



**Network Manager**  
nominated by  
the European Commission



# European Network Operations Plan 2016 - 2019/20

**Transition Plan for Major Projects in Europe  
Winter 2016/2017**



**Edition November 2016**

## DOCUMENT CHANGE RECORD

The following table records the complete history of the successive updates of the present document.

EDITION NUMBER	DATE	REASON FOR CHANGE
0.1	01/09/2016	1 <sup>st</sup> draft
0.2	05/10/2016	Proposed to NETOPS and NDOP
0.3	11/11/2016	EDGG updates
1.0	17/11/2016	Approved by NMB

Publications  
EUROCONTROL Headquarters  
96 Rue de la Fusée  
B-1130 BRUSSELS  
Tel: +32 (0)2 729 1152  
Fax: +32 (0)2 729 5149  
E-mail: [publications@eurocontrol.int](mailto:publications@eurocontrol.int)

## TABLE OF CONTENT

<b>TABLE OF CONTENT</b> .....	<b>ii</b>
<b>BACKGROUND</b> .....	<b>1</b>
<b>1. INTRODUCTION</b> .....	<b>2</b>
1.1 OBJECTIVE AND SCOPE.....	2
1.2 ROLES AND RESPONSIBILITIES .....	3
<b>2. TRANSITION PLANNING PRINCIPLES AND PROCESS</b> .....	<b>4</b>
2.1 MAIN PRINCIPLES .....	4
2.2 TRANSITION PLANNING PROCESS .....	4
<b>3. DOCUMENTATION</b> .....	<b>9</b>
<b>ANNEXES</b> 10	
Annex A. LIST OF MAJOR TRANSITION PROJECTS .....	11
Annex B. INDIVIDUAL TRANSITION PROJECTS .....	13
<b>DETAILED INFORMATION AND ANALYSIS</b> .....	<b>13</b>
Annex C. VIEW ON THE TRANSITION PROJECTS – AUTUMN 2016 / SPRING 2017.....	32
Annex D. ACRONYMS AND ABBREVIATIONS .....	33

## BACKGROUND

In response to the Commission Regulation (EU) No 677/2011 of 7 July 2011 (laying down the detailed rules for the implementation of air traffic management (ATM) network functions), and Commission Implementing Regulation (EU) No 390/2013, the Network Manager helps to ensure the achievement of European Union-wide performance targets during the implementation of system / airspace transition projects.

The Regulation 677/2011 requires the NM to include in the NOP the following elements relevant to the planning of major projects:

- A network forecast taking into account special events impact;
- A description of plans and actions at local and network level;
- An overview of special events with significant ATM impact;
- A description of individual special events and their handling from a network perspective;
- A consolidated forecast and analysis of the operational performance of the network, including the impact of special events.

## **1. INTRODUCTION**

The Transition Plan describes the processes, the activities, the plans and measures that will be applied by the Network Manager and the operational stakeholders, to minimise the impact on the network performance caused by major airspace or ATM system improvement projects. The Transition Plan is a living document, which forms part of the European Network Operations Plan (NOP).

The Transition Plan deals only with scheduled, planned, special events undertaken and managed by ANS, or ANS related entities, e.g. operational stakeholders that could lead to a temporary reduction of capacity and that may require mitigation measures agreed in a partnership approach at Network level. Examples of such events are: implementation of a new ATM system, move to a new ACC Ops room, major airspace reorganisation including change to the ACC area of responsibility, opening of a new airport, etc.

### **1.1 OBJECTIVE AND SCOPE**

#### **1.1.1. Objective**

The primary objective of the Transition Plan is to deliver the optimum ATM performance at European network level, taking into account temporary capacity limitations caused by the preparation and implementation of individual and combined major airspace and ATM system improvement projects.

Further objectives of the consolidated Transition Plan are:

- To ensure the coordination and synchronisation of major projects;
- To ensure an analysis of the resulting impact on network performance;
- To propose measures to mitigate capacity limitations;
- To ensure monitoring of individual project progress;
- To review the mitigation measures in the case of slippage or changes to the original plan;
- To ensure post-operations analysis;
- To document and share best practice.

#### **1.1.2. Scope**

The Transition Plan covers the following areas:

- Coordination among parties involved
- Capacity analysis and proposals;
- Airspace, sectorisation analysis and proposals;
- Detailed local transition plans;
- Consolidated Network transition plan;
- Local and Network measures and proposals.

## **1.2 ROLES AND RESPONSIBILITIES**

### **The Network Manager's role in the transition planning process is:**

- 1) to collect and consolidate all known information on major projects transition plans;
- 2) support the ANSPs in the preparation of their transition plans;
- 3) to analyse the effect, through simulation, of temporary capacity reductions or flight efficiency impact;
- 4) to analyse the impact at network level of individual and overlapping or consecutive projects;
- 5) to coordinate, agree and prioritise the strategic and tactical ATFCM mitigation measures;
- 6) to ensure optimum management of the Network, taking into account known limitations;
- 7) to perform post-operations analyses, documenting lessons learnt and making them available for future transition planning exercises.

