXUD A3/A4 to the AM Reviewers; AM Reviewers are selected according to their competencies for certain applications and/or Business Thread. A request is also sent to ITSM Infrastructure and other ITSM Teams by the ITSM AM Document Review Coordinator if they need to contribute to the review (e.g. for an IPR review) so that they can assign their resources in advance. Note: A reviewer may be any team member of the ITSM (AM, BP, SD, Infra, …), depending on the competencies requested for the review. However, most of the time, it will be limited to AM review.
AM.1.2 Perform Artefacts Review	**AM.1.2 Perform Artefacts Review** The AM Reviewer, when assigned to a review task, performs the technical review and feeds comments to the review organiser designated by DG TAXUD A3/A4 (the QA contractor) by using the comments database provided by the QA contractor. The AM Reviewer concerned should be informed about the document to build knowledge on the application linked to the artefact.
AM 1.3 Alert DG TAXUD if a severe defect is found	**AM.1.3 Alert DG TAXUD if a severe defect is found** If a severe defect is found or the quality of the reviewed document is not sufficient, DG TAXUD A3/A4 is notified through the QA contractor directly by the AM Reviewer assigned to the review.
AM 1.4 Attend meeting organised by DG TAXUD	**AM.1.4 Attend meeting organised by DG TAXUD** In case some comments need discussions, the QA contractor may organise a review meeting. The AM Reviewer assigned to the technical review is then attending those meetings, which is most of the time organised via a conference call with the requested stakeholders: • DG TAXUD A3/Tax, Exc or Cust; • DG TAXUD A4, depending on the document in review; • The QA contractor;

- The ITSM representative, normally the reviewer;

- The representative of x-Dev, the author of the document.

In case of major reviews, a meeting can be organised at DG TAXUD A3/A4 offices.

AM 1.5
Knowledge sharing

AM.1.5 Knowledge sharing

At the end of the review process, a verification database (IVE) is received from the QA contractor, who has checked the correct implementation of agreed comments by the author of the document.

The ITSM AM Document Review Coordinator communicates the IVE database to the AM Reviewer (and other ITSM reviewers if any), who will keep this information for facilitating future deployments.

AM.2 Prepare Planning

The ITOP (Installation and Testing Operational Plan) is firstly based on Service Requests arriving from the ITSM Business Thread Managers (BTM) (see Annex 26 ITSM Demand Management for further information). These Service requests should be the only trigger for planning.

When a BTM receives the Service Request, he/she sends it to the ITSM AM Planning Coordinator in charge of the ITOP. The ITSM AM Planning Coordinator then reviews the Service Request and checks with the ITSM AM team and ITSM AM Manager the availability of resources (including the ITSM Testing), as well as the related effort for this activity. Based on this information, a planning is proposed to DG TAXUD A3 (Tax, Exc, Cust or DG TAXUD A4/APM and CPT). If DG TAXUD A3/A4 approves this proposition, the initial planning serves as a baseline. If not, a new iteration is done to propose a new planning (e.g. proposing new dates and eventually planning changes for other activities).

Another important source of update is coming from meetings organised by DG TAXUD A3 and A4 (CAPS, SAPS, SMM, …), which allow correcting the planning to fit DG TAXUD A3 needs and ITSM availability.

The goal of this sub-process is to have at all time an up-to-date planning for all activities linked to the deployment of applications and fixes to existing applications.

