Final OSED for Madrid TMA (Annex Validation Plan)

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Abstract

This document provides the Validation Plan for Workstream 1 of Project 5.7.4 related to 'Full implementation of P-RNAV procedures in complex TMAs'. The only test case is Madrid TMA (high complexity). This document reflects the Validation objectives, scenarios and exercises. Validation exercises will consist in one Real Time Simulations from 17th of October to 28th of October of 2011.

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Executive summary

This document provides the Validation plan for the test case for Operational Focus Area **"Optimized RNP structures"** The intended audience are here listed:

1- Transversal projects:

- 5.7 - TMA Trajectory and Separation Management
- 5.2 - Consolidation of Operational Concept Definition and Validation
- 5.3 - Integrated and Pre-Operational Validation & Cross Validation

2- Operational projects:

- 5.6.2 - QM-2 – Improving Vertical Profile
- 5.6.3 - QM-3 – Approach Procedure with Vertical Guidance (APV)
- 5.6.4 - QM-4 – Tactical TMA and En-route Queue Management
- 5.7.2 - Development of 4D Trajectory-Based Operations for separation management using RNAV/PRNAV
- 4.7.3 - Use of Performance Based Navigation (PBN) for En Route Separation Purposes

3- People involved in the validation exercises

4- EURCONTROL and SJU

The main stakeholders involved are expected to be ANSPs, Airspace Users, Airports, Industry, ATCs, EUROCONTROL and SJU.

The validation objectives are:

1. Demonstrate the feasibility of the integration of P-RNAV & conventional routes used by a mix of P-RNAV-compliant and Conventional aircraft in high traffic density TMAs
2. Demonstrate that the procedures are compliant with bad weather conditions: storms, fog and hard wind (coming from North-West)
3. Demonstrate the success of the Controller Change Mode of Operation
4. Provide the maximum capacity of P-RNAV Arrivals/Transitions/SIDs/STARs
5. Reduce both the pilot and controller workload
6. Demonstrate the feasibility of P-RNAV CDAs in high density traffic scenarios
7. Continuous Climb Departures enabled by the enhanced horizontal performance of P-RNAV
8. Demonstrate the impact on departure sequencing due to aircraft performance mix (climb rates, turn capability, etc), which creates different departure routes for different performance levels.
9. Demonstrate that the delay times due to holding times has been reduced
10. Demonstrate the design is compatible with missed approach procedures
11. Demonstrate that the possibility of runway closure, doesn't affect the procedures. Also, in this TMA the night configuration is based on a single runway due to environmental impact.

The validation exercises will consist of Real Fast-Time Simulation form 17th of October to 21st of October of 2011) split in 4 validation exercises per day, summing up 40 exercises to simulate.

1 Introduction

1.1 Purpose and scope of the document

This document provides the Validation plan for the test case for Operational Focus Area (OFA) **"Optimized RNP structures."** It generates from the Operational Services and Environment Definition (OSED) and describes in which way the requirements defined for both terminal area are expected to be validated. The validation plan will also take into account and integrate the results and conclusions coming from the safety case developed for both test cases.

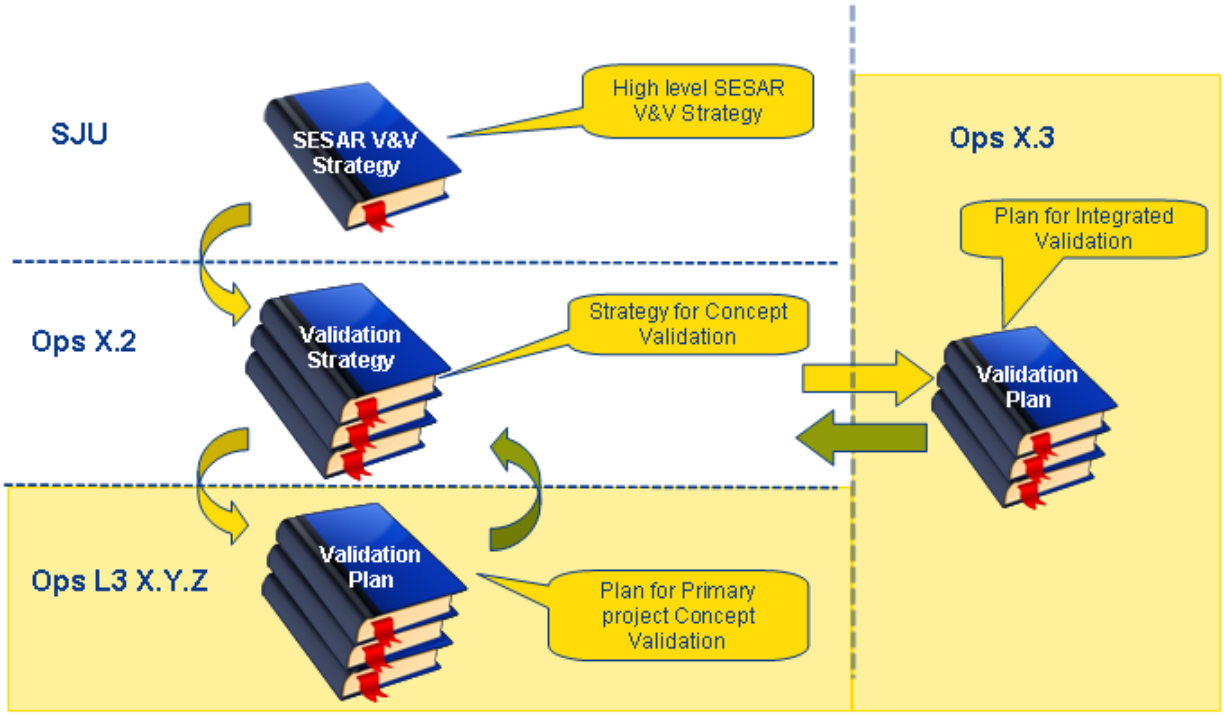

Figure 1: Overview of Validation Strategies and Plans responsibilities

P05.07.04 shall address the current limitations in practical implementation of P-RNAV in TMA operations, enabling a move to integrated P-RNAV management in high-density traffic situations, throughout the day.
The project is focused in complex TMAs, taking Madrid, Milan and London as reference test cases and extending the results to generic complex TMAs in Europe.

1.2 Intended audience

This document is oriented to internal use and for SJU expectations in validations activities to establish the tracking of these activities during Release 1. Moreover, in order to provide more information, 5.2 SWP can find this document interesting as well as transversal areas like B4.2. 5.3 SWP is interesting in these project validation activities to consider the integration of AMAN in the procedures. The main intended audience is here listed:

Transversal projects:

- 5.7 - TMA Trajectory and Separation Management
- 5.2 - Consolidation of Operational Concept Definition and Validation
- 5.3 - Integrated and Pre-Operational Validation & Cross Validation

Operational projects:

- 5.6.2 - QM-2 – Improving Vertical Profile
- 5.6.3 - QM-3 – Approach Procedure with Vertical Guidance (APV)
- 5.6.4 - QM-4 – Tactical TMA and En-route Queue Management
- 5.7.2 - Development of 4D Trajectory-Based Operations for separation management using RNAV/PRNAV
- 4.7.3 - Use of Performance Based Navigation (PBN) for En Route Separation Purposes

People involved in the validation exercises

EURCONTROL and SJU

1.3 Structure of the document

This section states how the document is organised.

1.4 Acronyms and Terminology

To be completed if needed.

Term	Definition
E-OCVM	European Operational Concept Validation Methodology
PUT	Product Under Test. This may be used to refer to both System Under Test and Concept Under Test.
SUT	System Under Test
CAVOK	Ceiling and Visibility OK

2 Context of the Validation

2.1 Scope/perimeter of the validation

This Validation Plan:

(a) Covers SESAR Concept Step 1 only.

(b) Covers all operational scenarios of WS1 (defined in the PIR).

(c) Does not cover validation of WS2, which will be undertaken by NATS and ENAV using London and Milan TMAs as the test cases.

The output of the Validation Plan will inform the final OSED for the OFA, which will incorporate all aspects of WS1.

The Madrid TMA will be represented by 3 major airports: Madrid-Barajas Airport, Torrejón Airport and Getafe Airport. This provides a multi-airport TMA, with real-life restrictions and considerations. The operations of other airfields in the Madrid TMA (as Cuatro Vientos airfield) must not be significantly impaired, so the impact to them must be considered. However, the routes to/from these other airfields will not be validated as part of P05.07.04.

2.2 Stakeholder identification, needs and involvement

Stakeholder 574.01: Airspace Users

Need 574.01: The utilization of trajectories will enhance the service quality as airspace users can determine their trajectories closest to their business needs, taking into account constraints and any opportunities earlier. This leads to better planning possibility and predictability. Moreover the use of trajectories will allow optimized use of airspace, and lead to increased capacity.

Involvement 574.01: The AU's will be represented by the pilots / pseudo-pilots involved in the simulation.

Stakeholder 574.02: ATC

Need 574.02: Better knowledge on the trajectories allows for avoiding situations the controllers cannot cope with. In so far it adds a safety layer in the system. On the other side it allows to go closer to the limits of the available capacity. Early detection of complex situations will be available through the implementation of additional ATC supporting tools. This reduces the risk to get overloaded as timely action can be taken to reduce the complexity and human capabilities are prevented from being exceeded.

The display of the trajectories at the controller working position assists the controller in building and maintaining the traffic picture.

Involvement 574.01: Controllers will participate in the sessions providing feedback and assessment of the operational procedures

Stakeholder 574.03: Airports

Need 574.03: The airport and the surrounding areas are the affected ones in this project. The modification of TMA, STARs and SIDs charts among others to introduce the P-RNAV procedures lead these validation activities in the airport which is going to be modified. In this case, is going to be Madrid-Barajas.

Involvement 574.03: Madrid/Barajas will be the place where is going to be performed this simulation

Stakeholder 574.04: ANSPs

Need 574.04: ANSPs are directly involved in the structure and standardization working methods for the implementation of P-RNAV in the TMA. There is furthermore need to implement these procedures in the future

Involvement 574.04: AENA (NATS and ENAV as stakeholders) will supervise the activities during the simulation and will determine the working methods.

Stakeholder 574.05: Industry

Need 574.05: There is no need from industry due to the current avionics / technology availability. The procedures won't need any additional resources more than actually available.

Involvement 574.05: There is no need of Industry involvement until the future implementation (out of the scope of this project) when it is going to be a necessity to demonstrate that these procedures are flyable in a real scenario (AIRBUS).

Stakeholder 574.06: EUROCONTROL and SJU

Need 574.06: There is a need to obtain a consistent and coherent TMA description and P-RNAV procedures and to demonstrate the feasibility and operability according to the ATM Master plan.

Involvement 574.06: Is involved indirectly in all the activities of the projects. Indeed, SJU will determine what is acceptable are not during the whole lifecycle of the project.

2.3 Maturity levels

This project serves the optimized RNP structure and point merge in Complex TMA Operational Focus Area (OFA) within Package 2 (PAC-2) of the SESAR V&V Roadmap "Efficient and Green Terminal airspace operations", however close links have been identified in other OFAs within and outside PAC-2: PAC05 "integrated and Collaborative Network Management".

