

TRS139/04 D4 – FINAL REPORT

<i>Reference :</i>	<i>TRS139/04 D4</i>	<i>Edition</i>	<i>0.1</i>	<i>Effective Date</i>	<i>21/12/04</i>
--------------------	---------------------	----------------	------------	-----------------------	-----------------

Project Manager	Conor Mullan	Signature:
ESC Manager	Ulrich Borkenhagen	Signature:

Edition history

<i>Edition N°</i>	<i>Effective date or status</i>	<i>Author(s)</i>	<i>Reason</i>
0.1	Draft	Conor Mullan	Creation

(Only the last four editions should be mentioned, with the most recent edition at the top of the list). (The Programme / Project Manager is responsible for the creation and maintenance of the distribution lists).

REVIEWING AND ACCEPTANCE PROCEDURE

Organisation	Name	Date	Reference /Signature
THINK Research	Robin Waggitt	20/12/04	
ISA Software	Ian Crook	20/12/04	



TABLE OF CONTENTS

1	INTRODUCTION.....	2
1.1	Organisation and content of the document.....	2
1.2	Reference Material.....	2
2	PROJECT DESCRIPTION.....	3
2.1	Project Summary.....	3
2.2	Purpose and objectives.....	3
2.3	Scope.....	3
2.4	Methodology.....	4
2.5	Main Deliverables and Milestones.....	4
2.5.1	Overview of Deliverables.....	4
2.5.2	Overview of Milestones and Meetings.....	4
3	Initial Analysis Findings.....	5
4	Template Development and Methodology.....	7
4.1	General Methodology.....	7
4.2	Template Design.....	7
4.3	Testing with Example Templates.....	7
5	Strategic Level Template and Examples.....	8
5.1	Template Overview.....	8
5.2	Key points.....	8
6	Programme Level Template and Examples.....	8
6.1	Template Overview.....	8
6.2	Key points.....	9
7	Project Level Template and Examples.....	9
7.1	Template Overview.....	9
7.2	Key points.....	9
8	Help and Guidance.....	10
9	Recommendations.....	10
10	Annex A: Examples.....	11

TABLES LIST

Table 1 - Overview of Deliverables.....	4
Table 2 - Overview of Meetings and Milestones.....	4



1 INTRODUCTION

This document is the final report of the Eurocontrol HQ TRS139 “Validation Plan Template” project. It summarises the activity and findings of the project in designing and producing a series of templates for ATM validation plans. It should be read in conjunction with the templates themselves and the completed examples provided as part of the project.

The project was undertaken by Think Research and ISA Software under contract to Eurocontrol in late 2004.

1.1 Organisation and content of the document

Section 1 (this section) provides an introduction and overview of this document.

Section 2 is a description of the project and the work breakdown.

Section 3 presents a summary of the analysis findings from WBS1 of this project.

Section 4 presents an overview of the design principles and methodology employed during WBS2 and WBS3 of this project.

Section 5 introduces the Strategy Level Validation Plan.

Section 6 introduces the Programme Level Validation Plan.

Section 7 introduces the Project Level Validation Plan.

Section 8 contains an embedded document that can be extracted and used as a help and guidance supplement to the validation plan templates.

Section 9 gives an overview of where the template information may fit into the Eurocontrol VDR, SST and PMS tools.

Section 10 summarises any outstanding issues and recommendations from the project.

Section 11 contains several embedded example validation plans completed using the templates as part of this project.

1.2 Reference Material

1. The Eurocontrol Operational Concept Validation Methodology v1.2.1, Eurocontrol 2004
2. Introductory Guideline For Validation In EATMP, v1.0, Eurocontrol 26/03/2003
3. TRS139/04, RCV-3-10-0200 Validation Management: Study for the feasibility of Validation Plan templates
4. TRS139.04 Technical Proposal, Think Research and ISA Software, ISA/2004/TRS 139/04
5. TRS139.04 D1 Template Analysis, Think Research and ISA Software, ISA/2004/TRS 139/04
6. TRS139.04 D2 Draft Templates, Think Research and ISA Software, ISA/2004/TRS 139/04
7. TRS139.04 D3 Validation Plan Templates, Think Research and ISA Software, ISA/2004/TRS 139/04