The schema below describes the relationship between the various planning handled by ITSM:
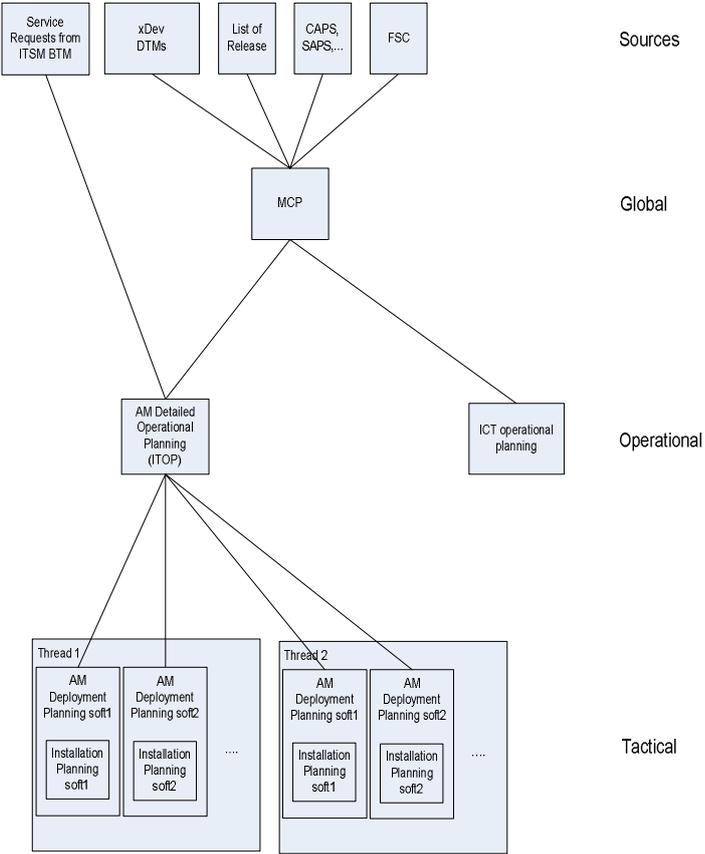

Figure 4-9: Relationship between planning actors

Deployment planning is established by the ITSM AM Planning Coordinator with the input of AM System Engineers and the

ITSM Testers, and maintain by the ITSM AM Deployment Coordinator.

The ITOP is then consolidated and maintained by ITSM AM Deployment Coordinator by aggregating the milestones of the various deployment planning documents (maintained by the ITSM AM Deployment Coordinator).

Note: The ITSM AM Planning Coordinator also contributes to the overall quality process by creating planning templates for AM and internally reviewing AM documents before they are submitted to ITSM Quality Control.

Each deployment planning contains the testing planning, as well as an installation planning, which details the steps requested to install the application in production (including the training and communication).

AM.2.1

Update Operational Planning

AM.2.1 Update Operational Planning

This activity consists of maintaining an up-to-date version of the ITOP.

To maintain this planning the ITSM AM Planning Coordinator collects planning information from the Service Requests.

The AM System Engineers and ITSM AM Deployment Coordinator provide planning information for new deployments and updates of their ongoing deployment operations.

The end result of this activity is an updated ITOP that is sent by e-mail every Friday to the ITSM Business Threads Managers (ITSM BP), the DG TAXUD A3/A4 sector leaders, ITSM operations, ITSM SD, ITSM ChM, ITSM RM, x-Dev teams, DG TAXUD A3/Tax, Exc and Cust, DG TAXUD A4/ISD, DG TAXUD A4/APM and DG TAXUD A4/CPT. It is also published on the ITSM Publishing Platform.

For all agreed upon initial plan, the ITOP constitutes the baseline. All changes agreed afterwards with DG TAXUD A3 or A4 concerning the delivery dates will generate a re-baselining of the initial plan.

Detailed plan example:

Figure 4-10: Operational planning

AM.2.2

Build Operational Planning for Deployment item

AM.2.2 Build Operational Planning for Deployment Item

When a Deployment is announced by the ITSM Release Manager, the ITSM AM Planning Coordinator together with the ITSM AM Deployment Coordinator collect the information in order to prepare the installation plan :

- A description of the content of the deployment (components, documentations, hardware, COTS,…);

- A description of the various environments (preSAT, SAT, CT, production);

- Prerequisites: IPM, IPR, TDD;

- Infrastructure requirements: hardware, Operating System, IP addresses of the servers, software versions and releases, licences needed, COTS ;

- A milestone plan (giving the main target dates for the release).

Whether it is for a new application, a release or a patch – a Deployment planning needs to be built for the Deployment operation. This plan is a Gantt chart built by the ITSM AM Deployment Coordinator and ITSM AM Deployment Coordinator. It starts as soon as the Deployment Document is communicated by the ITSM Release Manager and ends at the end of the "after care" period, after the item has been put in production. The Deployment plan includes tasks to be done by the different parties involved (ITSM Testing, ICT Infrastructure, document authors, trainers or 3rd parties under DG TAXUD A3's control.