The operational improvements related to this project are listed below:

- AOM-0601 Terminal Airspace Organization Adapted through Use of Best practice, PRNAV and FUA (where suitable)
- AOM 0602 Enhanced Terminal Airspace with Curved/Segmented Approaches and RNAV Approaches (where suitable)
- AUO-0501 Visual Contact Approaches when Appropriate Visual Condition prevail
- AOM-0404 Optimized Route Network using advanced RNP1
- AOM-0603 Enhanced Terminal Airspace for RNP-based Operations
- AO-0703 Aircraft Noise Management and Mitigation at and around Airports

Operational Package	Operational Sub-Package	Operational Focus Area	Ois or Operational Services	Initial Maturity level	Target Maturity level	Reused validation material from past R&D Initiatives
PAC02 - Efficient and Green Terminal Airspace Operations	Enhanced Route structures	Optimized RNP structures	*AOM-0601*	V3		
PAC02 - Efficient and Green Terminal Airspace Operations	Enhanced Route structures	Optimized RNP structures	*AOM 0602*	V3		
PAC02 - Efficient and Green Terminal Airspace Operations	Enhanced Route structures	Optimized RNP structures	*AUO-0501*	V3		
PAC02 - Efficient and Green Terminal Airspace Operations	Enhanced Route structures	Optimized RNP structures	*AOM-0404*	V3		
PAC02 - Efficient and Green Terminal Airspace Operations	Enhanced Route structures	Optimized RNP structures	*AOM-0603*	V3		
PAC02 - Efficient and Green Terminal Airspace Operations	Improved Vertical Profiles	Approach procedures with vertical guidance	*AOM-0601*	V3		
PAC02 - Efficient and Green Terminal Airspace Operations	Improved Vertical Profiles	Approach procedures with vertical guidance	*AOM 0602*	V3		
PAC05 - Integrated and Collaborative Network Management	Demand and Capacity Balancing En-route	Environmental Sustainability	*AO-0703*	V3		

Table 1: Maturity levels table

3 Validation Approach

The following figure represents the links between System Engineering Data, with a focus on V&V Data:

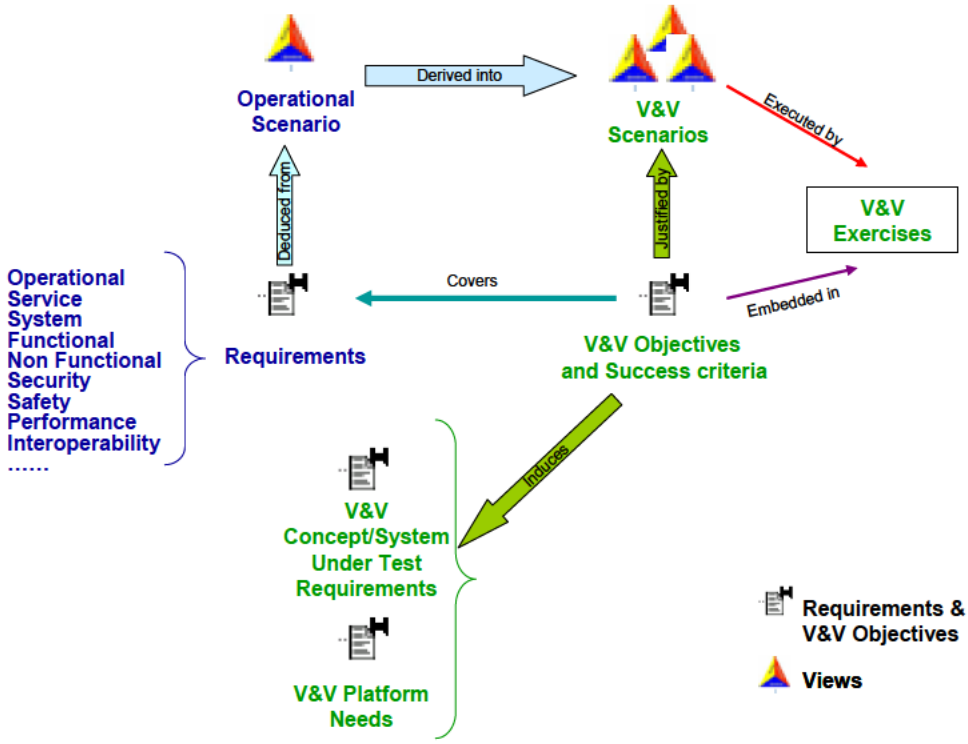

Figure 2: Overview of the System Engineering Data process (focus on V&V Data)

3.1 Validation Overview

In WS1, P-RNAV procedures for complex (multi-airport) TMAs will be assessed and tested with an Operational Validation plan to V3.

The work will be organized providing a general view of Operational, Safety and Performance aspects connected with the introduction of P-RNAV procedures in a complex TMA. These aspects will be then tested in four validation scenarios.

The chosen scenarios comprehend the North, South and MOPS Changes configuration for Madrid TMA which are characterized by operational and environmental constraints.

In order to get a high generalization of the project, the approach chosen for V3 maturity is the validation of the P-RNAV concept in complex TMA through Real Time Simulations. The reason for the Real-Time Simulation choice is that P-RNAV procedures in complex TMA largely affects Human Factors domain due to the radical change in Air Traffic Controller way of working, so it is an important investigation of the concept taking into account the human in the loop since the beginning.

At the end of this process an integrated validation report will be generated which is expected to feed the final business case of WS3. The WS3 outcomes will close out all necessary validation activities prior to start full implementation of P-RNAV in complex TMAs in V4.

3.1.1 Validation Techniques

- Precious studies in preliminary TMA and PRNAV procedures design
- Procedures designed (MICROSTATION)

- Real time simulation using ATC simulation platforms (6 UCs) and NORVASE data pick-up and analysis

3.1.2 Validation Tools

- NORVASE *(see 4.1.3.2)*
- EUROCONTROL ERM tool (Environment Case)

3.1.2.1 Validation Platform description

The Validation platform will be a SACTA simulator which reproduces reliable high degree of resolution the current operational system in Madrid TMA. It is going to be used 6 UCS with the possibility of simulate up to 12 sectors in a single controller configuration. Each control unit is equipped with 2 main radar information displays, 2 secondary information displays, 1 operational data display and the required frequencies telephonic and hot lines. Each control unit can be linked to single or multiple pseudo-pilot positions.

Aircrafts can be controlled automatically by the system or manually by pseud-pilots.

Figure 3: Simulator structure

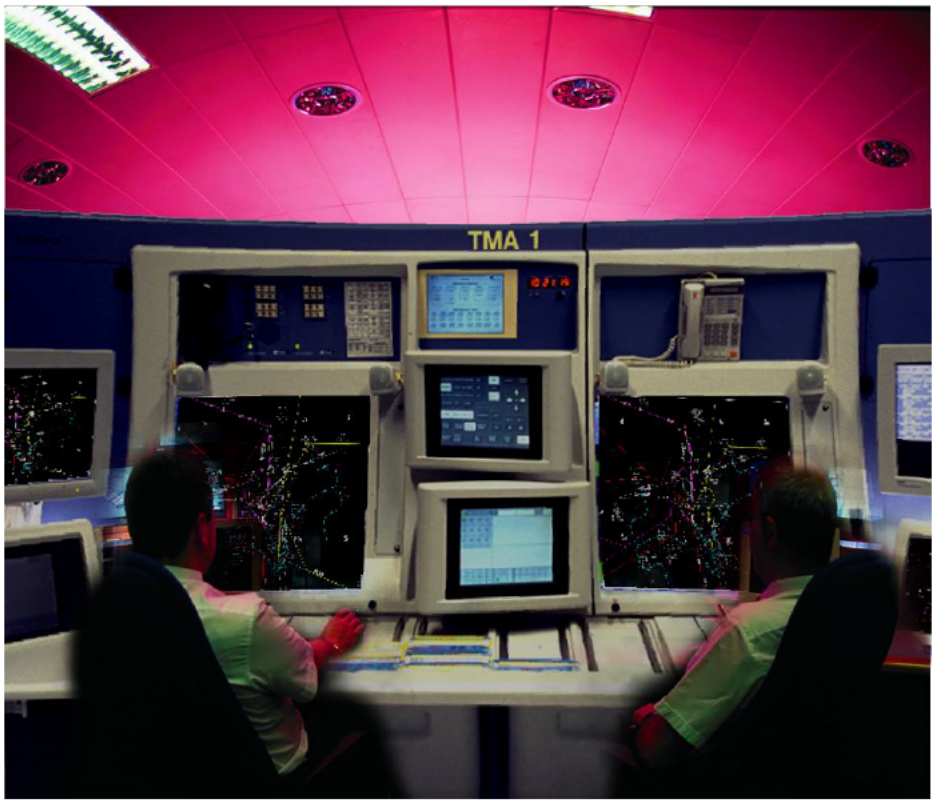

Figure 4: UCS

This graphic includes the SACTA IBP components related to the Real Time simulation Architecture.

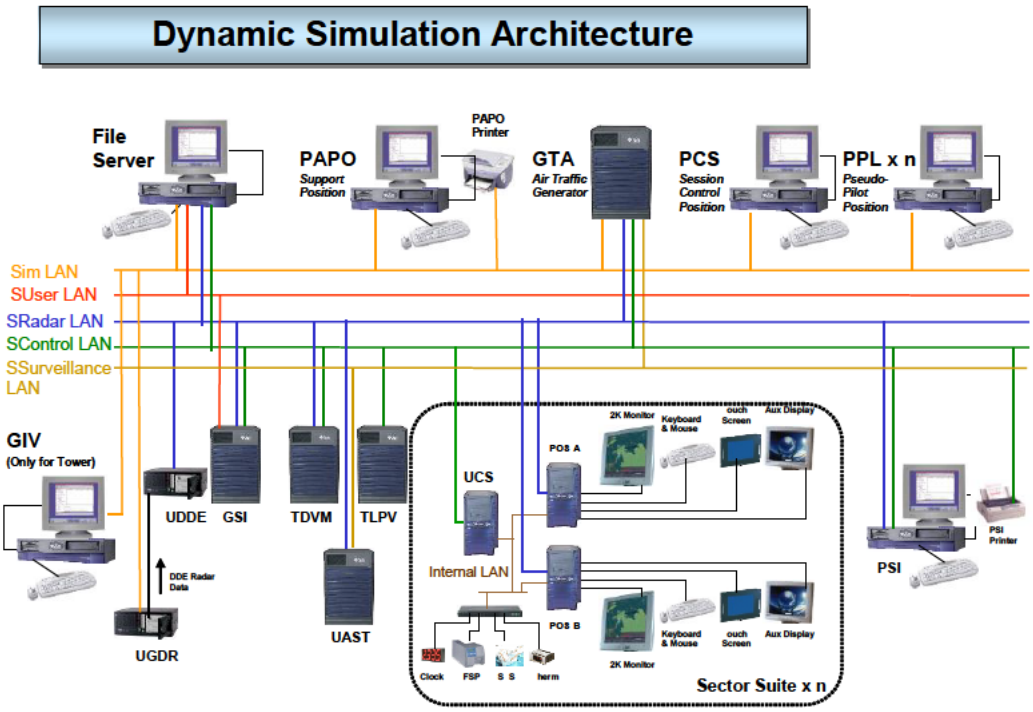

Figure 5 SACTA IBP Architecture

Next the IBP components are described:

- **File server** includes the simulation session and the scenarios database.
- **PAPO (Support Position)** is the position to define the simulated exercises; including the flights, meteorological conditions and any simulated event for the scenario.
- **GTA (Air traffic generator)** is the generator of radar data, flight plan data, and meteorological Grib data for the different scenarios.
- **PCS (Session Control Position)** is the position to control the simulated session execution (start, pause, stop); it also can be used as a Pseudo-Pilot position.
- **PPLs (Pseudo-Pilot Positions)** are the pseudo-pilot working positions, to simulate the movement of the aircrafts following the controller instructions.
- **GSI (Recording Subsystem)** is the integrated recording subsystem to record any relevant information for further analysis and replay.
- **TDVM (Surveillance data Processing Subsystem)** receives the surveillance data (Radar and Multilateration) from the UAST and process it to provide the track data to the Controller Working Positions. This subsystem also includes the Safety Nets function (STCA, MSAW), and the correlation and conformance monitoring functions.
- **UAST (Asterix Unit)** receives the surveillance data from Radar and Multilateration Sensors (real or simulated), process it, in terms of delay time and common Asterix format, and provides it to the TDVM. (Note: This unit is optional in the simulation architecture, the GTA can provide surveillance data either to the UAST or directly to the TDVM)
- **TLPV (Flight data Processing Subsystem)** receives the flight plan data from the GTA, process it, and provides it to the Controller Working Positions, it also process the flight plan manual actions from the CWPs. This subsystem also includes the Coordination and Transfer function and the AMAN functionality.
- **Sector Suite (Two Controller Working Positions)** receives the flight plan data and the correlated track information and presents all relevant information for the Controller. Each Sector Suit includes two Controller Working Positions. The Controller Working Position can operate as Executive, Planner or Integrated Role. Each Sector or Group of Sectors is assigned to a Sector Suite. The Controller Working Position presents all the information integrated (surveillance, flight plan, safety nets, alerts, meteorological, aeronautical, maps, coordination and transfer, arrival sequence information, monitoring relevant information of the system). Includes a 2k Main Monitor, a 1k Auxiliary Monitor, a qwerty, a tactile function and a mouse. Any Controller Working Position can operate as a Replay Position.
- **PSI (Control and Monitoring Position)** presents all the operational system state (excluding simulator subsystem). It gives information about performance and availability of the subsystems. It includes the Operational configuration function (assign Sectors to CWPs) and the Airport configuration function (define runways in use). It can present real-time statistics related to the system.
- **GIV (Visual simulator)** is not included in this exercise, used to simulate the visual view of the Airport system. Used in Tower Scenarios.
- **UGDR and UDDE** are not included in this exercise. Components to simulated old military surveillance radars (Not Asterix format).