### **The ANSP role is to provide the following information to the NM:**

- 1) early notification of planned project including expected capacity impact and timescale – as soon as project is confirmed;
- 2) planned dates for each phase of the project that may impact capacity or flight efficiency;
- 3) details of available sector configurations, opening schemes and default sector/ Traffic Volume (TV) monitoring values for each phase of the project;
- 4) notification, with as much notice as possible, of any changes to the timescales and/or capacity information;
- 5) work with NM and apply the agreed measures.

## 2. TRANSITION PLANNING PRINCIPLES AND PROCESS

### 2.1 MAIN PRINCIPLES

When preparing the consolidated Transition Plan, the Network Manager will apply the following main principles:

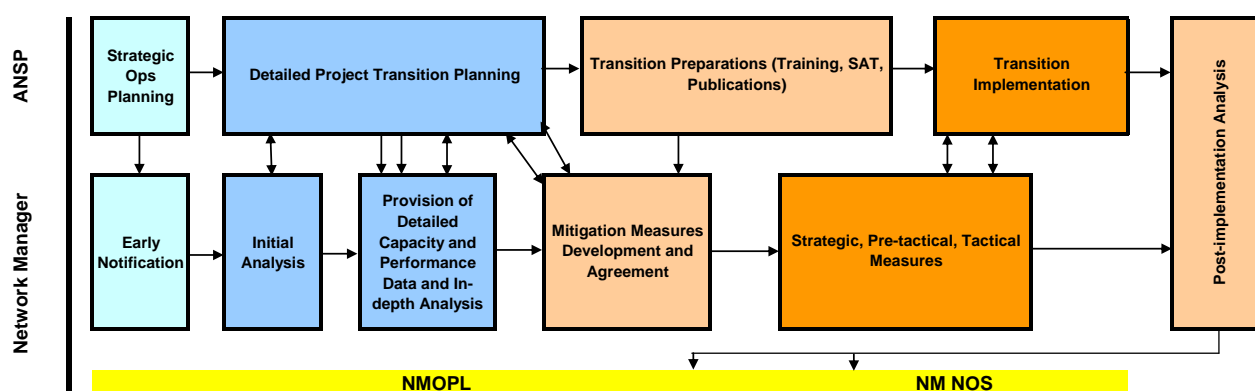
- Recognise airspace users' needs, both civil and military;
- Ensure a balance between capacity and flight efficiency;
- Ensure a balanced approach between European network, regional and local requirements;
- Ensure a coordinated and integrated approach for the collective benefit of airspace users, Air Navigation Service Providers, civil and military authorities through a collaborative planning process;
- Ensure notification of operational impact to all ACCs affected by the measures taken;
- Maintain regional interconnectivity between the affected airspace and adjacent areas;
- Apply a cost-effective solution;
- Consider the operational requirements and impact of a project;

### 2.2 TRANSITION PLANNING PROCESS

The transition planning is a joint activity between the ANSP(s) concerned and the Network Manager, which starts as soon as the ANSP decides to undertake a major improvement project which may temporarily affect the performance of the ATM network.

It is important that the planning process begins at the early stages of the project, leaving sufficient time for any adaptations in terms of capacity, airspace availability and procedures, to minimise the impact on the network performance during the transition phase.

The process needs to be conducted at the level of a single ACC, or an ATC unit, the principal bearer of the project activities.



Transition Planning Process

The Transition Planning process has the following stages:

1. Early notification of individual projects (ANSP);
2. Initial consolidation and analysis at Network level (NM);
3. High level synchronisation and coordination (NM);
4. Provision of detailed capacity and performance data for each phase of the project (ANSP);
5. In-depth impact analysis of individual and combined projects (NM);
6. Development and agreement of mitigation measures (NM and ANSP/FAB);
7. Transition plan implementation (NM and ANSP/FAB);
8. Post Implementation analysis (NM).

### 2.2.1 Early Notification of Individual Projects (ANSP)

The planning for a large scale project can start several years ahead and must be included in the ANSP capacity plan shared with NM.

There will be only one focal point per project, nominated by the ANSP.

The project owner will notify the NM through the NOP development process as soon as the project is confirmed, together with an initial assessment of the impact.

	Capacity / Traffic density
<b>Low Impact</b>	<ul style="list-style-type: none"><li>• local impact with low prospect of affecting adjacent area or traffic at sub-regional level, and/or</li><li>• project is located in an area of low traffic density.</li></ul>
<b>Medium Impact</b>	<ul style="list-style-type: none"><li>• impact on adjacent area with prospect to affect traffic flows at sub-regional or regional level, and/or</li><li>• project is located in an area of medium traffic density.</li></ul>
<b>High Impact</b>	<ul style="list-style-type: none"><li>• impact at sub-regional or regional level, and/or</li><li>• project is located in an area of high traffic density.</li></ul>

This will ensure that all entities that may be affected will be notified in a timely manner, enabling coordination and synchronisation with other projects in the same or adjacent areas.