All documents in the context of a deployment are stored on the ITSM server. They can be consulted by DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM or A4/CPT by requesting them to the ITSM AM Deployment Coordinator .

The ITSM AM Deployment Coordinator capitalises on planning templates to build the detailed plan for the deployment item (the planning templates used by AM are stored on the ITSM Publishing Platform). He/she also requests necessary resources from the AM Team Leader and ensures through internal coordination that non-AM parties (ICT Infrastructure Management for instance) are able to deliver the necessary results in time.

The progress of all activities is checked weekly by the ITSM AM Deployment Coordinator. If there is any slippage or problem, this is escalated and reported to the management and DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM and DG TAXUD A4/CPT

This data is maintained in the deployment planning by the ITSM AM Deployment Coordinator.

The deployment planning is consolidated in the ITOP by the ITSM AM Planning Coordinator.

The planning is built on the requirements received from DG TAXUD A3/Tax, Exc and Cust/DG TAXUD A4/APM, as well as from DG TAXUD A4/CPT. Input can also be collected from all other stakeholders (DIGIT, ISD, CCN, ITSM Infra,…). This planning is followed up by ITSM AM Deployment Coordinator and the ITSM AM Manager.

AM 2.3 Organise procurement of needed resources	**AM.2.3 Organise procurement[2] of needed resources**

AM.2.3 Organise procurement[2] of needed resources

New deployments may need resources in order to be installed, tested and deployed (hardware, software, development licence keys, queue reservations…). Therefore, the ITSM AM Deployment Coordinator consults the ITSM Capacity Manager to define the proper course of action to obtain the necessary resources (purchase order, licence re-allocation…) and use lead-time planning template to compute the availability date of the resources concerned. Please refer to the Annex 18 ITSM Capacity Management – CAP.3 Manage Resource Capacity for more details [R5].

The ITSM AM Deployment Coordinator also ensures that the operational actions needed to procure the resources are properly assigned. DG TAXUD A4 CPT or A4/ISD must be involved in case an RFA has to be launched. The ITSM AM Deployment Coordinator informs the ITSM AM Planning Coordinator of any update to be applied to the ITOP concerning the milestones of the delivery of the needed resources.

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[2] Please see also Section 4.6.2 of the FQP main document for more explanation on ITSM Procurement Manager.

AM.2.4 Verify Operational Planning resources & consistency	## AM.2.4 Verify Operational Planning resources & consistency The ITSM AM Planning Coordinator reviews the ITOP together with the ITSM AM Deployment Coordinator. This review allows confirming/updating the operational planning milestones, as well as addressing planning issues for each item. Resources allocation and overall consistency have also to be checked and milestones dates have to be computed or updated accordingly.
AM.2.5 Adjust Operational Planning	## AM.2.5 Adjust Operational Planning If the detailed planning of a new deployment item leads to a delivery date, which is not compliant to the MCP, the ITSM AM Planning Coordinator, in coordination with the ITSM AM Deployment Coordinator and ITSM AM Manager, will try to improve this delivery date with the appropriate 3rd party (Dev-teams, ITSM Infrastructure, CCN/TC, …). This improvement may be achieved by changing tasks priority, adding resources. If no agreement can be found with the 3rd party, DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM and DG TAXUD A4/CPT is informed and takes the final decision.
AM.2.6 Alert Business Perspective of Planning issues	## AM.2.6 Alert Business Perspective of Planning issues After the ITOP has been adjusted, if it still does not allow delivering some items on time with regards to the MCP, an alert is raised to the ITSM Business Perspective by notifying the planning issue and suggesting mitigation measures (e.g. priority changes, scope reduction...).
AM.2.7 Publish Operational Planning (weekly)	## AM.2.7 Publish Operational Planning (weekly) The ITSM AM Planning Coordinator is in charge of publishing the ITOP on a weekly basis (every Friday) on the ITSM Publishing Platform. It is also sent by e-mail to the:: • ITSM Business Perspective; • ITSM Infrastructure Management; • ITSM Service Desk; • ITSM Release Management; • ITSM Change Management; • Application Development 3rd parties (x-Dev); • DG TAXUD A3/A4 Sector leaders; • DG TAXUD A3/Tax, Exc and Cust; • DG TAXUD A4/CPT; • DG TAXUD A4/APM; • DG TAXUD A4/ISD.