2 PROJECT DESCRIPTION

2.1 Project Summary

The European ATM Systems and Convergence business division (ESC) of the EATM SD Directorate supports establishing the high level operational and technical framework for the EATM Programme. It is responsible for providing the overall roadmap for change initiatives and maintaining the Operational Improvements, as detailed in the ATM Strategy for 2000+. This feeds directly into the work programmes of the contributing organisations (e.g. the Agency, European Commission (EC), R&D Institutes, and Industry).

ESC is responsible for overall EATM Programme Validation Management and is therefore coordinating the development of the:

- Operational Concept Validation Strategy;
- Operational Concept Validation Methodologies;
- Overall Validation Plan in support of the implementation of the ATM 2000+ Strategy.

ESC collects and maintains a centralised, overall view of the validation activities executed at domain and programme level and by other European partners in the Validation Data Repository (VDR). For strategic planning ESC has developed the Strategic Support Tool (SST). The work in EATM is organised using the Project Management System (PMS).

In order to support the organisations contributing to the EATM in the use of the validation methodologies and preparation of validation plans there is the need for templates for the validation planning documents at the different planning levels. These templates should also ease the collection of planning data into the VDR – and, where applicable provide a connection to the PMS and SST.

2.2 Purpose and objectives

The objective of this project is a study of the feasibility and subsequent prototyping of the templates together with a synthesis of the relevant findings.

This project has certain specific objectives, strongly linked to the expected deliverables of the project:

- To produce an analysis of certain baseline strategy documents with the planning issues in particular extracted;
- To produce validation plan templates to enable the capture of validation planning information at various levels and for each of the validation life cycle phases V1, V2 and V3;
- To provide ESC with examples of completed templates and a guidance document for reference;
- To investigate and identify possible data structures and elements which could be later formalised and used to connect with other tools such as VDR, SST and PMS;
- To produce a report detailing project analysis, findings and recommendations.

2.3 Scope

The two main influences on the scope of the project are the validation principles outlined in the Operational Concept Validation Methodology (OCVM) and the relatively short amount of time involved in this phase.

The Validation Plan (or strategy) is the first major output of the OCVM strategic, lifecycle phase. Smaller, more specific plans are also produced during the project/experiment phase. In both cases, these documents shape the overall validation process and are among the first to be produced within the OCVM. In addition, at a higher level (not yet covered by the OCVM), strategic level validation planning takes place and must be covered by this process.



A further limit to the scope can also be taken from the limits to R&D itself. In the 5 levels of maturity defined in the OCVM, only the first three (V1, V2 and V3) are completely contained in R&D so this project will refer to these only.

2.4 Methodology

The work organisation is based on the project methodology given in the ISA Software / Think Research TRS 139/04 D0 (Project Management Plan).

The ESC Validation Plan Template Project is organised in 5 work packages (WBS0, WBS1, WBS2, WBS3, WBS4). Since it is a relatively short piece of work and very much driven by the deliverables, the structure is a straight forward breakdown based on the steps identified in the original TRS.

- WP0 – Project Planning
- WBS1 – Pre-Development Analysis
- WBS2 – Initial Draft of Validation Planning Templates
- WBS3 – Final Draft of Validation Planning Templates and Draft Final Reports
- WBS4 – Final Update and Dissemination of all material

2.5 Main Deliverables and Milestones

2.5.1 Overview of Deliverables

Table 1 lists the deliverables of the ESC Validation Plan Template Project

WBS	Work Package Description	Due Date
WBS0	D0: Project Management Plan	18/10/2004
WBS1	D1: Presentation of analysis findings at EUROCONTROL HQ	27/10/2004
WBS2	D2: Draft Templates and Supporting Documentation	19/11/2004
WBS3	D3a: Final Draft of Templates D3b: Final Report	10/12/2004
WBS4	D4: Final Update of all materials	21/12/2004

Table 1 - Overview of Deliverables

2.5.2 Overview of Milestones and Meetings

Table 2 describes the milestones and meetings of the ESC Validation Plan Template Project.