### 2.2.2 Initial consolidation and analysis at Network level (NM)

The NM will store the information provided by the ANSP on the NOP portal. A process will be introduced to ensure that all concerned stakeholders have full visibility and receive notification (preferably systematically) if there are changes. This information will be maintained and updated by the NM.

### 2.2.3 High level synchronisation and coordination (NM)

The NM will carry out an initial analysis of the impact of all the known projects during the relevant time period, based on the high level information provided by the ANSP/s concerned.

If this initial analysis indicates an unacceptably high negative impact on the network, the NM may propose changes to the transition plan. However, this cannot be done without the full agreement of the stakeholders concerned.



#### **2.2.4 Provision of detailed capacity and performance data for each phase of the project (ANSP)**

The ANSP shall provide the following details to the NM, as applicable, for each phase of the project:

- Planned start and end date;
- Information on major milestones (e.g. System Acceptance Test (SAT), training, shadow mode of operations etc.);
- The sectors that will be affected;
- Details of capacity reductions (dates and changes to default sector/ TV monitoring values);
- The configurations and opening schemes that will be available (max. peak/ off-peak periods);
- Details of any temporary changes to the airspace structure (route network and sectorisation);
- Proposed temporary measures to mitigate the impact of reduced capacity, e.g.:
  - removal or reduction in RAD restrictions;
  - changes to CDR status and/or availability;
  - proposed rerouting scenarios;
  - increased capacity in adjacent sectors.

The information delivered to the NM will be stored and used only for analytical and operational purposes.

#### **2.2.5 In-depth impact analysis of individual and combined projects (NM)**

The NM will make an assessment, through simulation, of the combined impact on the network of all relevant projects and identify potential operational bottlenecks. The analysis will be done from the following perspectives: capacity, flight efficiency (environment), route network, Airspace Management (ASM) and ATFCM. The analysis will cover adjacent areas affected by constraints in the transition area.

The evolution of capacity must be clearly planned and documented by the ANSP concerned, with all affected parties being fully informed. The Network Manager will analyse the effect of temporary capacity reduction during the phases for training, preparation and cutover and the subsequent return to normal operations.

The analysis will take into account simultaneous or overlapping projects, assessing the combined effect of all temporary capacity changes in the transition areas and in those adjacent. The NM will coordinate with the ANSPs directly or indirectly affected by a transition, aiming to jointly find mitigation solutions.

To the maximum extent possible, a balanced approach between capacity and flight efficiency will be ensured. Nevertheless flight efficiency could be reduced as users avoid capacity bottlenecks either by flight planning alternative routings, or accepting rerouting proposals offered by the Network Manager.

The performance analysis will be based on the use of the NEST and SIMEX tools. The NM will provide expert support to the ANSPs should they need to carry out their own detailed analysis.

Potential risks associated with transition phase of a project will be evaluated with solutions to build the sustainable measures for minimising negative impact of a transition.

### **2.2.6 Development and agreement on mitigation measures (NM, ANSP, Military)**

In coordination with the ANSP/s concerned, the NM will develop a number of proposals to identify how to manage the transition through local measures (changes to opening schemes, rostering etc.), to limit major network impact. If measures at local level are not sufficient, network measures will be developed.

The NM will incorporate all known capacity and flight efficiency information (capacity reductions, where spare capacity can be made available, changes to route availability or sectorisation) and propose strategic rerouting options to be taken into account when deciding on the appropriate ATFCM measures to be used.

Airspace management processes will be used to the maximum extent possible, to ensure enhanced civil-military coordination for optimum airspace utilisation by all airspace users.

Enhanced ATFCM measures will be developed as required. These could include: short notice scenarios, driving down delay, delay sharing, mandatory cherry picking, dynamic delay mitigation, Flight Level adherence.

The result will be a toolbox of measures that should be prioritised in order of preference according to the requirements at network and local level.

#### **Toolbox of Mitigation Measures**

- a. Proposals for alternative optimum sector configurations and opening schemes to manage unfamiliar traffic patterns;
- b. Rerouting proposals;
- c. RAD restriction reduction or removal;
- d. Temporary *increase* of adjacent sector/TV monitoring values;
- e. CDR category and availability modifications;
- f. Airspace structure adjustments;
- g. Proposal to reschedule military activity.
- h. Enhanced ATFCM measures;

#### **Additional support to airspace users**

- a. Timely communication of restrictions and alternative routeings to the aircraft operators;
- b. Use of Route Availability Information Summary (RAIS) to increase awareness among the airspace users of expected airspace changes and their respective durations;
- c. Allow flexible, short notice flight plan amendments without penalty, to enable users to take into account short notice changes;
- d. Provision of alternative routeings in accordance with agreed measures, and when possible, offer a choice of rerouting options to enable airspace users to utilise the available airspace according to their preferences for minimum delay, shortest routeing etc.