AM.3 Deployment

A deployment can be a new application, a release, a patch or a hotfix. By design, the deployment process starts only after the FAT performed by the developers (x-Dev) is successful. The global process leading to the release in production of the piece of software is similar whatever the nature of the software. However the amount of effort put into the testing of the software, as well as the lead time will differ depending on the testing path and the software nature:

- The two paths for testing a software before putting it in production are:
  - o Pre-SAT followed by SAT (+ optionally CT);
  - o Qualification (+ optionally CT).

- The software nature will also determine the effort that will be generated in order to perform a correct testing. This effort could be split into 3 categories (Minor, Medium and Major):
  - o Minor: When we speak about a hotfix or patch with minor updates and no involvement of NAs, which requests a small qualification. It is then handled by the AM SPOC, which plays the role of ITSM AM Deployment Coordinator;
  - o Medium: When it is about a major deployment or a minor deployment, but with NAs involvement. It is then handled by a dedicated ITSM AM Deployment Coordinator or an ITSM AM Team leader;
  - o Major: In case of Trans-European deployment or infrastructure project (e.g. CCN upgrade, DMZ move, …), for which a dedicated ITSM AM Deployment Coordinator is nominated.

On top of this defined structure, the ITSM AM Manager ensures the global coordination of all AM related activities, and the ITSM AM Planning Coordinator controls all planning related matters.

AM 3.1

Initialise
deployment
operation

AM.3.1 Initialise deployment operation

The process of initialising a new deployment is triggered by the ITSM Business Thread Managers through request to the ITSM AM Planning Coordinator and the ITSM AM Manger, which one assigns an ITSM AM Deployment Coordinator, as well as ITSM AM System Engineer and ITSM Tester to the deployment.

The following tasks are done by the ITSM AM Deployment Coordinator:

- If required, request DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM to organise a meeting to discuss the requirements of the deployment. If needed, ITSM AM can also request training sessions with the Application Development 3rd party or with DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM;

- Communicate the milestones (from ITOP prepared by the ITSM AM Planning Coordinator) to all relevant stakeholders (ITSM Infrastructure, x-Dev teams, DIGIT, CCN/TC ...).

  The ITSM AM Deployment Coordinator, together with the ITSM AM System Engineer, then prepares the Deployment plan containing the requirements for this specific deployment, as well as the installation steps.

  Note: If at some point DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM requests the deployment to be frozen, the information will be communicated by the ITSM AM Deployment Coordinator who will inform by e-mail ITSM management and all relevant ITSM staff concerned by the deployment (e.g. ITSM AM, SD RM, Infra…).

AM 3.2

Keep Deployment Planning up to date

AM.3.2 Keep deployment planning up to date

As soon as the deployment project is initialised, weekly reviews take place between the ITSM AM Planning Coordinator and the ITSM AM System Engineer or the ITSM AM Deployment Coordinator in order to keep the deployment planning up to date and escalate any difficulty and stay in line with the ITOP baseline (the escalation path is: from the ITSM AM System Engineer or the ITSM AM Deployment Coordinator to the ITSM AM Planning Coordinator, who will then escalate to the ITSM AM Manager, who will escalate to the ITSM BTM if need be). This activity begins as soon as the deployment project starts and ends after the last roll-out in an NA.

AM 3.3

Acquire Knowledge

AM.3.3 Acquire Knowledge

The ITSM AM System Engineers in charge and the AM Testers work together with the development team (x-Dev) to get all necessary information about the software to be deployed and training (to be given by the x-Dev teams) can be requested to DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM via DG TAXUD A4/CPT.