Other components not included in the *Figure 5* are:

- **Geodesys (Data Base HMI and generator)** to define the scenario and the subsystem configuration data.
- **Seigraf (Controller Working Position HMI configuration)** to define the Controller Working Position graphical and functional configuration.
- **PALESTRA (Analysis and Replay functionality)** based on recorded information in the GSI.
- **SCV (Communication Subsystem)** to simulate the air-ground a ground-ground voice communications.

3.2 Stakeholders Validation Expectations

Stakeholder 574.01: Airspace Users – The working methods, tools and procedures accepted by pilots and pseudo-pilots. The involvement will be broke down in a 10 pseudo pilot profiles.
Stakeholder 574.02: ATC - The working methods, tools and procedures accepted by controllers and supervisors. The involvement will be broke down in a 12 Controllers and 1 supervisor profiles.
Stakeholder 574.03: Airports - the working methods, tools and procedures accepted and ensured to be feasible to implement in the airport. The involvement will regard the Madrid Barajas INT airport, Getafe Airport and Torrejón Airport. All enclosed in the same TMA.
Stakeholder 574.04: ANSPs - the working methods, tools and procedures accepted and ensured to be feasible to implement in the airport and publish the procedures. AENA will be the main ANSP stakeholder regarding this validation pan but NATS and ENAV will be participating as stakeholders during the validation weeks. Also, 6 NORVASE specialists will be participating in order to assess the validation results in terms of workload, sector weakness, operational indicators, complexity, capacity…etc.
Stakeholder 574.05: Industry - the working methods, tools and procedures accepted, feasible and ensured to not need any additional requirement. No involvement is expected
Stakeholder 574.06: EUROCONTROL and SJU - the working methods, tools and procedures accepted and ensured to be feasible. EUROCONTROL will supervise the validation procedures in accordance with the E-OCVM methodology in V3.

3.3 Validation Objectives

[OBJ]

Identifier	OBJ-05-07.04-VP0000.0001
Objective	Demonstrate the feasibility of the integration of P-RNAV & conventional routes used by a mix of P-RNAV-compliant and Conventional aircraft in high traffic density TMAs
Title	Mixed Mode of Operations
Status	In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V Objective>	V&V Objective Identifier	<Full>
<COVERS>	<ATMS Requirement>	Requirement Identifier (OSED, SPR,..)	N/A
<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
<ALLOCATED TO>	<Operational Focus Area>	Operational Focus Area Identifier	N/A
<ALLOCATED TO>	<Project>	Project Identifier	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]

Identifier	Success Criterion
CRT-05.07.04-VP-0001.0001	The procedures are performed and accepted by the controller
CRT-05.07.04-VP-0001.0002	The procedures are performed accepted by the pilot
CRT-05.07.04-VP-0001.0003	The procedure are accepted by the supervisor
CRT-05.07.04-VP-0001.0004	The final report provides evidence about the feasibility of P-RNAV and conventional routes compliance in terms of capacity, flexibility, efficiency, predictability and equity access

[OBJ]

Identifier	OBJ-05-07.04-VP0000.0002
Objective	Demonstrate that the procedures are compliant with bad weather conditions: storms, fog and hard wind (coming from North-West)
Title	High Terrain and bad weather
Status	In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V Objective>	V&V Objective Identifier	<Full>
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<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
<ALLOCATED TO>	<Operational Focus Area>	Operational Focus Area Identifier	N/A
<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED BECAUSE OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]

Identifier	Success Criterion
CRT-05.07.04-VP-0001.0001	The procedures are performed and accepted by the controller
CRT-05.07.04-VP-0001.0002	The procedures are performed and accepted by the pilot
CRT-05.07.04-VP-0001.0003	The procedures are accepted by the supervisor
CRT-05.07.04-VP-0001.0007	The final report provides evidence about the feasibility of P-RNAV procedures in bad weather procedures.

[OBJ]

Identifier	OBJ-05-07.04-VP0000.0003
Objective	Demonstrate the success of the Controller Change Mode of Operation
Title	MOPS Change
Status	In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V Objective>	V&V Objective Identifier	<Full>
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<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
<ALLOCATED_TO>	<Operational Focus Area>	Operational Focus Area Identifier	N/A
<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]

Identifier	Success Criterion
CRT-05.07.04-VP-0001.0008	The MOPS change is performed and accepted by the controller
CRT-05.07.04-VP-0001.0002	The procedures are performed and accepted by the pilot
CRT-05.07.04-VP-0001.0009	The MOPS change is accepted by the controller
CRT-05.07.04-VP-0001.0010	A final report provides evidence about the feasibility of the MOPS change procedure (e.g.: the pre-advisory time for MOPS change has been reduced)

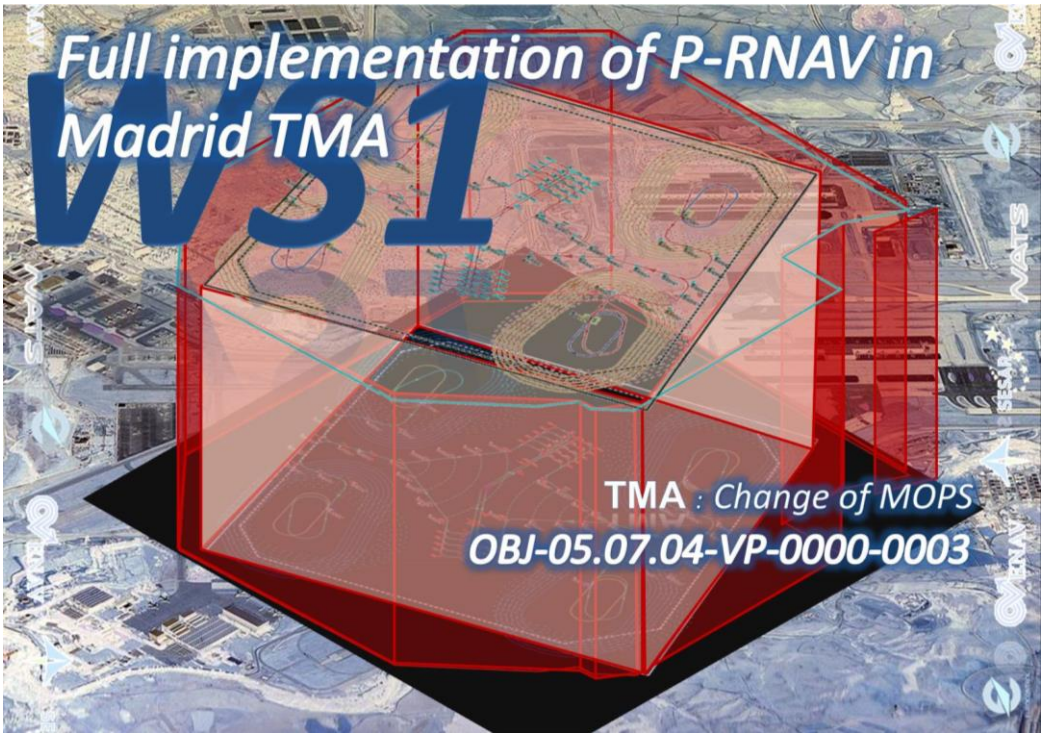

Figure 6: OBJ-05-07.04-VP0000.0003

[OBJ]

Identifier	OBJ-05-07.04-VP0000.0004
Objective	Provide the maximum capacity of P-RNAV Arrivals/Transitions/SIDs/STARs
Title	Max. Capacity
Status	In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance

<SATISFIES>	<V&V Objective>	V&V Objective Identifier	<Full>
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<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]

Identifier	Success Criterion
CRT-05.07.04-VP-0001.0011	A final report provides the maximum capacity arrivals and departures. The report should show at least an increase or maintenance of the airspace capacity.
CRT-05.07.04-VP-0001.0001	The procedures are performed and accepted by the controller
CRT-05.07.04-VP-0001.0002	The procedures are performed accepted by the pilot
CRT-05.07.04-VP-0001.0003	The procedure are accepted by the supervisor

[OBJ]

Identifier	OBJ-05-07.04-VP0000.0005
Objective	Reduce both the pilot and controller workload
Title	Workload
Status	In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
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<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
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<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]

Identifier	Success Criterion
CRT-05.07.04-VP-0001.0005	The pilot workload has been reduced
CRT-05.07.04-VP-0001.0006	The controller workload has been reduced
CRT-05.07.04-VP-0001.0003	The procedure are accepted by the supervisor
CRT-05.07.04-VP-0001.0012	A final report provides the workload results with evidences that workload has been reduced from baseline.

[OBJ]

Identifier	OBJ-05-07.04-VP0000.0006
Objective	Demonstrate the feasibility of P-RNAV CDAs in high density traffic scenarios
Title	CDAs
Status	In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
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<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
<ALLOCATED_TO>	<Operational Focus Area>	Operational Focus Area Identifier	N/A
<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]

Identifier	Success Criterion

CRT-05.07.04-VP-0001.0001	The procedures are performed and accepted by the controller
CRT-05.07.04-VP-0001.0002	The procedures are performed accepted by the pilot
CRT-05.07.04-VP-0001.0003	The procedure are accepted by the supervisor
CRT-05.07.04-VP-0001.0013	The final report provides evidence about the feasibility of CDAs in high density traffic scenarios and conventional routes compliance in terms of capacity, flexibility, efficiency, predictability and equity access

[OBJ]

Identifier	OBJ-05-07.04-VP0000.0007
Objective	Continuous Climb Departures enabled by the enhanced horizontal performance of P-RNAV
Title	CCDs
Status	In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V Objective>	V&V Objective Identifier	<Full>
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<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
<ALLOCATED TO>	<Operational Focus Area>	Operational Focus Area Identifier	N/A
<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED BECAUSE OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]

Identifier	Success Criterion
CRT-05.07.04-VP-0001.0001	The procedures are performed and accepted by the controller
CRT-05.07.04-VP-0001.0002	The procedures are performed accepted by the pilot
CRT-05.07.04-VP-0001.0003	The procedure are accepted by the supervisor
CRT-05.07.04-VP-0001.0014	The final report provides evidence about the feasibility of CDDs in high density traffic scenarios and conventional routes compliance in terms of capacity, flexibility, efficiency, predictability and equity access

[OBJ]

Identifier	OBJ-05-07.04-VP0000.0008
Objective	Demonstrate the impact on departure sequencing due to aircraft performance mix (climb rates, turn capability, etc), which creates different departure routes for different performance levels.
Title	Aircraft performances
Status	In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V Objective>	V&V Objective Identifier	<Full>
<COVERS>	<ATMS Requirement>	Requirement Identifier(OSED, SPR,..)	N/A
<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
<ALLOCATED TO>	<Operational Focus Area>	Operational Focus Area Identifier	N/A
<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]

Identifier	Success Criterion
CRT-05.07.04-VP-0001.0001	The procedures are performed and accepted by the controller
CRT-05.07.04-	The procedures are performed accepted by the pilot

VP-0001.0002
CRT-05.07.04-VP-0001.0003 The procedure are accepted by the supervisor
CRT-05.07.04-VP-0001.0015 The final report provides evidence about the impact on departure sequencing in terms of capacity, flexibility, efficiency, predictability and equity access

[OBJ]
Identifier OBJ-05-07.04-VP0000.0009
Objective Demonstrate that the delay times due to holding times has been reduced
Title Delay times
Status In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V Objective>	V&V Objective Identifier	<Full>
<COVERS>	<ATMS Requirement>	Requirement Identifier(OSED, SPR,..)	N/A
<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
<ALLOCATED_TO>	<Operational Focus Area>	Operational Focus Area Identifier	N/A
<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]
Identifier Success Criterion
CRT-05.07.04-VP-0001.0001 The procedures are performed and accepted by the controller
CRT-05.07.04-VP-0001.0002 The procedures are performed accepted by the pilot
CRT-05.07.04-VP-0001.0003 The procedure are accepted by the supervisor
CRT-05.07.04-VP-0001.0016 The final report provides evidence about the reduction of delay times

[OBJ]
Identifier OBJ-05-07.04-VP0000.0010
Objective Demonstrate the design is compatible with missed approach procedures
Title Missed Approaches
Status In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V Objective>	V&V Objective Identifier	<Full>
<COVERS>	<ATMS Requirement>	Requirement Identifier(OSED, SPR,..)	N/A
<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
<ALLOCATED_TO>	<Operational Focus Area>	Operational Focus Area Identifier	N/A
<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]
Identifier Success Criterion
CRT-05.07.04-VP-0001.0001 The procedures are performed and accepted by the controller
CRT-05.07.04-VP-0001.0002 The procedures are performed accepted by the pilot
CRT-05.07.04-VP-0001.0003 The procedure are accepted by the supervisor
CRT-05.07.04-VP-0001.0017 The final report provides evidence about the feasibility of missed approaches and the design compliance with it.