The above list of measures is not exhaustive; the NM, together with the ANSP(s), may propose other solutions or even a package of composite measures.

Depending on the type of measures agreed, verification may be necessary using simulation tools.

### **2.2.7 Transition plan implementation (NM, ANSP, Airspace users)**

The Transition Plan will be developed and implemented using full cooperative decision making processes between the NM and all stakeholders, including the airspace users.

The ANSP(s) shall ensure that all staff involved in the transition, controllers, supervisors and FMPs, are fully familiar with the adopted measures so that the capacity critical situations during transition process can be handled satisfactorily.

Any deficiency during the implementation and execution of the transition plan must be immediately addressed through the implementation of additional measures.

Potential risks associated with transition phase of a project will be evaluated and solutions developed for minimising negative side effects.

### **2.2.8 Post-ops analysis**

The purpose of this phase is to assess how the network performed during the relevant periods of the project, including the effectiveness of the implemented measures.

Understanding the deficiencies encountered during the implementation phase, their causes, and the lessons learned, will ensure that the best practice is carried through into the preparation of the future projects.

### **3. DOCUMENTATION**

The NM will record all activities throughout the entire process from notification to the post implementation analysis, including:

- Data and information delivered by the ANSP(s) including date of delivery and the purpose for which they have been used;
- Analyses, initial and detailed, including the results and proposed actions;
- Measures proposed agreed and implemented;
- Register of all measures, changes, and their status throughout the transition project, providing for traceability of each measure proposed and agreed;
- Available ATFCM reports (daily/weekly/monthly) during the implementation/transition phase;
- Yearly Network Operations Report.

The documentation will be stored in NMD/NOM/OPL and will be made available to the entities which participated in the project.

## **ANNEXES**

<b>Annex A</b>	<b>List of major transition projects</b>
<b>Annex B</b>	<b>Individual projects – detailed information and analysis</b>
<b>Annex C</b>	<b>View on all projects</b>
<b>Annex D</b>	<b>Acronyms and Abbreviations</b>

## ANNEX A. LIST OF MAJOR TRANSITION PROJECTS

The nine-month period, from the autumn 2016 until spring 2017 will be affected by a number of system modernisation, and airspace projects across Europe.

Some six ANS units, four ACCs plan to migrate to a new or upgraded ATM system, while two plan to undertake major airspace reorganisation projects during the current season.

Some of the ANSPs affected are likely to generate increased delays during the winter season, which may mean they cannot meet their annual delay breakdown values. This could in turn impact the overall Network capacity performance. All of the transition projects involve lengthy training activities for operational personnel, which may as well affect the performance of the ACC concerned. Hence training is often included in the transition planning process.

The NM has a key role in the synchronisation, coordination and management of the Network to ensure that Network capacity remains in line with, or better than expected.

Very careful planning and synchronisation between the ANSPs and the NM is required. Some projects, even though locally implemented, may involve other ANSPs in the transition planning and coordination.

The table and the map below show all major capacity critical (potentially or expected), transition projects for the coming period.

Major Projects / Special Events	2016		2017	
	07>09	10>12	01>03	04>06
<b>Albania - Tirana ACC</b>				
Stripless system				
<b>EUROCONTROL - MUAC</b>				
Brussels UIR, 3rd layer				
<b>France - Bordeaux ACC</b>				
ERATO system implementation				
<b>Germany - Langen ACC</b>				
Upgrade P2/ATCAS (PSS)EBG10				
<b>Switzerland - Zurich ACC</b>				
Upper Airspace Harmonisation & Optimisation / System upgrade				
<b>Ukraine - L'viv ACC</b>				
New ATM system				
<b>Malta - Malta ACC</b>				
New ATM system Details TBC				
<b>Cyprus – Nicosia ACC</b>				
ATM system upgrade Details TBC				