They also collect all the supporting documentation for the software (configuration details, installation procedures, test scenarios, Conformance Testing scenarios…).

The deployment document reaches its completed and final

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	version during this phase. The information and knowledge collected are used to: • Update the information about the release and hosting requirements for the structure(s) that will host the application testing and production; • Complete the CI list template for Configuration Management. **Note:** This phase has to happen well in advance of the actual deployment (several months for a major release for instance). If the release content changes after that, a formal decision must be made between the customer stakeholders, the ITSM AM Deployment Coordinator and the ITSM AM System Engineer as to which extra steps must be taken in the normal process. For instance, if only a resource file (e.g. a bitmap) is changed in the delivery then the process can be continued as planned with only a documentation update. For a more important change (e.g. a programme is added to update automatically the production DB and the programme logic is completely changed), decision could be taken to start again from the start disregarding the tests run so far.
AM 3.3bis Check environments	## AM.3.3bis Check environments The ITSM AM System Engineer checks that the various environments are ready and delivered according to specifications by connecting to the environment and checking all software mentioned in the installation manual. If not OK a ticket is raised by sending an e-mail to the ITSM Service Desk. He/she also checks the connectivity between the infrastructure and the testing locations, and coordinates with ITSM Infra in case of problem. He/she collects the Installation reports from ITSM Infrastructure and produces an Environment Acceptance report (only for preSAT and SAT environment), which is then sent to the ITSM PMA for upload on CIRCA after validation by ITSM Internal QC (with copy to the ITSM Release Manager). The upload on CIRCA constitutes the official delivery for acceptance to DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM; the document may be audited and a re-SfA requested if need be.
AM 3.4 Check Release completeness	## AM.3.4 Check release completeness The ITSM AM System Engineer receives the software to be deployed from the x-Dev 3rd party (via e-mail, CD, or via their ftp site), together with the associated documentation. He/she checks that all the documentation is provided (release note, test cases …).

He/she reports to the ITSM Release Manager and the ITSM AM Deployment Coordinator about any incompleteness of the release material; the ITSM Release Manager would then ask for completion in case the full package has not been delivered.

If the release is not complete, the problem is also escalated to DG TAXUD/A3 Tax, Exc, Cust or DG TAXUD A4/APM, as well as to DG TAXUD A4/CPT.

Once the package is complete, the ITSM AM System Engineer performs a last check of the environment towards the release note in order to identify any potential change (e.g. to the configuration requirements) and ensure a final quality check of all artefacts.

| AM 3.5

Install & Prepare
Testing | ## AM.3.5 Install & Prepare Testing |

AM.3.5 Install & Prepare Testing

The preparation of the testing (repeated for preSAT and SAT) includes a number of operations that are described below:

- For major and complex deployments, a preliminary kick-off will take place at this stage (i.e. before the start of preSAT) in order to ensure proper coordination between all stakeholders;

- Review of the FAT report by the ITSM Testing Team;

- Addendum to test specifications (this is done once before the testing campaign begins): The ITSM Tester complements the test specifications received from the 3rd party development team with the non-functional requirements and in particular: regression, installation, deployment, performance, resource use and stress requirements;

- Setup the Test Environments (this can be done each time a new testing cycle is needed): The ITSM System Engineer prepares the testing environments (preSAT and SAT or qualification), including the new software installation and the test data, in conformance with the test specifications and the addendum.

The setup of the test environment is reported to the ITSM Release Manager and to DG TAXUD A3 and A4, as follows:

The ITSM AM System Engineer proceed with the installation of the software in compliance with recommendations delivered by the x-Dev teams and produces an installation report (eventually accompanied with an addendum to test specifications), which is sent to the ITSM PMA for upload on CIRCA after validation by ITSM Internal QC (with copy to the ITSM Release Manager). The upload on CIRCA constitutes the official delivery for acceptance to DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM; the document may be audited and a re-SfA requested if need be.

AM.3.6 Perform preSAT	**AM.3.6 Perform preSAT** The purpose of the preSAT (pre Site Acceptance Test) is to make sure that the quality of software delivered by x-Dev 3rd parties is compliant and able to pass in SAT. The tester has to test all the test cases described in the test plans provided by x-Dev team and the implemented change requests and defects described in the release notes or Delivery Qualification Report (DQR).