WP	Deliverable or review	Location	Week Beginning
WBS0	Project Kick-Off Meeting – Presentation of D0	EUROCONTROL HQ, Brussels	18/10/2004
WBS2	Presentation and Working Meeting with ESC Core Team members – D2	EUROCONTROL HQ, Brussels	19/11/2004
WBS3	Presentation and Working Meeting with ESC Core Team members – D3a and D3b	EUROCONTROL HQ, Brussels	10/12/2004
WBS4	Project Wrap-up and preparation for presentation – D4	EUROCONTROL HQ, Brussels	27/01/2005

Table 2 - Overview of Meetings and Milestones



3 Initial Analysis Findings

The purpose of WBS1 was to conduct an analysis of current strategy documents available at various levels and to use these documents, the OCVM and inputs from the SST, VDR and PMS team to produce outlines and recommendations for the production of the actual templates.

To do this analysis, the current documentation (what exists) was compared to what is stated in the best practice methodologies (what is needed). Gaps and overlaps were identified and the outcomes from the analysis acted as the main input to WBS2 of this Project – the Initial Draft of the Validation Planning Templates

The analysis assessed a number of issues including:

What validation planning currently exists (at any level);

What validation planning is needed (at each level);

The differences in what exists compared to what is needed;

A suggested outline structure for validation plans at the various levels;

A note on how the suggested structures fit into tools such as the VDR;

Recommendations for WBS2

External recommendations (if any) for urgent issues or conflicts with (for example) the OCVM or the VDR.

Many strategies already exist at various levels so clearly the need for them is accepted. However, some problems become apparent when comparing them with others at the same level and with their dependents at lower levels:

- Keeping it validation related – At a very high level (strategic) validation can seem like a long way off and so it can be difficult to extract only the validation issues. At a lower level, the temptation can be to describe validation exercises only in terms of their platform or concept and lose focus on the validation issues;
- Links between levels – Of the examples chosen for analysis, it was not always easy to see the links from one level's strategy to the next;
- What information goes where – It may be hard to know which information should be detailed at each level. This may be due to unclear description of the levels or it may even be due to the different approaches between MAEVA and the OCVM where MAEVA suggests providing certain information much earlier than the OCVM;
- Size of document – In large projects, the low level plans can become quite big. There is a choice to be made between one large document or several smaller documents.

What exists currently is not sufficient. It is disjointed throughout the various levels and there is no standardisation within the levels.

At strategic level a template is required that can analyse the ATM issues and planned Operational Improvements, thereby helping to plan the validation programmes required within European research and development.

At programme level a template is required to provide a strategy and plan to show how a range of OI should be assessed to see if they address a particular ATM problem and to show how this programme can be broken down into manageable 'chunks', be that into work packages, projects or straight to validation exercises.

At the project or experiment level, a standardised template is required that can formally capture the validation issues relevant to a particular project or series of validation exercises. Much like the nested programme/project aspect of the OCVM, this is likely to be similar in style to the programme template with more focus put on the actual planning of the validation exercises that make up the project.



The following diagram shows the entire validation planning process that must be covered by the validation plan templates.