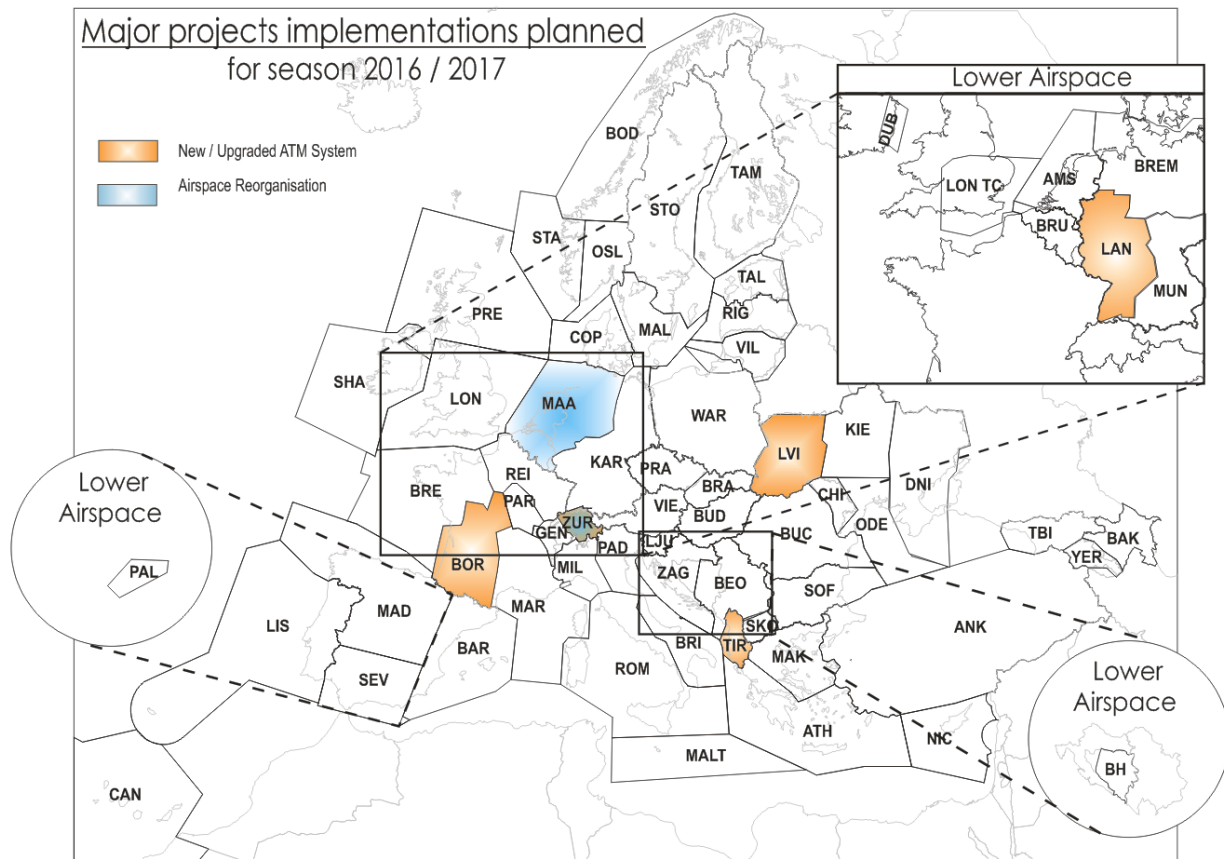
The details of all planned or confirmed projects can be accessed via the network events calendar on the strategic and pre-tactical portlets of the Network Operations Portal.

The transition projects pending confirmation will be described in the subsequent editions of the Transition Plan.

The map below indicates the areas for which the transition plans have been already confirmed.

## TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE

### WINTER 2016 / 2017



**ANNEX B. INDIVIDUAL TRANSITION PROJECTS**  
**DETAILED INFORMATION AND ANALYSIS**



**ALBANIA**

**TIRANA ACC**

**UPGRADE OF THE ATM SYSTEM**

**May – June 2017**

Albcontrol plans to significantly upgrade ATM system to sustain night FRA during the summer 2017, before introducing H24FRA. The new system functionalities are scheduled to become operational in May 2017.

Point of contact:

ALBCONTROL – Bledi Jani – [bjani@albcontrol.al](mailto:bjani@albcontrol.al)

Project description:

- Upgrade of ATM system
  - Improve of planned trajectory
  - Improve of MTCD performance
  - Implementation of System Backup Capability
  - Adapt system to process MLAT
  - Improve processes of calculating ATCOs operational hours.
  - System FRA capability
  - Cross border FRA capability
- Stripless system
- Reduced separation minima

Expected benefits:

- Increased ACC capacity
- Airspace structure optimization
- The same safety level is maintained;
- Capacities shall not be negatively impacted
- reduce ATCO workload

Implementation phases:

	Period	Impact on network performance	Mitigation measures
Training	01Jan 17 – 01 April 2017	Low/Medium	No
<b>Cut over</b>	<b>25 May 2017</b>	Low	No
Transition period	25 May '17 – 25 June '17	Low	No

TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

**Training: 01 January 2017 – 01 April 2017**

<b>Description &amp; areas impacted</b>	Final training theoretical/ practical on <ul style="list-style-type: none"> <li>- FRA airspace management and</li> <li>- stripless</li> <li>- reduce separation minima</li> </ul>
<b>Milestones and dates</b>	01Jan 17 - 01Mar 17- stripless 01Mar17 - 20 May17 – FRA airspace management
<b>Sector capacities</b>	No reduction of sector capacities
<b>Configurations</b>	Maximum configuration: max 4 sectors will be available during summer & 3 sectors in winter season depending on traffic demand
<b>Expected network impact</b>	Low
<b>Possible bottleneck sectors</b>	No
<b>Mitigation measures</b>	No
<b>Remarks</b>	