[OBJ]

Identifier	OBJ-05-07.04-VP0000.0011
Objective	Demonstrate that the possibility of runway closure, doesn't affect the procedures. Also, in this TMA the night configuration is based on a single runway due to environmental impact.
Title	Single Runway as contingency procedures
Status	In progress

[OBJ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V Objective>	V&V Objective Identifier	<Full>
<COVERS>	<ATMS Requirement>	Requirement Identifier(OSED, SPR,..)	N/A
<COVERS>	<V&V SUT Requirement>	SUT Requirement Identifier	N/A
<ALLOCATED TO>	<Operational Focus Area>	Operational Focus Area Identifier	N/A
<ALLOCATED_TO>	<Project>	Project Identifier	N/A
<CHANGED BECAUSE OF>	<Change Order>	Change Reference	N/A

[OBJ Suc]

Identifier	Success Criterion
CRT-05.07.04-VP-0001.0001	The procedures are performed and accepted by the controller
CRT-05.07.04-VP-0001.0002	The procedures are performed accepted by the pilot
CRT-05.07.04-VP-0001.0003	The procedure are accepted by the supervisor
CRT-05.07.04-VP-0001.0018	The final report provides evidence about the single runway usage as contingency procedures.

Table 2: Validation Objective layout

3.4 Validation Scenarios

[SCN]

Identifier	SCN-05.07.04-VP-0000-0001
Scenario	North configuration
Status	In progress

[SCN Trace]

Relationship	Linked Element Type	Identifier	Compliance
<JUSTIFIES>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Partial
		OBJ-05.07.04-VP-0000.0004	Partial
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	Partial
		OBJ-05.07.04-VP-0000.0011	Partial
<DERIVES FROM>	<Architecture element>	EA element Identifier	N/A
<ASSOCIATED_TO>	<ATM Phase>	Arrival 1 (En-route - Clearance Limits) Arrival 2 (Clearance limits - BENJI/MONTE) Arrival 3 (BENJI/MONTE - FAF (North)) Departure 1 (Ground - 7000 ft) Departure 2 (7000 ft - 13000 ft) Departure 3 (13000 ft - FL200)	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[SCN Description]

Environment		Complexity/Density	
<Airspace Characteristics>	Madrid-(Barajas, Getafe	High	N/A

	& Torrejon) TMA		
<Air Traffic profile>	2015 / 2020 or 2030 Duplicated Forecast with the poss bility of establishing a sample of a particular percentage of the maximum airport capacity.	Med/High	N/A
<Aircrafts profile>	Civil, GA and Military	Full implemented / Traditional procedures	N/A
<Weather conditions>	Options available: - CAVOK - Strong wind / Turbulence (North North-West) - Storms	Low/High	
Involved Actors	APP controllers Pilots and pseudo pilots Supervisors	Change Reference	N/A

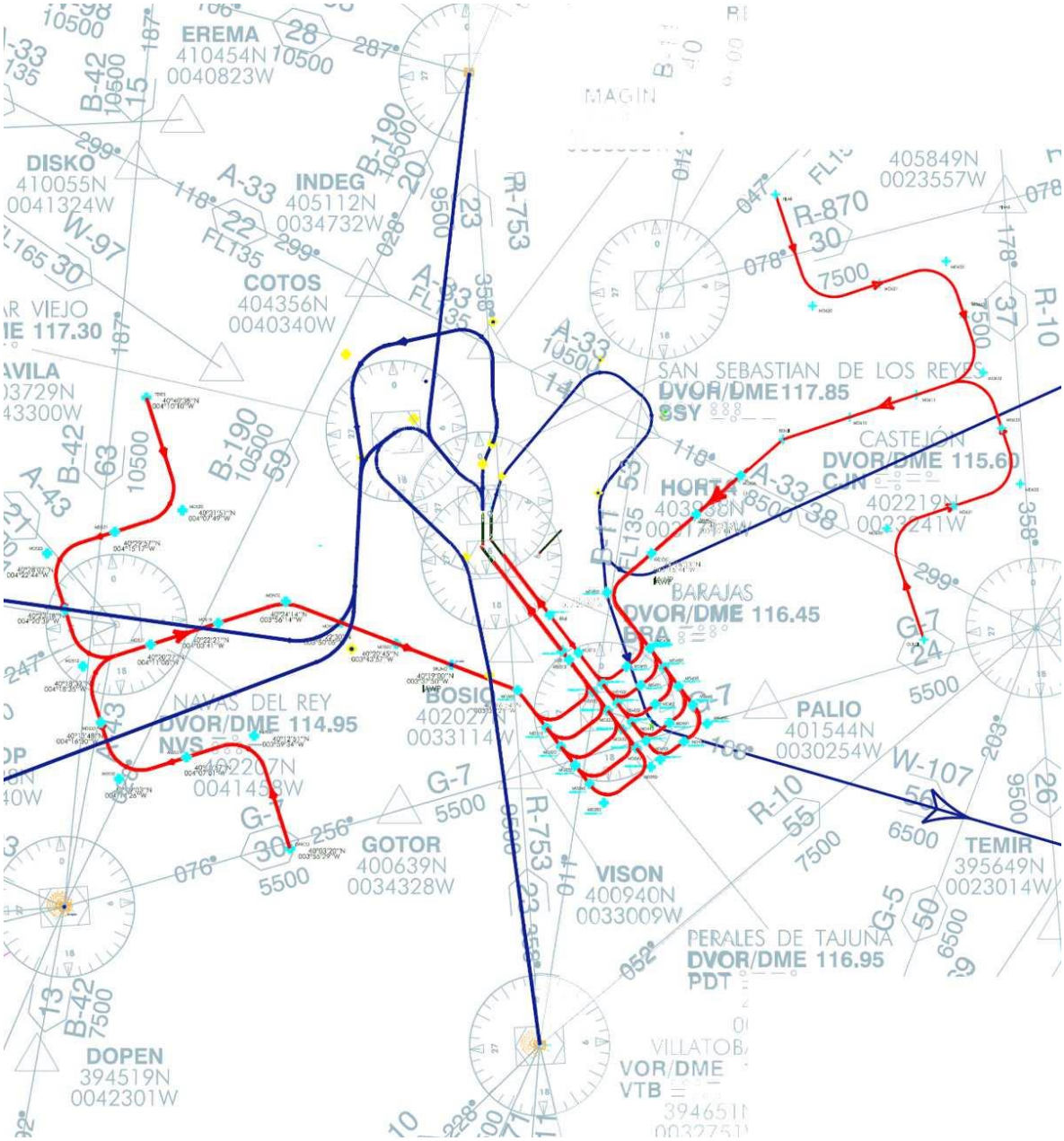


Figure 7: SCN-05.07.04-VP-0000-0001

[SCN]

Identifier	SCN-05.07.04-VP-0000-0002
Scenario	South configuration
Status	In progress

[SCN Trace]

Relationship	Linked Element Type	Identifier	Compliance
<JUSTIFIES>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Partial
		OBJ-05.07.04-VP-0000.0004	Partial
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	Partial
		OBJ-05.07.04-VP-0000.0011	Partial
<DERIVES FROM>	<Architecture element>	EA element Identifier	N/A
<ASSOCIATED_TO>	<ATM Phase>	Arrival 1 (En-route - Clearance Limits) Arrival 2 (Clearance limits - BENJI/MONTE) Arrival 3 (BENJI/MONTE - FAF (North)) Departure 1 (Ground - 7000 ft) Departure 2 (7000 ft - 13000 ft) Departure 3 (13000 ft - FL200)	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[SCN Description]

Environment		Complexity/Density	
<Airspace Characteristics>	Madrid-(Barajas, Getafe & Torrejon) TMA	High	N/A
<Air Traffic profile>	2015 / 2020 or 2030 Duplicated Forecast with the poss bility of establishing a sample of a particular percentage of the maximum airport capacity.	Med/High	N/A
<Aircrafts profile>	Civil, GA and Military	Full implemented / Traditional procedures	N/A
<Weather conditions>	Options available: - CAVOK Strong wind / Turbulence - Storms	Low/High	
Involved Actors	APP controllers Pilots and pseudo pilots Supervisors	Change Reference	N/A

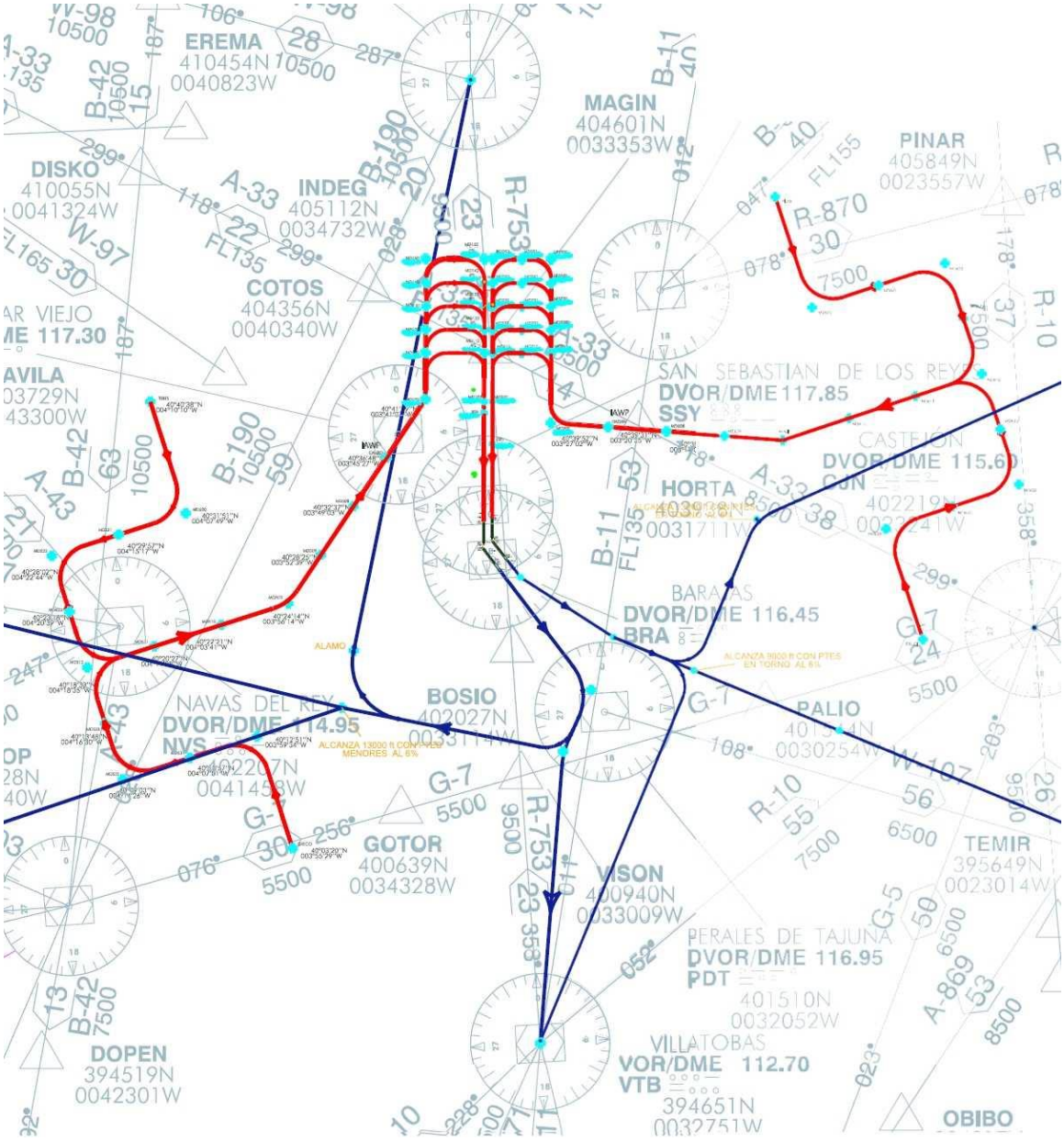


Figure 8: SCN-05.07.04-VP-0000-0002

[SCN]

Identifier	SCN-05.07.04-VP-0000-0003
Scenario	Change MOPS (from North to South Configuration)
Status	In progress

[SCN Trace]

Relationship	Linked Element Type	Identifier	Compliance
<JUSTIFIES>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Partial
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Partial
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Partial
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
<DERIVES FROM>	<Architecture element>	EA element Identifier	N/A