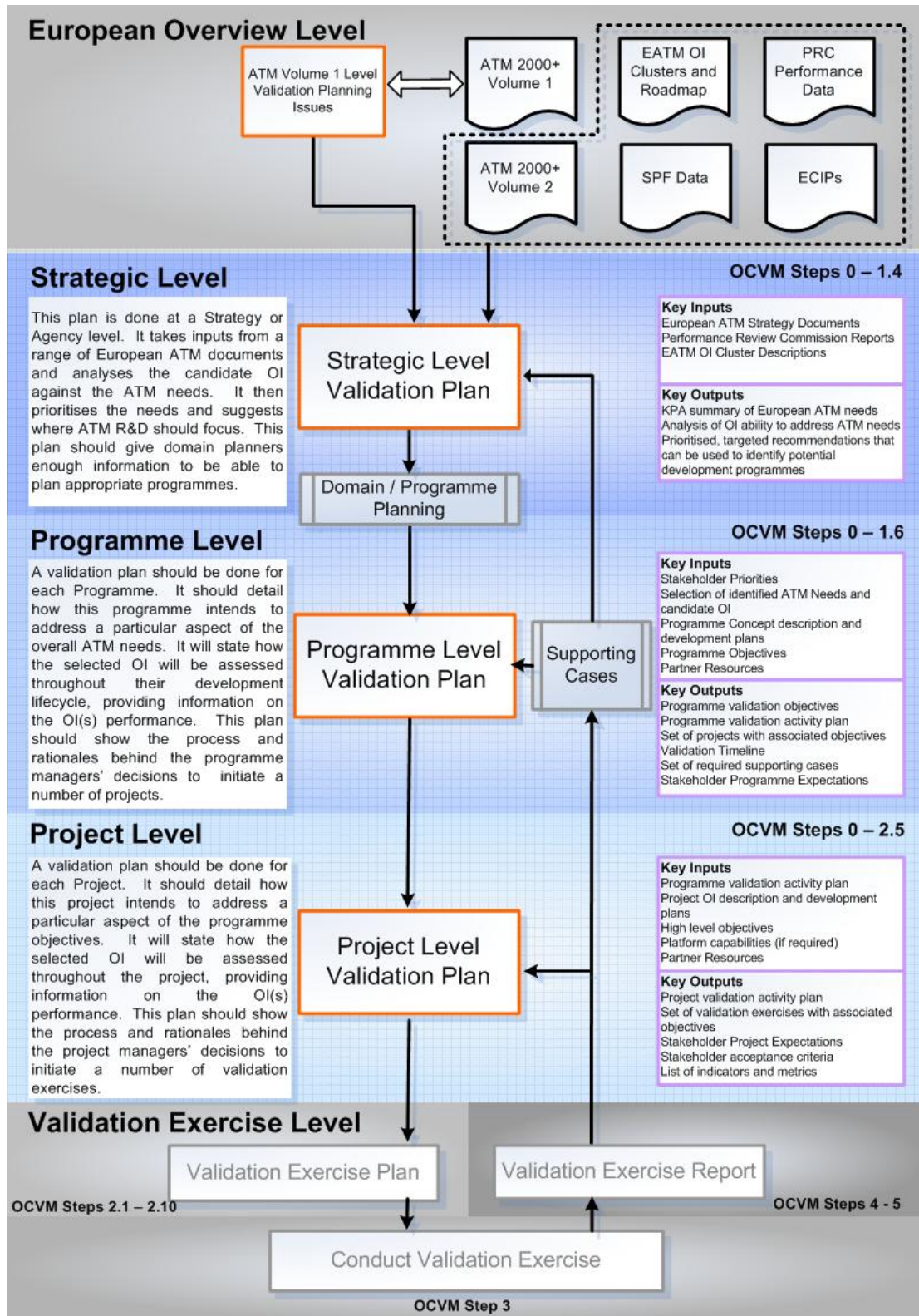


Figure 1: The Validation Planning Process

Also visible as part of the validation planning process in the diagram are the Supporting Cases. These are the cases that make up the ‘body of evidence’ about a concept’s ability to perform as the stakeholders expect. Examples of such cases may be Business Cases,



Safety Cases, Technical Cases and others. Although these cases are first identified at programme level, they may be refined at project level, or even allocated to certain projects. Ultimately, the output from one or more validation exercises will provide the input to the cases.

4 Template Development and Methodology

4.1 General Methodology

The templates were based on the findings from WBS1 – as presented in Section 3 of TRS139/04 D1 (ref 1). These findings were a result of an initial analysis on existing validation and planning documentation and needs outlined in the Eurocontrol Operational Concept Validation Methodology (OCVM).