**Planned Cutover Date: 25 May 2017**

**Transition period 1: 25 May 2017 – 25 June 2017**

<b>Description &amp; areas impacted</b>	Operations with the new system functionality in the new environment
<b>Milestones and dates</b>	
<b>Sector capacities</b>	Sector capacities not reduced
<b>Configurations</b>	Maximum configuration: 4 sectors for 8 hours / day and two sectors for 8 hours night ( depending on traffic demand)
<b>Expected network impact</b>	Low
<b>Possible bottleneck sectors</b>	Not expected
<b>Mitigation measures</b>	Not expected
<b>Remarks</b>	

## FRANCE

## BORDEAUX ACC

### NEW ATM SYSTEM

#### November 2016 – Summer 2017

DSNA will implement a new ATM system, EEE (ERATO Environnement Electronique), in November 2016 in Bordeaux ACC.

Point of contact:

DSNA – Corinne Papier – corinne.papier@aviation-civile.gouv.fr

Project description:

The implementation of the new system will include the following new features:

- Stripless system
- ATCO's tools : aircraft filtering-extrapolation-"what-if"- agenda- MONA- MTCD on request
- New tools fully integrated in the HMI providing accurate support to controllers
  - o Filtering functions allowing the management of a sub-set of a complex traffic situation
  - o Agenda functionalities developing interactive cooperation between Planner and Tactical controllers
  - o Extrapolation tool to continually check and assess the minimal separation
  - o Monitoring tool

Expected benefits:

- Increased ACC safety, mainly due to the ATCO's tools
- Increased ACC capacity
- Boosting interactive coordination and dialogue between controllers

TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

Implementation phases:

	Period	Impact on network performance	Mitigation measures
Last refresher training	03 Nov.-16 Nov.	NIL	NIL
Cut over	16/17 November 2016		
Transition period 1	Technical Validation 17-18 November 2016	- 40% of current capacities 11.1U conf, as a maximum deployment (see details under)	NMOC support
Transition period 2	Initial handling phase 1 19 - 22 November 2016	- 30% of current capacities 11.1U conf, as a maximum deployment (see details under)	NMOC support
Transition period 3	Initial handling phase 2 23 – 30 November 2016	- 30% of current capacities	NMOC support
Transition period 4	Recovery phase 1 1 <sup>st</sup> December 2016 - 08 <sup>th</sup> January 2017	- 25% to -20% of current capacities	NMOC support
Transition period 5	Recovery phase 2 09 <sup>th</sup> January- 06th march 2017	-15% to -10% of current capacities	NMOC support
Transition period 6	Back to normal	TBD	
Normal operations	Summer 2017	NIL	NIL

The transition period will be dedicated to a complete appropriation of the system and his functionalities.

The return to normal operation will come naturally as the ATCOs become confident not just in the system but also in their own new skills.

**Back office and feedback**

LFBB will provide update and feedback with daily conferences from 16/11 to 30/11.

After the 1<sup>st</sup> of December, conferences will be held once a week, or more frequently if necessary.

**Refresher Training phase: 03-16 November 2016**

<b>Description &amp; areas impacted</b>	Last Training to operate new system
<b>Milestones and dates</b>	03-16 November 2016
<b>Sector capacities</b>	No reduction
<b>Configurations</b>	No impact
<b>Expected network impact</b>	None
<b>Possible bottleneck sectors</b>	None
<b>Mitigation measures</b>	Nil
<b>Remarks</b>	Performed on simulator, irrelevant ATFM-wise thank to local optimised human resource

TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

**Transition period 1: 17-18 November 2016**

<b>Description &amp; areas impacted</b>	"Technical Validation" 2 days: Thursday 17 <sup>th</sup> and Friday 18 <sup>th</sup> November 2016 Systems and parameters validation phase
<b>Milestones and dates</b>	17-18 November 2016
<b>Sector capacities</b>	- 40 % of all sectors
<b>Configurations</b>	0000-0600 Normal configurations 0600-2100 11.1U 2100-2400 Normal configurations
<b>Expected network impact</b>	All sectors will be regulated
<b>Possible bottleneck sectors</b>	ALL
<b>Mitigation measures</b>	Scenarios/RAD adaptations/NMOC support/DSNA presence in NMOC
<b>Remarks</b>	

**Transition period 2: 19-22 November 2016**

<b>Description &amp; areas impacted</b>	Initial handling phase 1
<b>Milestones and dates</b>	19-22 November 2016
<b>Sector capacities</b>	- 30 % of all sectors
<b>Configurations</b>	0000-0600 Normal configurations 0600-2100 11.1U 2100-2400 Normal configurations
<b>Expected network impact</b>	All sectors will be regulated
<b>Possible bottleneck sectors</b>	ALL
<b>Mitigation measures</b>	Scenarios/RAD adaptations/NMOC support/DSNA presence in NMOC
<b>Remarks</b>	

TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

**Transition period 3: 23-30 November 2016**

<b>Description &amp; areas impacted</b>	Initial handling phase 2
<b>Milestones and dates</b>	23 – 30 November 2016
<b>Sector capacities</b>	- 30 % of all sectors
<b>Configurations</b>	Similar to 2015 normal operations
<b>Expected network impact</b>	All sectors will be regulated
<b>Possible bottleneck sectors</b>	ALL
<b>Mitigation measures</b>	Provision of optimal local opening scheme/ Scenarios/RAD adaptations/NMOC support
<b>Remarks</b>	

**Transition period 4: 1<sup>st</sup> December 2016 – 8<sup>th</sup> January 2017**

<b>Description &amp; areas impacted</b>	Recovery phase 1
<b>Milestones and dates</b>	1 <sup>st</sup> December 2016 – 08 <sup>th</sup> January 2017
<b>Sector capacities</b>	- 25% to -20% of current capacities
<b>Configurations</b>	Similar to 2015/16 normal operations
<b>Expected network impact</b>	Delays on elementary and collapsed sectors depending on available configurations.
<b>Possible bottleneck sectors</b>	Depending on available configurations.
<b>Mitigation measures</b>	Provision of optimal local opening scheme/Scenarios/RAD adaptations during the first part of December/NMOC support
<b>Remarks</b>	Evolution of capacities will be followed by dedicated local WG

**Transition period 5 : 9<sup>th</sup> January 2016 – 6<sup>th</sup> March 2017**

<b>Description &amp; areas impacted</b>	Recovery phase 2
<b>Milestones and dates</b>	09 <sup>th</sup> January - 06 March 2017
<b>Sector capacities</b>	- 15% to -10% of current capacities
<b>Configurations</b>	Similar to 2016 normal operations
<b>Expected network impact</b>	Delays on elementary and collapsed sectors depending on available configurations.
<b>Possible bottleneck sectors</b>	Depending on available configurations.
<b>Mitigation measures</b>	Provision of optimal local opening scheme/Scenarios/NMOC support
<b>Remarks</b>	Evolution of capacities will be followed by dedicated local WG

TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

**Transition period 6: After the 7<sup>th</sup> March 2017**

<b>Description &amp; areas impacted</b>	Back to normal phase
<b>Milestones and dates</b>	Start : 07 March 2017
<b>Sector capacities</b>	TBD
<b>Configurations</b>	According to ATCO potential : - From 12 to 20 sectors
<b>Expected network impact</b>	Delays on elementary and collapsed sectors depending on available configurations.
<b>Possible bottleneck sectors</b>	TBD
<b>Mitigation measures</b>	Provision of optimal local opening scheme
<b>Remarks</b>	Evolution of capacities will be followed by dedicated local WG

## EUROCONTROL

## MAASTRICHT UAC

### Brussels Sector Group – 3<sup>rd</sup> layer

**06 March 2017**

In order to cope with the growing traffic demand, additional 3-layered sector configurations will be introduced for the East of the MUAC Brussels Sector Group in March 2017.

Point of contact:

MUAC – danny.leenders@eurocontrol.int

Project description:

MUAC will create new configurations (in addition to the existing ones), based on three layers in the East of the Brussels Sector Group.

The new configurations in the East will consist of 3 sectors (East Low / East Middle / East Top) or 4 sectors (Olno Low / Lux Low / East Middle / East Top). The DFL between Low and Middle is FL335. The DFL between Middle and Top is FL375.

All the existing 2-layered configurations, with a Low/High split at FL335 in the East, remain as well.

The configurations for the West sectors in the Brussels Sector Group remain unchanged (DFL355 between Low and High).

The maximum number of sectors in the total Brussels Sector Group (East + West) is increased from 6 to 7 (Max 3 West and Max 4 East sectors).

The technical implementation is planned on the 2<sup>nd</sup> of March 2017. The first operational usage of the new 3-layered configurations in the East is planned as from the 6<sup>th</sup> of March 2017.

At the time of writing this transition plan (version 03-Aug-2016), the development of the concept is still on-going, and changes to the project are still possible.

Expected benefits:

- Improved traffic management

Implementation phases:

	Period	Impact on network performance	Mitigation measures
Training	17 Nov. 16 – 24 Feb. 17	None	No
<b>Implementation</b>	<b>06 March 2017</b>	Medium	Yes
Transition period	06 Mar. 17 – 25 Mar. 17	Medium	Yes
Normal operations	26 Mar. 17	No	No



TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

**Training: 17 Nov 2016 – 24 Feb 2017**

<b>Description &amp; areas impacted</b>	Training to operate with new 3 layer configuration in the Brussels East sectors
<b>Milestones and dates</b>	Start: 17 November 2016 End: 24 February 2017
<b>Sector capacities</b>	No reduction of sector capacities
<b>Configurations</b>	Normal SOTs
<b>Expected network impact</b>	None
<b>Possible bottleneck sectors</b>	None
<b>Mitigation measures</b>	No
<b>Remarks</b>	