The following deliverables are produced during the preSAT:

- Addendum to the test plan (if requested by DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM)

- Minutes of the Kick-Off meeting;

- Daily Status report (including the Test Incident Report (TIR) database);

- Minutes of the Closure Meeting;

- PreSAT Report.

The following documents are distributed for information to all participants:

- Minutes of the Kick-Off meeting;

- Minutes of the Closure meeting.

During the preSAT the following people are involved:

- The Tester(s);

- The Development contractor (x-Dev);

- The ITSM AM System Engineer.

The preSAT cycle starts with a kick-off conference call and ends with an end of preSAT conference call; both meetings gathering all parties (see here above) and DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM representatives.

Incidents found during the preSAT are logged in a TIR database for every application.

A daily report of the test progress (including the TIR database) is also sent to x-Dev, the QA Contractor and DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM by e-mail. This e-mail also describes in general terms the progress of the current testing and the main issues encountered.

AM.3.7 Perform Qualification	**AM.3.7 Perform Qualification** The purpose of the qualification is to test a patch/hotfix in a limited period of time. During qualification, testing is restricted to limited number of problems; full regression testing or performance tests are not done. The following deliverables are produced: • Status readiness e-mail when testing starts; • Status readiness e-mail when testing finishes; • Qualification report. No kick-off meeting is planned but when the testing starts and finishes an e-mail is sent to DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM, the x-Dev and QA contractors. Incidents are opened through the ITSM Service Desk for each issue detected during the qualification. DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM decides if the software can be installed in production or conformance environment after having received the result of the qualification.
AM 3.8 Perform SAT	**AM.3.8 Perform SAT** During the SAT (Site Acceptance Test), the test scenarios of the Test Plans are executed (as agreed during the Kick-off meeting). Where necessary, additional test cases are created by the tester in relation with: • Non-functional requirements and in particular: regression, installation, deployment, performance, resource use and stress requirements; • Extra test cases defined to refine and complement the test specifications from the Development contractor (x-Dev). These are documented in an addendum to the test plan that will be delivered at the end of the SAT to DG TAXUD A3 Tax, Exc or Cust/DG TAXUD A4/APM and DG TAXUD A4/CPT. As in the preSAT, an incident is raised to the ITSM Service Desk for every deviation between the actual test result and the expected result as described in the Test Plan. All incidents are reported in the TIR database. During the SAT no representative from the Development contractor (x-Dev) is authorised to attend and no further coordination with them is allowed. During the SAT the following people are involved: • The Tester;

- The ITSM AM System Engineer.

- The QA contractor.

A daily report of the test progress (including the TIR database) is sent to the Development contractor (x-Dev), the Quality Contractor and the Commission by e-mail. This e-mail also describes in general terms the progress of the current testing and the main issues encountered.

The following deliverables are produced during the SAT:

- Addendum to the test plan (if requested by DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM);

- Minutes of the Kick-Off meeting;

- Daily Status report (including the Test Incident Report (TIR) database);

- Minutes of the Closure meeting;

- SAT Report.

In addition, the following documents are distributed for information to all participants:

- Minutes of the Kick-Off meeting;

- Minutes of the Closure Meeting.

If there are remaining bugs and the DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM decides that the software is nevertheless going to production, the ITSM Tester opens an incident per issue found during the SAT.

AM 3.9

Launch the delivery to production

AM.3.9 Launch the delivery to production

DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM uses all Test reports to decide if software is ready for production. If DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM authorises the software to be put in production the ITSM AM Deployment Coordinator gets the information and triggers the roll-out of the software.

The first task for ITSM AM is to organise this roll-out and the associated "after care" support by:

- Assigning resources to the different tasks;

- Liaising with 3rd parties (e.g. DIGIT, CCN/TC);

- Finalising the installation detailed planning.