The templates first took the suggested structure from the WBS1 analysis as a starting point. This was further developed and then an initial test was conducted on the templates' ability to capture the essential information (again, as identified in the WBS1 analysis). Sample programmes and projects were chosen and information was extracted from existing documentation, or derived from existing information.

Where the information could not be captured in the templates, or where the capture was not thought to be adequate, the template was adapted to provide a better fit. A further attempt to complete the example was then undertaken and this process was repeated until the information could be satisfactorily captured for more than one example.

These draft templates were presented to the project team for review at working meeting in Eurocontrol HQ (Brussels). Following the review some key decisions were taken regarding the design of the templates. The templates were more closely matched to the OCVM and the priority was placed on the Strategy, Programme and Project templates.

4.2 Template Design

At Strategic Level, the design approach of the templates was different to lower levels. It was necessary at this level to concentrate more on planning issues on a wider horizon. A key point at this level was to enable the comparison of selected OI to ATM needs. The design also had to support the cluster format used in EATMP.

The final design is very much based on the early steps of the OCVM. However, the issues and decisions at this level may actually represent a third layer to the OCVM – one that fits around the programme level. The design follows a high level application of Step 0 and the early sub-steps of Step 1. This provides a useful analysis and capture of information and also means that the information is presented in a format similar to the OCVM – a feature which will make it easier to compare levels and relate levels to each other.

For the Programme level and Project level templates a 'nested' design was proposed in WBS1. However, following the review meeting the decision was taken to remove the validation exercise plans and concentrate on just programme and project plans. Again, the common core of the documents was based on the early steps of the OCVM. Whereas the Strategy level covered Steps 0 to 1.4 in a high level, the Programme level covered Steps 0 to 1.6 in a lower level with the Project Plans covering Steps 0 to 2.5 (after which point the OCVM steps relate to planning at a validation exercise level and then the conduct, analysis and reporting of the validation exercises). This design was favoured for a number of reasons. Such a design would:

- Provide an obvious link from level to level.
- Promote common information usage across the levels
- Ease translation into the OCVM process and, ultimately, a VDR-like structure or tool



4.3 Testing with Example Templates

Validation and planning documents from the candidate projects listed in WBS1 were used to provide information to 'test' the templates.

Once the templates had been designed, information was extracted from the existing documentation and put in the new template format. Lessons learned were then used to guide any changes to the templates.

Where possible, actual information from the documents has been used exactly as it would be intended with the templates. However, since it is not the job of this project to actually write Validation Plans for other programmes and projects it was necessary in some cases to use sample information to illustrate what the projects might say at a given point in the template.

5 Strategic Level Template and Examples

5.1 Template Overview

There were originally two templates at this level – one to support ATM 2000+ Vol. 1 information and a more detailed one for ATM 2000+ Vol. 2 level information, as per the TRS requirements. However, at the design review meeting the decision was taken to concentrate on the 'Level 2' template.

This template was perhaps the most difficult to design due to the lack of existing validation documents at this level. The purpose of this template should be to provide a common place for all the related, European strategy information, and an analysis and recommendation of what should be addressed in European R&D (and validation in particular). The general 'feel' of the templates was that they should outline the ATM and validation needs and give direction.

The templates are designed to re-use a lot of existing information from other documents and indeed the Strategic Performance Framework provides a very similar structure. This document takes that approach and brings it closer to the OCVM, the concept maturity development model and the domain of validation.

The key outcome of the document should be a series of recommendations for future ATM validation programme planning.

5.2 Key points

The key points on this template are:

- Information should be taken from a series of existing ATM strategy documents and compiled and analysed here.
- The validation practitioner is encouraged at this early level to start talking in terms of KPA. The ATM problem should be expressed in KPA terms, the KPA themselves can be defined, and the candidate OI should be presented as having some kind of expected KPA benefit.
- Despite notes in the TRS stating that the Volume 2 level template should be less than 10 pages, the completed example actually contains 26 pages of information, and this using only a reduced sample set of OI clusters.
- The template provides a diagrammatic schema for the practitioner to show the development (and this validation needs) of the high priority OI. It is this development that the recommendations are based on.