<ASSOCIATED_TO>	<ATM Phase>	Arrival 1 (En-route - Clearance Limits) Arrival 2 (Clearance limits - BENJI/MONTE) Arrival 3 (BENJI/MONTE - FAF (North)) Departure 1 (Ground - 7000 ft) Departure 2 (7000 ft - 13000 ft) Departure 3 (13000 ft - FL200)	N/A
<CHANGED BECAUSE OF>	<Change Order>	Change Reference	N/A

[SCN Description]

Environment		Complexity/Density	
<Airspace Characteristics>	Madrid-(Barajas, Getafe & Torrejon) TMA	High	N/A
<Air Traffic profile>	2015 / 2020 or 2030 Duplicated Forecast with the poss bility of establishing a sample of a particular percentage of the maximum airport capacity.	Med/High	N/A
<Aircrafts profile>	Civil, GA and Military	Full implemented / Traditional procedures	N/A
<Weather conditions>	Options available: - CAVOK - Strong wind (North North-West) - Storms	Low/High	
Involved Actors	APP controllers Pilots and pseudo pilots Supervisors	Change Reference	N/A

[SCN]

Identifier SCN-05.07.04-VP-0000-0004
Scenario Change MOPS (from South to North Configuration)
Status In progress

[SCN Trace]

Relationship	Linked Element Type	Identifier	Compliance
<JUSTIFIES>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Partial
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Partial
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Partial
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
<DERIVES FROM>	<Architecture element>	EA element Identifier	N/A
<ASSOCIATED_TO>	<ATM Phase>	Arrival 1 (En-route - Clearance Limits) Arrival 2 (Clearance limits - BENJI/MONTE) Arrival 3 (BENJI/MONTE - FAF (North)) Departure 1 (Ground - 7000 ft) Departure 2 (7000 ft - 13000 ft) Departure 3 (13000 ft - FL200)	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[SCN Description]

Environment		Complexity/Density	
<Airspace Characteristics>	Madrid-(Barajas, Getafe & Torrejon) TMA	High	N/A
<Air Traffic profile>	2015 / 2020 or 2030 Duplicated Forecast with the poss bility of establishing a sample of a particular percentage of the maximum airport capacity.	Med/High	N/A

<Aircrafts profile>	Civil, GA and Military	Full implemented / Traditional procedures	N/A
<Weather conditions>	Options available: - CAVOK - Strong wind (North North-West) - Storms	Low/High	
Involved Actors	APP controllers Pilots and pseudo pilots Supervisors	Change Reference	N/A

Table 3: Validation Scenario layout

Figure 9: Objective List Interdependencies

3.5 Validation Assumptions

Here are listed the main assumptions up to know concerning the validation exercises:

[Validation Assumptions]

Identifier	Assumption	Comments	
ASS-05-07-04-VP-0005-0001	Real Traffic Samples	The traffic samples will reflect the local air traffic forecasting in 2015 / 2020 and 2030	N/A
ASS-05-07-04-VP-0005-0002	Mixed aircraft types	Civil and Military mixed regarding all types of aircraft	
ASS-05-07-04-VP-0005-0003	Strong wind and crosswind during the simulation in both configurations		N/A
ASS-05-07-04-VP-0005-0004	10 Operative Sectors	4 External, 2 Initial Approach, 2 Final Approach and 2 Departure sectors	N/A
ASS-05-07-04-VP-0005-0005	Mixed Mode of Operations both Conventional and P-RNAV procedures	STARs and SIDs both Conventional and PRNAV in Barajas, Getafe and Torrejón Airports. Here is breakdown the % P-RNAV compliant aircraft operating in the different airports for the validation activities: • Barajas: 85% of the traffic aircrafts will perform P-RNAV procedures • Torrejón: 60% of the traffic aircrafts will perform P-RNAV procedures • Getafe: 40% of the traffic aircrafts will perform P-RNAV procedures	N/A
ASS-05-07-04-VP-0005-0005	Hard Meteorological Conditions (cloudy, windy, snowy, hard windshear…)	Possibility of simulate hard meteorological conditions apart from the crosswind assumptions	N/A
ASS-05-07-04-VP-0005-0006	Noise Constraints	The scenario is fully compliant with noise constraints regulations	
ASS-05-07-04-VP-0005-0007	Airspace Capacity	The airport capacity won't be a constraint for the local airspace capacity (TMA)	

Table 4: Validation Scenario layout

3.6 Validation Requirements on the Concept/System Under Test

The Concept /System under test is already compliant with the validation exercise and there is no need for additional requirements except for the CONOPS and procedures documentation familiarization by the people involved in the validation exercises

[PRQ]

Identifier PRQ-05.07.04-VP-0005-0001

Requirement The controllers shall be:

- Concerned about new procedures documentation
- Concerned about the new CONOPS
- Formed / Working in TMA under test

Title Controllers concept requirements

Status In progress

Importance High

Rationale

V&V Method Real Time Simulation

[PRQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V SUT Requirement>	SUT Requirement Identifier	<Full>
<INDUCED_BY>	<V&V Objective>	ALL	N/A
<ALLOCATED_TO>	<Project>	05.07.04	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[PRQ]

Identifier PRQ-05.07.04-VP-0005-0002

Requirement The supervisor shall be:

- Concerned about new procedures documentation
- Concerned about the new CONOPS
- Formed / Working in TMA under test

Title Supervisor concept requirements

Status In progress

Importance High

Rationale

V&V Method Real Time Simulation

[PRQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V SUT Requirement>	SUT Requirement Identifier	<Full>
<INDUCED_BY>	<V&V Objective>	ALL	N/A
<ALLOCATED_TO>	<Project>	05.07.04	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

[PRQ]

Identifier PRQ-05.07.04-VP-0005-0003

Requirement The pseudo-pilots shall be:

- Concerned about new procedures documentation
- Concerned about the new CONOPS
- Formed / Working in TMA under test

Title Pseudo pilots concept requirements

Status In progress

Importance High

Rationale

V&V Method Real Time Simulation

[PRQ Trace]

Relationship	Linked Element Type	Identifier	Compliance
<SATISFIES>	<V&V SUT Requirement>	SUT Requirement Identifier	<Full>
<INDUCED_BY>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	N/A
<ALLOCATED_TO>	<Project>	05.07.04	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Table 5: Validation Concept/System Under Test Requirement layout

3.7 Validation Environment Needs

3.7.1 Validation Platform Needs

To obtain the best realistic prototype to simulate in the TMA database, the validation platform needs have been split in three main groups concerning:

- Volumetric aspects and procedures

- Routes refinement/modification
- Presentation parameters and validation

There are some starting hypotheses to set the work framework and the deadlines and milestone schedule are sensitive to modifications and delays during the lifecycle of the project. Here are listed the platform needs before get configured and technically accepted:

[PFN]	
Identifier	PFN-05.07.04-VP-0001.0001
Requirement	The data requested have to be provided in the milestones listed. It is going to be analyzed, refined and accepted in the very first days and then it is going to be introduced in the platform, validation test and generation until the correct functioning as expected and ready to validation exercises.
Title	Starting platform needs
Status	In progress
Importance	Essential
Rationale	

[PFN Trace]

Relationship	Linked Element Type	Identifier	Compliance
<INDUCED_BY>	<V&V Objective>	ALL	N/A
<ALLOCATED_TO>	<Project>	05.07.04	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	PFN-05.07.04-VP-0001.0002
Requirement	It is a possible need to refine the boundaries, data and/or elements to system correct functioning
Title	Refinement needs
Status	In progress
Importance	Essential
Rationale	

[PFN Trace]

Relationship	Linked Element Type	Identifier	Compliance
<INDUCED_BY>	<V&V Objective>	ALL	N/A
<ALLOCATED_TO>	<Project>	05.07.04	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	PFN-05.07.04-VP-0002.0001
Requirement	The activities needed concern the following topics:

	- Base Boundary Lines - SACTA sectors - New Fixed Points - Arrivals and departures procedures - Procedures levels adjustments to airspace volumetric aspects - Connecting Points Definition
Title	Group 1: Volumetric aspects and Procedures
Status	(3 weeks) In progress
Importance	Essential
Rationale	

[PFN Trace]

Relationship	Linked Element Type	Identifier	Compliance
<INDUCED_BY>	<V&V Objective>	ALL	N/A
<ALLOCATED_TO>	<Project>	05.07.04	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	PFN-05.07.04-VP-0002.0002
Requirement	The activities needed concern the following topics: - Airways refinement - Standard routes refinement - Standard connecting routes refinement - Entry points between geographical zones - Standard connecting routes refinement between border points and aerodromes This 2 weeks can be time increased depending on the amount of modifications/refinements or reduced if there is no significant changes. Here it has been supposed a basic level of refinement.
Title	Group 2: Routes Refinement/modification
Status	(2 weeks) In progress
Importance	Essential
Rationale	

[PFN Trace]

Relationship	Linked Element Type	Identifier	Compliance
<INDUCED_BY>	<V&V Objective>	ALL	N/A
<ALLOCATED_TO>	<Project>	05.07.04	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	PFN-05.07.04-VP-0002.0003
Requirement	The activities needed concern the following topics: - Imprinting parameters in fixed points and

	aerodromes - AMAN functionality revision (fixes and runway assignment rules) - Operational configuration + operative sectors + standard sectorization - Dynamic simulation parameters adjustment - Controllers position maps - Pseudo-pilots maps
Title	Group 3: Presentation parameters and simulation
Status	(3 weeks) In progress
Importance	Essential
Rationale	

[PFN Trace]

Relationship	Linked Element Type	Identifier	Compliance
<INDUCED_BY>	<V&V Objective>	ALL	N/A
<ALLOCATED_TO>	<Project>	05.07.04	N/A
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Table 6: Validation Platform Need layout

3.7.2 Other Validation Environment Needs

The air traffic controllers involved in the validation activities shall be familiarized with Madrid-Barajas TMA procedures and pilots too. There is a need to perform the validation and simulation in Madrid-Barajas TMA with local staff.

3.8 Integration and preliminary Validation activities

As explained before in the validation platform need here are listed and scheduled the preliminary and integration activities in order to get the platform technically accepted and configured:

Activities/Milestones	Type	Start Date	End Date
Validation exercises start	Milestone	17/10/2011	17/10/2011
Validation exercises run	Activity	17/10/2011	28/10/2011
Exercises performance and testing	Activity	30/09/2011	14/10/2011
Platform configured and ready to run	Milestone	14/10/2011	14/10/2011
Last problems refinement	Activity	23/09/2011	29/09/2011
Platform Technically accepted	Milestone	23/09/2011	23/09/2011
Problems refinement	Activity	09/09/2011	22/09/2011
Platform Integrated	Milestone	09/09/2011	09/09/2011
Platform Modified 3	Milestone	08/09/2011	08/09/2011
PFN-05.07.04-VP-0002.0003	Activity	19/08/2011	08/09/2011
Group 3 data input	Milestone	19/08/2011	19/08/2011
Platform modified 2	Milestone	18/08/2011	18/08/2011
PFN-05.07.04-VP-0002.0002	Activity	05/08/2011	18/08/2011

Group 2 Data Input	Milestone	05/08/2011	05/08/2011
Platform modified 1	Milestone	04/08/2011	04/08/2011
PFN-05.07.04-VP-0002.0001	Activity	15/07/2011	04/08/2011
Group 1 Input	Milestone	15/07/2011	15/07/2011

Table 7: Integration and preliminary Validation activities

3.9 Validation Exercises List

Identifier	EXE-05.07.04-VP-142.0001
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be reduced to 50% in order to pilots and controllers get used to sectors and procedures.
Title	North Configuration (Eastern Nucleus) - First Contact
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 1
Planned Execution Date	17/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial

<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0002
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be reduced to 50% in order to pilots and controllers get used to sectors and procedures. It includes the simulation of missed approaches
Title	North Configuration (Eastern Nucleus) - Missed Approaches
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 1
Planned Execution Date	17/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	Full
		OBJ-05.07.04-VP-0000.0011	None

<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0003
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for West Sectors. The traffic sample will be reduced to 50% in order to pilots and controllers get used to sectors and procedures.
Title	North Configuration (Western Nucleus) - First Contact
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 1
Planned Execution Date	17/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None

<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0004
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for West Sectors. The traffic sample will be reduced to 50% in order to pilots and controllers get used to sectors and procedures. It includes the simulation of missed approaches
Title	North Configuration (Western Nucleus) - Missed Approaches
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 1
Planned Execution Date	17/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	Full

		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0005**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be reduced to 60% in order to pilots and controllers get used to sectors and procedures with hard wind conditions (North North-East Wind)
Title	North Configuration (Eastern Nucleus) - Hard wind conditions
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 2
Planned Execution Date	18/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full