	Note: The ITSM AM Deployment Coordinator role deals more with the communication, coordination and validation aspects, while the ITSM AM System Engineer role deals with the operational aspects.
AM 3.10 Assist NAs for gateways & e-mail servers configurations	## AM.3.10 Assist NAs for gateways & e-mail servers configurations For Trans-European applications, gateways and/or e-mail servers configuration (ACF forms) are done via the ITSM AM System Engineer. He/she fills the form with the information provided by x-Dev (queue names, ips…) and e-mails it to CCN/TC (via an incident opened in the ITSM SD), which will verify it and put in place the new rules. For NAs-side configuration, the ITSM AM System Engineer pre-fills in the form (with already available information) and passes it to the NA via an incident opened at the ITSM SD. Once completed by the NA, the form comes back to the ITSM AM System Engineer (via the ITSM SD) who sends it to CCN/TC for verification and implementation.
AM 3.11 Prepare CT environments	## AM.3.11 Prepare CT environments For Trans-European applications, the ITSM AM System Engineer prepares the CT environment so that the NAs can run their Conformance Tests; it should be noted that the environment prepared by ITSM AM is only the part of the application that is hosted at ITSM or DIGIT, while the local part is dealt with by the NAs themselves. The ITSM AM System Engineer sets-up the test data defined by x-Dev for the Conformance Testing.
AM 3.12 Release the software to NAs	## AM.3.12 Release the software to NAs If DG TAXUD gives the green light through the ITSM AM Deployment Coordinator, the software to be installed by the NAs is released via the ITSM Webportal. In fact, the accepted software that needs to be installed by the NAs is first archived by the ITSM Release Manager in the DSL to serve as a baseline, and then published on the ITSM Webportal so that the NAs can download it.
AM 3.13 Prepare start of operations	## AM.3.13 Prepare start of operations In case a Trans-European application needs to be deployed, and when the ITSM AM System Engineer has received the confirmation of CT readiness from the NA and the CT plan from x-Dev, he/she is responsible for: • Global communication to explain and provide the "GO"

	information (Date, tasks expected from MSA);
	• Following up each MSA regarding CCN communication channel verification with central application and MSA application;
	• Weekly report to DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM and DG TAXUD A4/CPT regarding who is ready for Production / went into Production /status of connectivity configuration / ... ;
	• ACF template preparation / communication / information exchange with MSAs;
	• MSA help and support regarding communication /connectivity issue.
	A NAs Start of operations plan is created/updated and sent to the specific NA (with copy to DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM and DG TAXUD A4/CPT).
AM 3.14 Put application in production	**AM.3.14 Put Application in production** If DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM confirms the "Go" through the ITSM AM Deployment Coordinator; the ITSM AM System Engineer puts the software in production. The detailed steps depend on the application and the technologies involved but generally consists of: • Backup the database and the software current version; • Stop the application; • Install the new software; • Run a db update if relevant; • Restart the application; • Check the good functioning of the application.
AM.3.15 Prepare installation report	**AM.3.15 Prepare Installation report** Immediately after the "go live", an installation report is produced by the ITSM AM System Engineer for all software's installed in production by AM (on DIGIT and ITSM Infra equipments). The installation report is sent to the ITSM PMA for upload on CIRCA after validation by ITSM Internal QC (with copy to the ITSM Release Manager). The upload on CIRCA constitutes the official delivery for acceptance to DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM; the document may be audited and a re-SfA requested if need be.

AM.3.16 Start of operations follow-up	## AM.3.16 Start of operations follow-up

AM.3.16 Start of operations follow-up

After installation in production, the ITSM AM Deployment Coordinator ensures the follow-up of the start of operations. He/she:

- Communicates the effective start of operations of the NAs via the ITSM SD;

- Synchronises with the NAs on different activities of connectivity;

- Assists the NAs during the start of operations;

- Supports the NAs during the "after care" period; the duration of the "after care" is defined in common agreement with DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM, and DG TAXUD A4/CPT.

The NAs Start of operations plan is updated and sent to the specific NA (with copy to DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM and DG TAXUD A4/CPT).