6 Programme Level Template and Examples

6.1 Template Overview

This template is designed to be a practical implementation of Step 0 and Steps 1.2 to 1.4 of the OCVM¹. Thus it takes its cue from both the OCVM and, to a lesser degree, the GATE TO GATE Consolidated Validation Strategy (CVS). The GATE TO GATE CVS is as close to a real implementation of the OCVM Step 1 as exists and it shares the same authors.

The first part of the template says which of the recommendations and suggestions from the strategy level validation were taken to form this programme. The needs for this particular programme are then introduced along with the OI that this programme intends to develop to address the needs. When the ATM needs and candidate OI have been described, a strategy can be formed, beginning with asking all the stakeholders what they expect from the programme. This information, along with other inputs enables the programme validation team to form programme validation objectives and plan a series of validation exercises to meet these objectives. These can be structured into a series of projects to make the programme more manageable. The purpose of each project is then given along with a high level validation plan that can later be refined at project level.

This template shares a similar core to the Strategy Level template by describing the ATM Needs and candidate OI in a similar way and giving this programme's place in that overall strategy.

6.2 Key points

The key points on this template are:

- This is the link from high level ATM needs and OI expected benefits to the practical planning of experiments. Thus it has a clear link to information in the Strategy Level Templates.
- The plan at this level gives the structure of the validation activity throughout the concept development lifecycle
- The key output of this plan is the validation objectives, a set of projects and an identified set of supporting cases.
- The sample project chosen was the GATE TO GATE programme. The size of the completed templates is slightly higher than was estimated in the TRS. The GATE TO GATE example has 43 pages of actual information, when the TRS suggested 30 per OI cluster.

7 Project Level Template and Examples

7.1 Template Overview

This template is designed to assist in an application of Steps 0 – 2.5 of the OCVM. The purpose of this template was to allow a more formal planning of each project, based on the initial plans given in the programme validation plan. As such, it is similar in structure to the programme level plan with the earlier OCVM steps being presented here in lesser detail (Steps 0.1 – 1.4) but with the later steps being presented in greater detail. This avoids unnecessary duplication with the programme level plan but also helps provide a stand alone logical OCVM application.

Among the key points here are the setting of project stakeholder acceptance criteria, hypothesis and validation objectives for each validation exercise. Aside from being the formal

¹One finding at this level was that Step 1.1 “Identify Level of Maturity” was actually performed at a much earlier stage than it currently appears in the OCVM sequence

planning of the project, this is the first part of the next plan – the validation exercise (or experiment) plan.

A plan such as this one is perhaps the most recognisable plan to most practitioners since it is the one that has been accepted for the longest. However, the need for standardisation was highlighted in the WBS1 analysis and this template should help address this.

7.2 Key points

The key points on this template are:

- The structure is similar to the programme level template but the information should be refined for project level.
- The key output of this document should be a series of clearly identified validation exercises and the project (or validation) manager's rationale behind the planning of these exercises.
- The sample project chosen was the GATE TO GATE WP1 project. The size of the completed templates is slightly higher than was estimated in the TRS. The GATE TO GATE example has 43 pages of actual information, when the TRS suggested 30 per OI cluster.

8 Help and Guidance

The following document forms the Help and Guidance sections of this report. It is presented as an embedded document to enable easy extraction so that a stand-alone 'help' document can be made.



TRS139 D4 Template
Help.doc

9 The VDR, SST and PMS

9.1 Introduction

This section gives an overview of where the information from the various validation plans might fit into the Eurocontrol VDR, SST and PMS tools. For each heading in the plans, a note is given as to which tool, view (if using the VDR) and section the information may be captured. If no section of any of the tools can capture the information it is left blank. For headings where only some of the information can be captured the note on the tool is in italics. An important point to remember is that the tools are repositories – information is placed in them once it has been analysed and decided somewhere else. Thus it is not appropriate to directly copy any 'analysis' sections into the tools. If the information can be stored in more than one tool, or more than one view (for the VDR) each place is listed.