		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0006**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 and 2030 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be corresponding to 2020 and 2030 sample with hard wind conditions (North North-East Wind)
Title	North Configuration (Eastern Nucleus) - Hard wind conditions
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 2
Planned Execution Date	18/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full

		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0007**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western Sectors. The traffic sample will be reduced to 60% in order to pilots and controllers get used to sectors and procedures with hard wind conditions (North North-East Wind)
Title	North Configuration (Western Nucleus) - Hard wind conditions
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 2
Planned Execution Date	18/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full

		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0008**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 and 2030 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western Sectors. The traffic sample will be 2020 and 2030 sample with hard wind conditions (North North-East Wind)
Title	North Configuration (Western Nucleus) - Hard wind conditions
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 2
Planned Execution Date	18/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full

		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0009**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be reduced to 60% in order to pilots and controllers get used to sectors and procedures with storms
Title	North Configuration (Eastern Nucleus) - Storms
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 3
Planned Execution Date	19/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full

		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0010**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be reduced to 70% in order to pilots and controllers get used to sectors and procedures with storms
Title	North Configuration (Eastern Nucleus) - Storms
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 3
Planned Execution Date	19/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full

		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0011**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western Sectors. The traffic sample will be reduced to 60% in order to pilots and controllers get used to sectors and procedures with storms
Title	North Configuration (Western Nucleus) - Storms
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 3
Planned Execution Date	19/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full

		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0012**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western Sectors. The traffic sample will be reduced to 70% in order to pilots and controllers get used to sectors and procedures with storms
Title	North Configuration (Western Nucleus) - Storms
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 3
Planned Execution Date	19/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full

		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0013**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2020 sample up to maximum capacity.
Title	North Configuration (Eastern Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 4
Planned Execution Date	20/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None

		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0014**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2030 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2030 sample up to maximum capacity.
Title	North Configuration (Eastern Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 4
Planned Execution Date	20/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial

<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0015
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2020 sample up to maximum capacity.
Title	North Configuration (Western Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 4
Planned Execution Date	20/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0016
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2030 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2030 sample up to maximum capacity.
Title	North Configuration (Western Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 4
Planned Execution Date	20/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0017
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be reduced to 50% in order to pilots and controllers get used to sectors and procedures. Missed approaches will be simulated
Title	South Configuration (Eastern Nucleus) - First Contact
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 5
Planned Execution Date	21/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	Full
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0018
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be reduced to 60% in order to pilots and controllers get used to sectors and procedures with Southern wind.
Title	South Configuration (Eastern Nucleus) - South wind
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 5
Planned Execution Date	21/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0019
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western Sectors. The traffic sample will be reduced to 50% in order to pilots and controllers get used to sectors and procedures. Missed approaches will be simulated
Title	South Configuration (Western Nucleus) - First Contact
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 5
Planned Execution Date	21/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	Full
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0020
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western Sectors. The traffic sample will be reduced to 60% in order to pilots and controllers get used to sectors and procedures with Shouter wind
Title	South Configuration (Western Nucleus) - South wind
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 5
Planned Execution Date	21/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	Full
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0021
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2020 sample up to maximum capacity.
Title	South Configuration (Eastern Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 6
Planned Execution Date	24/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0022
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2030 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2030 sample up to maximum capacity.
Title	South Configuration (Eastern Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 6
Planned Execution Date	24/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0023

Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western Sectors. The traffic sample will be 2020 sample up to maximum capacity.
Title	South Configuration (Western Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 6
Planned Execution Date	24/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0024
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2030 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western Sectors. The traffic sample will be 2030 sample up to maximum capacity.
Title	South Configuration (Western Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 6
Planned Execution Date	24/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0025
Exercise	This exercise comprehends the MOPS change from North configuration to South Configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2020 sample up to maximum capacity.
Title	MOPS change from North to South Configuration (Eastern Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 7
Planned Execution Date	25/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0003	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0026
Exercise	This exercise comprehends the MOPS change from North configuration to South Configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2030 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2030 sample up to maximum capacity.
Title	MOPS change from North to South Configuration (Eastern Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 7
Planned Execution Date	25/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0003	Partial

<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0027
Exercise	This exercise comprehends the MOPS change from North configuration to South Configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2020 sample up to maximum capacity.
Title	MOPS change from North to South Configuration (Western Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 7
Planned Execution Date	25/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None

<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0003	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	EXE-05.07.04-VP-142.0028
Exercise	This exercise comprehends the MOPS change from North configuration to South Configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2030 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2030 sample up to maximum capacity.
Title	MOPS change from North to South Configuration (Western Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 7
Planned Execution Date	25/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None

		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0003	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0029**
Exercise	This exercise comprehends the MOPS change from South configuration to north Configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2020 sample up to maximum capacity.
Title	MOPS change from South to North Configuration (Eastern Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 8
Planned Execution Date	26/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full

		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0004	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0030**
Exercise	This exercise comprehends the MOPS change from South configuration to north Configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for East Sectors. The traffic sample will be 2030 sample up to maximum capacity.
Title	MOPS change from South to North Configuration (Eastern Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 8
Planned Execution Date	26/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full

		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0004	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0031**
Exercise	This exercise comprehends the MOPS change from South configuration to north Configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2020 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western sectors. The traffic sample will be 2020 sample up to maximum capacity.
Title	MOPS change from South to North Configuration (Western Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 8
Planned Execution Date	26/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full

		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0004	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0032**
Exercise	This exercise comprehends the MOPS change from South configuration to north Configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2030 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Western sectors. The traffic sample will be 2030 sample up to maximum capacity.
Title	MOPS change from South to North Configuration (Western Nucleus) - Max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 8
Planned Execution Date	26/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0003	Full
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full

		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0004	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0033**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Eastern and Western Sectors. The traffic sample will be reduced to 60% in order to pilots and controllers get used to sectors and procedures.
Title	North Configuration (Eastern + Western Nucleus) - Final approach sectors
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 9
Planned Execution Date	27/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full

		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0034**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Eastern and Western Sectors. The traffic sample will de 2020 sample up to maximum capacity.
Title	North Configuration (Eastern + Western Nucleus) - Final approach sectors max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 9
Planned Execution Date	27/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full

		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0035**
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Eastern and Western Sectors. The traffic sample will be reduced to 60% in order to pilots and controllers get used to sectors and procedures.
Title	South Configuration (Eastern + Western Nucleus) - Final approach sectors
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 9
Planned Execution Date	27/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full

		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0036**
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Eastern and Western Sectors. The traffic sample will de 2020 sample up to maximum capacity.
Title	South Configuration (Eastern + Western Nucleus) - Final approach sectors maximum capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 9
Planned Execution Date	27/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full

		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	None
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0037**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Easter and Western Sectors in night configuration as single runway contingency procedure. The traffic sample will be reduced to 30% airport capacity in order to pilots and controllers get used to sectors and procedures.
Title	North Configuration (Eastern + Western Nucleus) - Night configuration as single runway contingency procedure
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 10
Planned Execution Date	28/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None

		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	Full
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0038**
Exercise	This exercise comprehends the North configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Easter and Western Sectors in night configuration as single runway contingency procedure. The traffic sample will be reduced to 40% airport capacity in order to pilots and controllers get used to sectors and procedures.
Title	North Configuration (Eastern + Western Nucleus) - Night configuration as single runway contingency procedure max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 10
Planned Execution Date	28/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full

		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	Full
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0001	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0039**
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Easter and Western Sectors in night configuration as single runway contingency procedure. The traffic sample will be reduced to 30% airport capacity in order to pilots and controllers get used to sectors and procedures.
Title	South Configuration (Eastern + Western Nucleus) - Night configuration as single runway contingency procedure
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 10
Planned Execution Date	28/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Test
Exercise Level	ATM
Lifecycle Phase	V3
V&V Technique	RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	None
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	Full
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Identifier	**EXE-05.07.04-VP-142.0040**
Exercise	This exercise comprehends the South configuration procedures both conventional and P-RNAV STARs and SIDs with a mixed 2015 traffic sample P-RNAV compliant and non-compliant. The active UCS will be configured for ACC-TMA interface and TMA for both departures and arrivals but only for Easter and Western Sectors in night configuration as single runway contingency procedure. The traffic sample will be reduced to 40% airport capacity in order to pilots and controllers get used to sectors and procedures.
Title	South Configuration (Eastern + Western Nucleus) - Night configuration as single runway contingency procedure max. Capacity
Status	In progress
Responsible Project	05.07.04
Exercise Plan	Validation exercise plan day 10
Planned Execution Date	28/10/2011
Planned Analysis Date	31/10/2011
Activity Type	Analysis
Exercise Level	ATM
Lifecycle Phase	V3

V&V Technique RTS

Relationship	Linked Element Type	Identifier	Compliance
<EMBEDS>	<V&V Objective>	OBJ-05.07.04-VP-0000.0001	Full
		OBJ-05.07.04-VP-0000.0002	None
		OBJ-05.07.04-VP-0000.0004	Full
		OBJ-05.07.04-VP-0000.0005	Full
		OBJ-05.07.04-VP-0000.0006	Full
		OBJ-05.07.04-VP-0000.0007	Full
		OBJ-05.07.04-VP-0000.0008	Full
		OBJ-05.07.04-VP-0000.0009	Full
		OBJ-05.07.04-VP-0000.0010	None
		OBJ-05.07.04-VP-0000.0011	Full
<EXECUTES>	<V&V Scenario>	SCN-05.07.04-VP-0000-0002	Partial
<CHANGED_BECAUSE_OF>	<Change Order>	Change Reference	N/A

Table 8: Validation Exercise layout

3.10Validation Exercises Planning

Activity Identifier	Start Date	End Date
Group 1 Input	15/07/2011	15/07/2011
PFN-05.07.04-VP-0002.0001	15/07/2011	04/08/2011
Platform modified 1	04/08/2011	04/08/2011
Group 2 Data Input	05/08/2011	05/08/2011
PFN-05.07.04-VP-0002.0002	05/08/2011	18/08/2011
Platform modified 2	18/08/2011	18/08/2011
Group 3 data input	19/08/2011	19/08/2011
PFN-05.07.04-VP-0002.0003	19/08/2011	08/09/2011
Platform Modified 3	08/09/2011	08/09/2011
Platform Integrated	09/09/2011	09/09/2011
Problems refinement	09/09/2011	22/09/2011
Last problems refinement	23/09/2011	29/09/2011
Platform Technically accepted	23/09/2011	23/09/2011
Exercises performance and testing	30/09/2011	14/10/2011
Platform configured and ready to run	14/10/2011	14/10/2011
0Validation exercises run	17/10/2011	28/10/2011
0Validation exercises start	17/10/2011	17/10/2011
EXE-05.07.04-VP-142.0001	17/10/2011	17/10/2011
EXE-05.07.04-VP-142.0002	17/10/2011	17/10/2011
EXE-05.07.04-VP-142.0003	17/10/2011	17/10/2011

EXE-05.07.04-VP-142.0004	17/10/2011	17/10/2011
EXE-05.07.04-VP-142.0005	18/10/2011	18/10/2011
EXE-05.07.04-VP-142.0006	18/10/2011	18/10/2011
EXE-05.07.04-VP-142.0007	18/10/2011	18/10/2011
EXE-05.07.04-VP-142.0008	18/10/2011	18/10/2011
EXE-05.07.04-VP-142.0009	19/10/2011	19/10/2011
EXE-05.07.04-VP-142.0010	19/10/2011	19/10/2011
EXE-05.07.04-VP-142.0011	19/10/2011	19/10/2011
EXE-05.07.04-VP-142.0012	19/10/2011	19/10/2011
EXE-05.07.04-VP-142.0013	20/10/2011	20/10/2011
EXE-05.07.04-VP-142.0014	20/10/2011	20/10/2011
EXE-05.07.04-VP-142.0015	20/10/2011	20/10/2011
EXE-05.07.04-VP-142.0016	20/10/2011	20/10/2011
EXE-05.07.04-VP-142.0017	21/10/2011	21/10/2011
EXE-05.07.04-VP-142.0018	21/10/2011	21/10/2011
EXE-05.07.04-VP-142.0019	21/10/2011	21/10/2011
EXE-05.07.04-VP-142.0020	21/10/2011	21/10/2011
EXE-05.07.04-VP-142.0021	24/10/2011	24/10/2011
EXE-05.07.04-VP-142.0022	24/10/2011	24/10/2011
EXE-05.07.04-VP-142.0023	24/10/2011	24/10/2011
EXE-05.07.04-VP-142.0024	24/10/2011	24/10/2011
EXE-05.07.04-VP-142.0025	25/10/2011	25/10/2011
EXE-05.07.04-VP-142.0026	25/10/2011	25/10/2011
EXE-05.07.04-VP-142.0027	25/10/2011	25/10/2011
EXE-05.07.04-VP-142.0028	25/10/2011	25/10/2011
EXE-05.07.04-VP-142.0029	26/10/2011	26/10/2011
EXE-05.07.04-VP-142.0030	26/10/2011	26/10/2011
EXE-05.07.04-VP-142.0031	26/10/2011	26/10/2011
EXE-05.07.04-VP-142.0032	26/10/2011	26/10/2011
EXE-05.07.04-VP-142.0033	27/10/2011	27/10/2011
EXE-05.07.04-VP-142.0034	27/10/2011	27/10/2011
EXE-05.07.04-VP-142.0035	27/10/2011	27/10/2011
EXE-05.07.04-VP-142.0036	27/10/2011	27/10/2011
EXE-05.07.04-VP-142.0037	28/10/2011	28/10/2011
EXE-05.07.04-VP-142.0038	28/10/2011	28/10/2011
EXE-05.07.04-VP-142.0039	28/10/2011	28/10/2011
EXE-05.07.04-VP-142.0040	28/10/2011	28/10/2011
0Validation exercises end	28/10/2011	28/10/2011
0Validation exercises analysis	31/10/2011	30/12/2011
Capacity Report Elaboration	31/10/2011	25/11/2011
Operational Report	31/10/2011	04/11/2011
Final Assessment	28/11/2011	30/12/2011