AM.3.17 Execute Roll-back plan

AM.3.17 Execute Roll-back plan

If there is a problem with the "go live" of the application, the ITSM AM Deployment Coordinator, in agreement with DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM, may order the launch of the roll-back plan that is to be executed by the ITSM AM System Engineer in order to come back to the situation prior to the installation in production.

AM.4 Optimisation

AM.4.1 Add application optimisation proposals to MPR/MSR

AM.4.1 Add application Optimisation proposals to MPR/MSR

ITSM adds a section in the MSR/MPR reporting to provide optimisation recommendations for applications to DG TAXUD A4/CPT. Those recommendations can be information about future obsolescence of applications, end of support of COTS or improvements to be done to support better our operations (e.g. new page on web site to monitor the application, architectural change to have a better reliability, …).

AM.5 Application Management - Operation

Introduction

The ITSM AM operation sub-process consists of the following (note that most sub-processes are already covered in other processes and are not repeated in AM.5, please check their own

main process):

- Event Management (see AM.5.1, AM.5.2);

- Incident Management (see Annex 12 Incident Management [R6]) – this includes the technical support which is described in WP.8.1.2.3 WP.8.1.2.4;

- Request fulfilment (including Access Management activities see Incident Management WP.8.1.2.2);

- Investigate Problems related to Applications (see Annex13 Problem Management [R7], and more particularly PM.1);

- Evaluate changes (see Annex 15 Change Management [R8], and more particularly ChM.2);

- Implement changes (see deployment AM.3);

- Support IT service continuity for building/maintaining recovery plans (see Annex 18 IT Service Continuity Management [R9], and more particularly SCM1, SCM2, SCM4);

- Get trained on recovery plans (see Annex 18 IT Service Continuity Management [R9], and more particularly SCM2);

- Test recovery plans (see Annex 18 IT Service Continuity Management [R9], and more particularly SCM2);

- Execute system and service recovery plan in the case of a crisis (see Annex 18 IT Service Continuity Management [R9], and more particularly SCM3).

Another recurring task is the monitoring of the compliance to the SLA objectives that is described in AM 5.3.

AM.5.1 Manage Events

AM.5.1

Manage Events

This activity consists of examining the events coming from the various monitoring tools and logs and conducting actions based on these events. The resulting actions can be to resolve a potential incident on the spot (e.g. removing temp files before the file system is full), or having an incident or ticket created in the ITSM SMT. Supposed problems that are identified will be created as incidents (via the ITSM Service Desk) so that they are analysed before becoming problem records; this is done by the ITSM AM System engineer by sending an e-mail to the ITSM Service Desk.

All such events should be logged so that history can be analysed and proactive actions taken to optimise the performance of applications. Significant events from DIGIT hosted applications are reported to the Service Desk as incidents by DIGIT

AM.5.2 Monitor Trans-European applications

AM.5.2

Monitor Trans-European applications

This activity is nearly the same as the monitoring performed under ITSM Infra (Inf.5.3), except that most of the infrastructure is hosted by the NAs. This means that information comes from multiple sources and is focused mainly on applications. The activity consists of examining the events coming from these various sources and conducting actions based on these events. The resulting actions can be the creation of an incident/problem/ticket in the ITSM SMT through an e-mail to the ITSM Problem Manager (there is no direct contact between AM and the NAs).

Even though all events cannot be individually examined they are logged, measured, classified, counted and reported so that history can be analysed and proactive actions can be taken to optimise the performance.

All such events should be logged so that history can be analysed and proactive actions can be taken to optimise the performance of applications.

AM.5.3 Monitor SLA compliance

AM.5.3

Monitor SLA compliance

The ITSM AM Manager, together with the ITSM AM Team Leaders, monitors the SLA compliance of Application Management. In case of SLA breaches, he/she offers corrective and proactive actions to the ITSM AM and may raise incident tickets where needed.

The scope of this monitoring is two-folds:

- SLA targets from the operation of DG TAXUD A3/Tax, Exc or Cust/DG TAXUD A4/APM applications (e.g. Application *xyz* must have a response time < to 3 seconds);

- SLA targets for the internal AM processes (e.g. SAT report must be sent to DG TAXUD A4/CPT within n w-days after completion).