9.2 Strategic Level Template

Section Title	Tool
1. Introduction	N/A
2. European Validation	-
3. The Key Performance Areas	VDR – Key Performance Areas SST ATM 2000+ Strategic Objectives
4. Quantifying the Current ATM Problems	-
5. The ATM Needs	-
6. Priorities and Influences	-
7. Candidate Operational Improvements	SST – Operational Improvements

	VDR – Concepts and Scenarios View - Specific Operational Concept
8. Operational Improvement Benefits Analysis	N/A
9. Recommendations	N/A

9.3 Programme Level Template

The VDR does not clearly distinguish between Programmes and Projects. A Programme is entered in much the same way as a Project with limited scope for 'embedding' a set of sub-projects.

Section Title	Tool
1. Introduction / Overview	<i>VDR – Project Summary View – Description</i>
2. Programme's Place in European Research and Development Strategy	N/A
3. Quantifying the ATM Needs	-
4. The Operational Concept	SST – Operational Improvements VDR – Concepts and Scenarios View - Specific Operational Concept VDR – Project Summary View – Strategic Improvements
5. Programme Influences and Objectives	<i>VDR – Project Summary View – Description</i> <i>VDR – Project Summary View – Stakeholders</i>
6. The Validation Expectations and Objectives	VDR – Project Summary View - Objectives
7. Setting the strategy	Take Input from VDR Reports. VDR – Project Summary View – Related Exercises VDR – Exercise Data – Tools and Techniques
8. Management information	<i>VDR – Project Summary View – Description</i> <i>VDR – Project Summary View – Validation Approach</i> <i>VDR – Project Summary View – Stakeholders</i> SST – Deliverables SST – WBS PMS - WBS
9. Further References	VDR – Project Summary View - References

9.4 Project Level Template

Projects will have to appear at the same level as programmes in the VDR.

Section Title	Tool
1. Introduction	<i>VDR – Project Summary View – Description</i>
2. Context of this Project	VDR – Project Summary View – Strategic Improvements
3. Project Influences and Dependencies	<i>VDR – Project Summary View – Description</i> VDR – Project Summary View – Projects (Related)
4. The Validation Expectations and Objectives	<i>VDR – Project Summary View – Description</i> <i>VDR – Project Summary View – Stakeholders</i>
5. Refinement of Programme Validation Plan	Take Input from VDR Reports. VDR – Project Summary View – Related Exercises

	VDR – Exercise Data View – Tools and Techniques
6. Validation Exercise Overview	VDR – Project Summary View – Related Exercises VDR – Exercise Data View - Description
7. Management information	<i>VDR – Project Summary View – Description</i> <i>VDR – Project Summary View – Validation Approach</i> SST – Deliverables SST – WBS PMS - WBS

9.5 Summary

The following points are a summary of the analysis on storing the plan information in the Eurocontrol tools:

- The Strategy Level Validation Plan cannot be easily stored in any tool
- The PMS tool did not show any obvious link to the plans, except for the detailed storage of WBS information
- The link of programmes to projects could be handled better in the VDR – perhaps using a nested approach
- The VDR information was not obviously linked to the SST or PMS information, although this would help for OI and WBS information.
- In many cases, the tools only provided *some* element of information capture. Entering the data into the VDR would mean that some information would have to be manipulated to 'fit' the VDR (e.g. Stakeholder Information). Doing this may result in a loss of the overall picture gained from the validation plans themselves.

10 Recommendations

This project has been a quite neatly well contained package of work, dealing specifically with validation planning documentation. Nonetheless, there are some recommendations for further work to come out of this project.

10.1 The OCVM

The first recommendation concerns the OCVM. In this project, 3 levels of validation planning (Strategy, Programme and Project) were used. The OCVM only supports 2 of these levels (Strategy and Project). While these 2 are the most important (and practical) it is a recommendation that the OCVM be updated to include some guidance on strategy level validation planning.