Table 9: Validation Exercises planning

4 Validation Activities

4.1 Validation Exercises #1 Plan

4.1.1 Exercise Scope and Justification

4.1.1.1 Exercise Level

The exercises level will be at ATM level

4.1.1.2 Description of the Operational concept being addressed

See OSED document

4.1.1.3 Stakeholders and their expectations

See 3.2 – Stakeholders validation expectations

4.1.1.4 Validation objectives and hypothesis

See 3.3 – Validation Objectives and 3.5 – Validation assumptions

4.1.1.5 Validation scenario

4.1.1.5.1 Airport Information

See OSED document

4.1.1.5.2 Airspace Information

See OSED document

4.1.1.5.3 Traffic Information

The traffic sample will be based on a duplicated samples furcating air traffic corresponding to 2017, 2020 and 2030 with the possibility of simulate a particular percentage of the maximum capacity of the airport.

4.1.1.5.4 Simulation scenarios

See 3.4 – Validation scenarios

4.1.1.5.5 Additional Information

No additional information

4.1.1.6 Exercise Assumptions

4.1.1.7 Exercise Tool, Validation Technique and/or Platform

See 3.1.1 - Validation techniques and 3.1.2 – Validation tools

4.1.1.8 Entrance criteria

See 3.8 – Integration and preliminary validation activities

4.1.1.9 Exit Criteria

Outputs ready for NORVASE assessment tool

4.1.1.10 Validation Environment Needs

4.1.1.10.1 Validation requirements on the Concept/System Under Test

See 3.6

4.1.1.10.2 Validation Platform needs

See 3.7.1

4.1.1.10.3 Platform Configuration

See 3.8 – Integration and preliminary validation activities

4.1.1.10.4 Other Validation Environment Needs

See 3.7.2

4.1.1.11 Links to other Validation Exercises

No, all the exercises are in V3

4.1.1.12 Dependent and Independent variables

No

4.1.2 Exercises Planning and management

4.1.2.1 Activities

See 3.9 - Validation exercises list

4.1.2.1.1 Preparatory activities

See 3.8

4.1.2.1.2 Execution activities

See 3.9

4.1.2.1.3 Post execution activities

See 3.10

4.1.2.2 Responsibilities in the exercise

Describe clearly the roles of the participants involved in preparing, conducting and analysing the exercise.

Human Resources.

This section should give the expected human resources and also describe what kind of expertise, skills and knowledge is required from all participants involved in preparing and conducting the exercise. The table below is proposed as a format example: for expected effort indicating the effort-unit (e.g. in person hours (ph) / weeks (pw) or months (pm) and specifying the provider of the resource (e.g. IBP host, WP3, technical project, ...)

Activities	Detail	Effort (pw)						
		ATCOs Working Group	Airspace Design Staff	V&V Platform Configuration Staff	Pilots (Pseudo-pilots)	Supervisor	V&V data analysis	Post-exercise expertise
Preparatory	Group 1 Input	4	3					
	PFN-05.07.04-VP-0002.0001			3				
	Platform modified 1			√				

Activities	Detail	Effort (pw)						
		ATCOs Working Group	Airspace Design Staff	V&V Platform Configuration Staff	Pilots (Pseudo-pilots)	Supervisor	V&V data analysis	Post-exercise expertise
	Group 2 Data Input	4	3					
	PFN-05.07.04-VP-0002.0002			3				
	Platform modified 2			√				
	Group 3 data input	4	3					
	PFN-05.07.04-VP-0002.0003			3				
	Platform Modified 3			√				
	Platform Integrated			√				
	Problems refinement			3				
	Last problems refinement			3				
	Platform Technically accepted			√				
	Exercises performance and testing			3				
Execution	Platform configured and ready to run	√			√	√	√	
	0Validation exercises run	√			√	√	√	
	0Validation exercises start	√			√	√	√	
	From EXE-05.07.04-VP-142.0001 To EXE-05.07.04-VP-142.0020	10			12	1	6	
	From EXE-05.07.04-VP-142.0021 To EXE-05.07.04-VP-142.0040	10			12	1	4	
	Validation exercises end	√			√	√	√	
Post-Exercise	Validation exercises analysis	√				√		√
	Capacity Report Elaboration							4
	Operational Report							4
	Final Assessment	4						4
TOTAL by resource provider (persons)		10	3	3	12	1	4	4

Activities	Detail	Effort (pw)						
		ATCOs Working Group	Airspace Design Staff	V&V Platform Configuration Staff	Pilots (Pseudo-pilots)	Supervisor	V&V data analysis	Post-exercise expertise
TOTAL (persons)		37						

Table 10: Resources

4.1.2.3 Training

The training necessities are already covered during the validation exercises identified as test type: Activities in which the traffic sample can be reduced up to 50% of maximum capacity (in order to pilots and controllers get used to sectors and procedures).

4.1.2.4 Time planning

Here is the detailed time planning for the activities involved in the validation activities: preparatory (orange), execution (green) and post-execution (blue):

Activity	Week																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Group 1 Input	X																		
PFN-05.07.04-VP-0002.0001	X	X	X																
Platform modified 1			X																
Group 2 Data Input			X																
PFN-05.07.04-VP-0002.0002			X	X	X														
Platform modified 2					X														
Group 3 data input					X														
PFN-05.07.04-VP-0002.0003					X	X	X												
Platform Modified 3							X												
Platform Integrated							X												
Problems refinement							X	X	X										
Last problems refinement									X	X									
Platform Technically accepted									X										
Exercises performance and testing										X	X								
Platform configured and ready to run											X								
0Validation exercises run											X	X							
0Validation exercises start											X								
EXE-05.07.04-VP-142.0001											X								
EXE-05.07.04-VP-142.0002											X								
EXE-05.07.04-VP-142.0003											X								
EXE-05.07.04-VP-142.0004											X								
EXE-05.07.04-VP-142.0005											X								
EXE-05.07.04-VP-142.0006											X								
EXE-05.07.04-VP-142.0007											X								
EXE-05.07.04-VP-142.0008											X								
EXE-05.07.04-VP-142.0009											X								
EXE-05.07.04-VP-142.0010											X								
EXE-05.07.04-VP-142.0011											X								
EXE-05.07.04-VP-142.0012											X								
EXE-05.07.04-VP-142.0013											X								
EXE-05.07.04-VP-142.0014											X								
EXE-05.07.04-VP-142.0015											X								
EXE-05.07.04-VP-142.0016											X								
EXE-05.07.04-VP-142.0017											X								
EXE-05.07.04-VP-142.0018											X								
EXE-05.07.04-VP-142.0019											X								
EXE-05.07.04-VP-142.0020											X								
EXE-05.07.04-VP-142.0021												X							
EXE-05.07.04-VP-142.0022												X							
EXE-05.07.04-VP-142.0023												X							
EXE-05.07.04-VP-142.0024												X							
EXE-05.07.04-VP-142.0025												X							
EXE-05.07.04-VP-142.0026												X							
EXE-05.07.04-VP-142.0027												X							
EXE-05.07.04-VP-142.0028												X							
EXE-05.07.04-VP-142.0029												X							
EXE-05.07.04-VP-142.0030												X							
EXE-05.07.04-VP-142.0031												X							
EXE-05.07.04-VP-142.0032												X							
EXE-05.07.04-VP-142.0033												X							
EXE-05.07.04-VP-142.0034												X							
EXE-05.07.04-VP-142.0035												X							
EXE-05.07.04-VP-142.0036												X							
EXE-05.07.04-VP-142.0037												X							
EXE-05.07.04-VP-142.0038												X							
EXE-05.07.04-VP-142.0039												X							
EXE-05.07.04-VP-142.0040												X							
0Validation exercises end												X							
0Validation exercises analysis												X	X	X	X	X	X	X	X
Capacity Report Elaboration												X	X	X	X				
Operational Report												X	X	X					
Final Assessment																X	X	X	X

Table 11: Detailed time planning

4.1.2.5 Risks

- No accomplishment of the milestone in the foreseen date
- NO Resource availability

- No platform configured at the right time
- Other risks identified in the PIR

4.1.2.6 Errors and Observation handling

See 3.8

4.1.3 Analysis Specification

4.1.3.1 Data collection methods

The data collection method will be perform by NORVASE during the validation exercises

NORVASE is an AENA tool model development describing the real ATC operation in control sectors by:

- Validating and optimizing current control sectors
- Improving airspace utilization by creating new control sectors
- Calculating complexity, workload and capacity

4.1.3.2 Acquisition of information to support assessment of TA

Here is listed the indicators used by NORVASE and its compliance with TAs. The Environmental Case is going to be assessed by EUROCONTROL tool ERM (TBD):

	KPA												BC
SECTOR INDICATOR	SAF	SEC	ENV	CEF	CAP	EFF	FLX	PRD	AEQ	PRT	INTER	HP	
Complexity	X				X							X	CBA/HF
Complexity per movement	X				X							X	CBA/HF
Workload per movement					X							X	CBA/HF
Movement Workload					X							X	CBA/HF
Mean Flight Time (min)			X		X	X						X	ENV/CBA
Percentage Time in Evolution (climb/descent)			X		X							X	ENV/CBA/HF
Number of Movements					X							X	CBA/HF
Max. Simultaneous Aircrafts					X							X	CBA/HF
Min. Simultaneous Aircrafts					X							X	CBA/HF
Actions in arrivals					X		X					X	CBA/HF
Actions in departures					X		X					X	CBA/HF
Actions in over flight					X		X					X	CBA/HF
Actions					X		X					X	CBA/HF
Actions due to Movement					X		X					X	CBA/HF
Arrival separation or Sequencing Actions	X				X	X						X	CBA/HF
Departure separation or Sequencing Actions	X				X	X						X	CBA/HF
Overflight separation or Sequencing Actions	X				X	X						X	CBA/HF
Sep. Or Seq. Actions per Movement	X				X	X						X	CBA/HF
Number of vector per arrival					X						X	X	CBA/HF

Number of vector per departure					X						X	X	CBA/HF
Number of vector per overflight					X						X	X	CBA/HF
Heading instructions due to movement					X							X	CBA/HF
Arrival monitoring					X							X	CBA/HF
Departure Monitoring					X							X	CBA/HF
Overflight Monitoring					X							X	CBA/HF
Monitoring due to movement					X							X	CBA/HF
Complexity (%) due to arrival	X				X							X	CBA/HF
Complexity (%) due to departure	X				X							X	CBA/HF
Complexity (%) due to overflight	X				X							X	CBA/HF
Movement Complexity	X				X							X	CBA/HF
Workload (%) due to arrival					X							X	CBA/HF
workload (%) due to departure					X							X	CBA/HF
workload (%) due to overflight					X							X	CBA/HF
Movement Workload					X							X	CBA/HF
Holdings					X	X						X	CBA/HF
Coordinations					X	X	X					X	CBA/HF
Percentage of time in evolution*			X		X							X	ENV/CBA/HF
Number of arrivals					X							X	CBA/HF
Number of departures					X							X	CBA/HF
Number of Overflights					X							X	CBA/HF

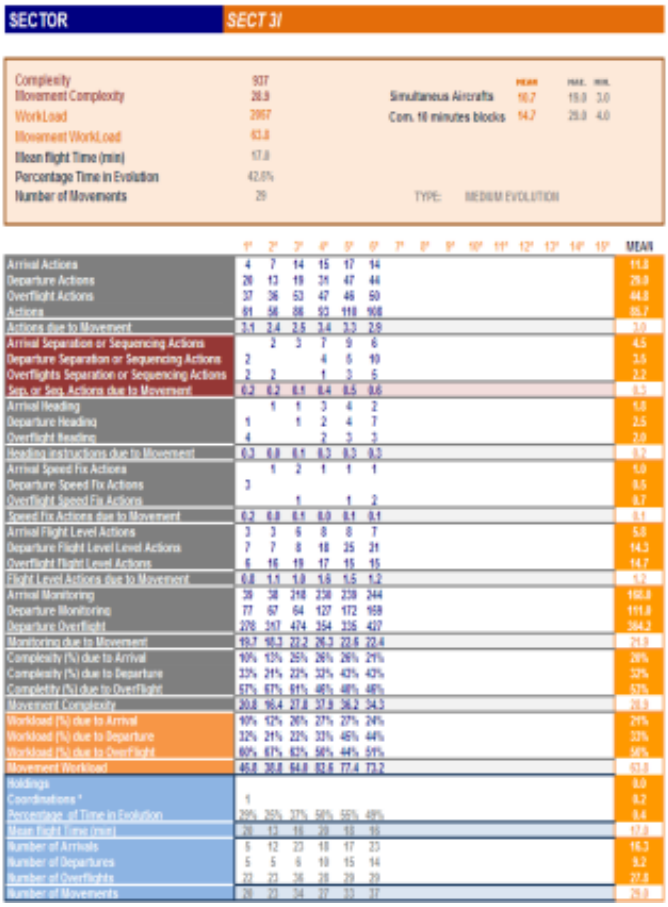
Table 12: TA assessments compliance

4.1.3.3 Analysis method

The data analysis method will be perform by NORVASE after the validation exercises endorsing a final report. It includes:

- A description of the new operational scenario
- Sector indicators
- Capacity assessment per sector
- Workload assessment per sector
- Descriptive diagram per sector
- Operational description per sectors

The following figures are a non-representative sample just to show how the diagrams to be assessed will be look like:



SECTOR	SECT 31

Complexity	937
Movement Complexity	28.9
WorkLoad	2957
Movement WorkLoad	63.8
Mean flight Time (min)	57.8
Percentage Time in Evolution	42.6%
Number of Movements	29

	PEAK	MAX.	MIN.
Simultaneus Aircrafts	16.7	19.0	3.0
Corn. 16 minutes blocks	14.7	28.0	4.0

TYPE: MEDIUM EVOLUTION

	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	MEAN
Arrival Actions	4	7	14	15	17	14										11.8
Departure Actions	26	13	19	31	47	44										29.0
Overflight Actions	37	36	53	47	46	50										44.8
Actions	61	56	86	93	110	108										85.7
Actions due to Movement	3.1	2.4	2.5	3.4	3.5	2.9										3.0
Arrival Separation or Sequencing Actions		2	3	7	9	6										4.5
Departure Separation or Sequencing Actions	2			4	6	10										3.5
Overflights Separation or Sequencing Actions	2	2		1	3	5										2.2
Sep. or Seq. Actions due to Movement	0.2	0.2	0.1	0.4	0.5	0.6										0.5
Arrival Heading		1	1	3	4	2										1.8
Departure Heading	1		1	2	4	7										2.5
Overflight Heading	4			2	2	3										2.0
Heading Instructions due to Movement	0.3	0.0	0.1	0.3	0.5	0.3										0.2
Arrival Speed Fix Actions		1	2	1	1	1										1.0
Departure Speed Fix Actions	3															0.5
Overflight Speed Fix Actions			1		1	2										0.7
Speed Fix Actions due to Movement	0.2	0.0	0.1	0.0	0.1	0.1										0.1
Arrival Flight Level Actions	3	3	6	8	8	7										5.0
Departure Flight Level Level Actions	7	7	8	18	25	21										14.3
Overflight Flight Level Actions	6	16	19	17	15	15										14.7
Flight Level Actions due to Movement	0.8	1.1	1.0	1.6	1.5	1.2										1.2
Arrival Monitoring	39	38	248	258	238	244										160.8
Departure Monitoring	77	67	64	127	172	168										111.8
Departure Overflight	278	247	474	354	335	427										384.2
Monitoring due to Movement	19.7	18.3	22.2	26.3	22.6	22.4										21.9
Complexity (%) due to Arrival	10%	13%	25%	26%	26%	21%										28%
Complexity (%) due to Departure	33%	21%	22%	33%	43%	43%										32%
Complexity (%) due to OverFlight	57%	67%	51%	40%	48%	48%										53%
Movement Complexity	30.8	16.4	27.8	37.9	36.2	34.3										28.9
Workload (%) due to Arrival	10%	12%	26%	27%	27%	24%										21%
Workload (%) due to Departure	32%	21%	22%	33%	46%	44%										33%
Workload (%) due to OverFlight	60%	67%	52%	56%	44%	51%										56%
Movement Workload	46.8	30.8	54.8	82.6	77.4	73.2										63.8
Holdings																0.0
Coordinations *	1															0.2
Percentage of Time in Evolution	29%	35%	37%	58%	55%	48%										0.4
Mean flight Time (min)	20	13	18	29	18	18										17.8
Number of Arrivals	5	12	23	18	17	23										16.3
Number of Departures	5	5	6	10	15	14										9.2
Number of Overflights	22	23	26	28	29	29										27.8
Number of Movements	26	23	34	37	33	37										29.8

Figure 10: Operational description per sectors

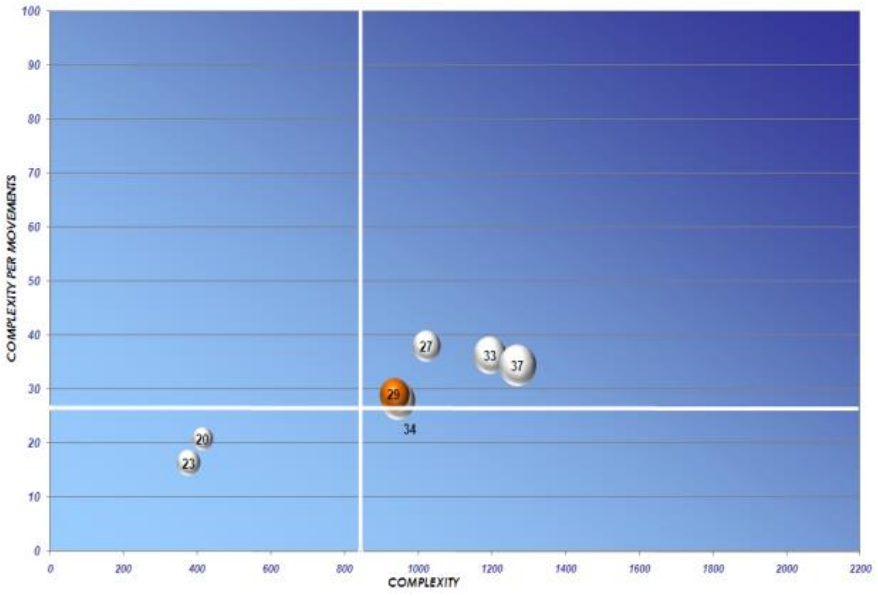


Figure 11: Descriptive diagram per sectors

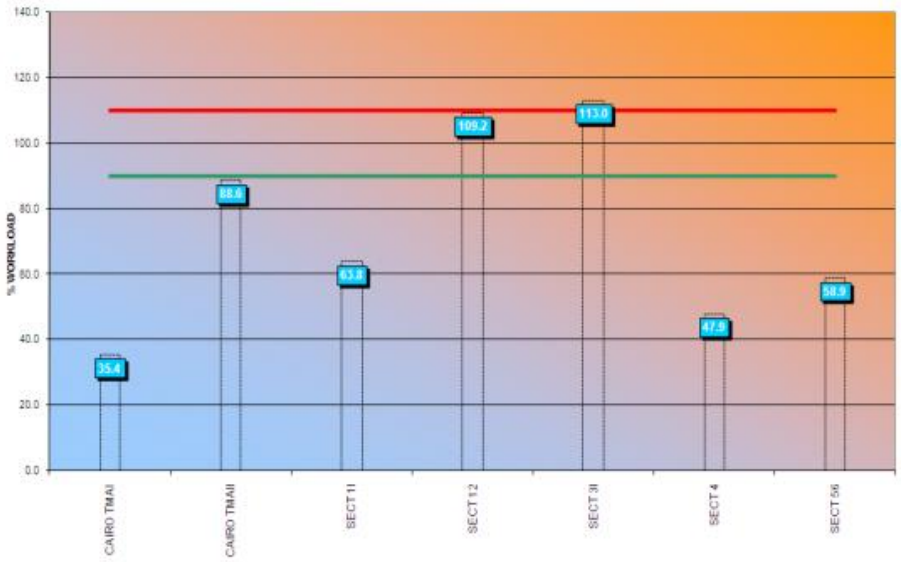


Figure 12: Workload assessment

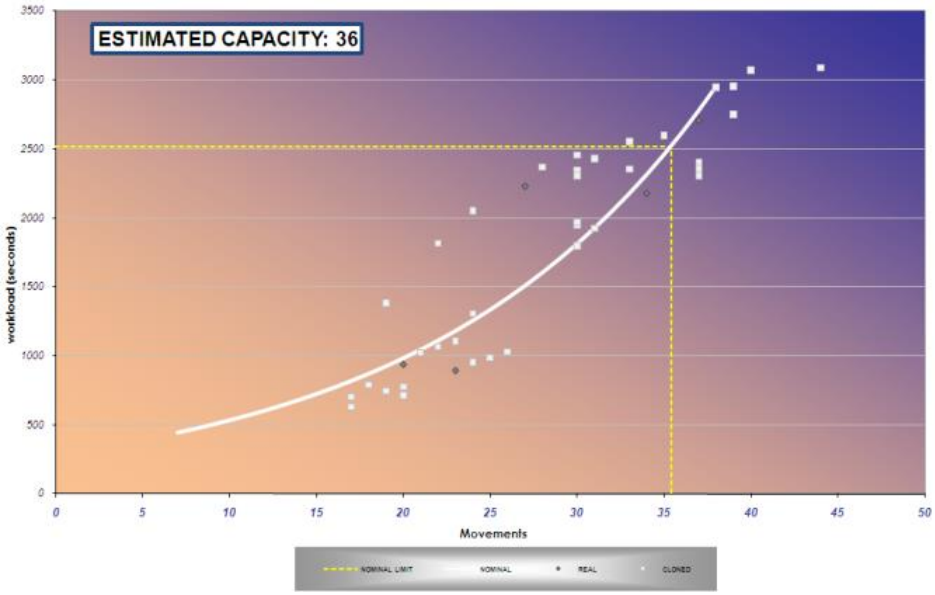


Figure 13: Capacity assessment

INDICATOR	SECT 3I	AVERAGE OF THE GROUP
COMPLEXITY	937	843
MOVEMENT COMPLEXITY	28.0	26.6
ACTIONS DUE TO MOVEMENT	3	2.7
SEP. OR SEQ. ACTIONS DUE TO MOV.	0.3	0.2
NUMBER OF MOVEMENTS	29	28
MEAN FLIGHT TIME (MIN)	17.0	23.4
WORKLOAD (SECONDS)	2057	1872
ESTIMATED CAPACITY	36	

Figure 14: Sector indicators layout

4.1.3.4 Data logging requirements

As respective working Groups required

4.1.4 Level of Representativeness/ limitations

The main limitation is in the number of UCS available (6 UCS to simulate 12 sectors can lead sometimes to a limitation if North and South configurations, MOPS change and Eastern and Western Nucleus wants to be simulated at the same time)

5 References

5.1 Applicable Documents

[1] SESAR V&V Strategy V XXX
[2] SESAR SEMP V XXX
[3] Ops 5.2 DOD
[4] SESAR TemplateToolbox Latest version
[5] SESAR Req and V&V Guidelines Latest version
[6] SESAR Template Toolbox User Manual Latest version
[7] European Operational Concept Validation Methodology (E-OCVM) - 2.0 [March 2007]

5.2 Reference Documents

The following documents provide input/guidance/further information/other:

[8] 05.07.04 – Initial OSED 00.00.01
[9] PIR part 1 and 2 02.02.00

- **END OF DOCUMENT -**