Also, in the process of designing these templates the OCVM Step 2.1 (Identify the level of Maturity) was always done much earlier (after, or as part of, Step 0.2). In early editions of the OCVM 'Level of Maturity' was in fact Step 0.3 but was moved to later in the process. This project recommends that this decision be reviewed so that a conclusion may be reached as to where this step should fall in the OCVM process.

The third recommendation concerns the application of the OCVM. These templates cover all the OCVM steps from Step 0.1 to Step 2.5. There remains in the OCVM a number of documents for which templates could be produced. At the validation exercise level this includes a Validation Exercise (or Experimental) plan, a template for scenarios, analysis plans or experimental designs. Like the planning, the analysis and reporting can be done at various levels and so templates could again be produced at validation exercise, project and programme level for the dissemination of validation results.



10.2 The Validation Plans and their place in the Planning Process

The next recommendation concerns the strategy level validation plan. From the analysis of existing documents a large amount of overlap was observed with this validation plan and the Strategic Performance Framework Report. Whilst the validation plan no doubt adds some key information and validation issues, it is a recommendation that a review be done that looks into the duplication from these two documents in particular to see if both are necessary in their current form or if there is scope for a merging of the documents.

The fifth recommendation concerns the original 'ATM 2000+ Volume 1' level strategy. This strategy was not pursued in WBS3 but it is still a recommendation of this project that the issues raised in the 'Volume 1' Level Strategy (from WBS2) be recommended to the authors of ATM 2000+ or inclusion in their validation chapters.

10.3 The VDR, SST and PMS

This project did not look in depth at tools such as the SST and PMS. Their design was considered during template design to make sure the templates were compliant but interactions with these tools were not considered in detail. Whilst it is known that the programme and project validation plans will have a place in the VDR, it is less certain what role the SST and PMS will play in these templates. A more formal analysis of the Eurocontrol validation tools, documents and interactions will be required.

An initial analysis was done on the compatibility of the VDR and the validation plans. At strategy level the 'fit' of the validation plans to the VDR is not obvious. Development would be required to the VDR to enable this high level information to be captured. Most other information at both programme and project level can be captured in some form. A recommendation of this project would be that, should the validation plans be implemented, a more detailed study of the VDR compatibility be undertaken.

The next (advanced) stage for the relation to the VDR and SST would be for the validation plan information to be automatically captured in (or transferred to) the VDR. Studies like the VDR-V2MP Integration project show that this is possible in theory however the templates would need to become more advanced and use more than the standard MS Word functionality. Users would also require some training to learn the transfer process and it is thought that some flexibility would be lost in the automation. However, once again a more formal conclusion a deeper analysis would be required.

10.4 Implementation of the Validation Plan Templates

After the production of these templates comes the implementation. This raises two main issues – formal agreement on the templates themselves, and getting the right people to apply the templates during their validation planning.

The templates will only be accepted by the target users if they can see the purpose and added value that they bring. The first step towards this should be to expose the templates to a wider audience. It is important that such exposure is carefully managed, especially for the Strategy Level Template. Whilst the programme and project level templates are likely to be more familiar to planners (and thus easier to accept) the Strategy Level Template will take more explanation as to its purpose and place in the process. The difficulty behind this explanation is compounded by the current uncertainty of the Strategy Level Template's exact role. It will require more review than the programme and project templates.

Once the design, structure and purpose of the templates have been presented to (and accepted by) the target audience, they must be persuaded to apply them. The validation planners can not be 'forced' to use the templates so they must be made aware of the added value they bring. One way to achieve this could be as part of a 'validation toolset' – possibly including things such as the OCVM, the VDR and the templates, all packaged together for the 'complete' validation planning process. In the short term this could be promoted via a validation website or other centralised, readily available source. In the longer term their

application could form part of the overall management process and included in the EATM Management Handbook.

Finally, when the validation planners do start to actually use the templates some direct guidance may be required to assist in the completion of the templates. This will certainly be the case in the beginning of their application as the users become familiar with the practise of completing the templates.

11 Annex A: Examples

The following documents are completed examples of the Validation Plan Templates.



2. Strategic Level
Example.doc



3. Programme Level
Example.doc



4. Project Level
Example.doc