**Planned Implementation Date: 06 March 2017**

**Transition period : 06 March 2017 – 25 March 2017**

<b>Description &amp; areas impacted</b>	Operations with 3 <sup>rd</sup> layer configuration in the East Sectors of the Brussels Sector Group.
<b>Milestones and dates</b>	First Operational use of the new 3-Layered Configurations: 06-March-2017
<b>Sector capacities</b>	Sector capacities (TMV) reduced by 20% for the Brussels Sector Group – East sectors
<b>Configurations</b>	Maximum configuration in East: Olno Low / Lux Low / East Middle / East Top
<b>Expected network impact</b>	Medium
<b>Possible bottleneck sectors</b>	MUAC Brussels Sector Group East Middle Sector
<b>Mitigation measures</b>	Close follow-up by MUAC during the transition period. <ul style="list-style-type: none"> <li>Capacity reductions will be re-assessed daily (heavier or less reductions are possible).</li> <li>Measures will be taken, in a coordinated way, to limit the negative impact of the transition period, whilst providing sufficient exposure to ATCOs to get familiarized with the new configurations before the start of the busy summer season.</li> </ul>
<b>Remarks</b>	

**Return to normal operations 26 March 2017**

## GERMANY

## LANGEN ACC

### Implementation of PSS system SWG10 - July 2016 – February 2017

The strip less system PSS of Langen ACC will be implemented in the sector family (SWG) 10.

#### Point of contact:

Project leader: [werner.kranz@dfs.de](mailto:werner.kranz@dfs.de)

ATFCM: [Oliver.Wessollek@dfs.de](mailto:Oliver.Wessollek@dfs.de) and [Juergen.Janke@dfs.de](mailto:Juergen.Janke@dfs.de) and [Christian.boehmer@dfs.de](mailto:Christian.boehmer@dfs.de)

#### Project description:

- The strip less system PSS of Langen ACC will be implemented in the SWG10.

#### Expected benefits:

- Prerequisite for a future ATS system iCAS
- Personal reduction (runner)

#### Overview implementation phases:

	Period	Impact on network performance	Mitigation measures
Training	29th July – 20th November 2016	Low	No
Operational Weekend 1	17 <sup>th</sup> – 18 <sup>th</sup> December 2016	Medium	Yes
Operational Weekend 2	07 <sup>th</sup> – 08 <sup>th</sup> January 2017	Medium	Yes
Switch over	14 <sup>th</sup> / 15 <sup>th</sup> January 2017	Medium	Yes
Transition period 1	15 <sup>th</sup> January 2017 – 12 <sup>th</sup> February 2017	Medium	Yes
Normal operations	13 <sup>th</sup> February 2017	None	No

#### Training: July 2016 – November 2016

<b>Description &amp; areas impacted</b>	Training and familiarisation training to operate the new system.
<b>Milestones and dates</b>	Training: July 2016 - November 2016
<b>Sector capacities</b>	No reduction of sector capacities
<b>Configurations</b>	Configuration and staffing according to traffic demand
<b>Expected network impact</b>	No impact
<b>Possible bottleneck sectors</b>	None
<b>Mitigation measures</b>	None
<b>Remarks</b>	No impact expected

TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

**Operational Weekend 1: 17<sup>th</sup> and 18<sup>th</sup> December 2016**

<b>Description &amp; areas impacted</b>	Familiarization with the new system and handover methods
<b>Milestones and dates</b>	Operational Weekend: 18 <sup>th</sup> - 21 <sup>st</sup> December 2016
<b>Sector capacities</b>	EDDFARR 51/60 DFAN 32/60 DFAS 32/60
<b>Configurations</b>	Maximum configuration and staffing
<b>Expected network impact</b>	Medium
<b>Possible bottleneck sectors</b>	Inbound Sectors: GED, PSA (possible holdings)
<b>Mitigation measures</b>	None
<b>Remarks</b>	Capacities and possible ATFCM measures will be handled on tactical basis, according hourly departure and arrival demand.

**Operational Weekend 2: 07<sup>th</sup> and 08<sup>th</sup> January 2017**

<b>Description &amp; areas impacted</b>	Familiarization with the new system and handover methods
<b>Milestones and dates</b>	Operational Weekend: 07 <sup>nd</sup> – 08 <sup>th</sup> January 2017
<b>Sector capacities</b>	EDDFARR 51/60 DFAN 32/60 DFAS 32/60
<b>Configurations</b>	Maximum configuration and staffing
<b>Expected network impact</b>	Medium
<b>Possible bottleneck sectors</b>	Inbound Sectors: GED, PSA (possible holdings)
<b>Mitigation measures</b>	None
<b>Remarks</b>	Capacities and possible ATFCM measures will be handled on tactical basis, according hourly departure and arrival demand.

TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

**Planned Cutover Date: 14<sup>th</sup> /15<sup>th</sup> January 2017**

**Transition period 1: 15th January 2017 – 12th February 2017**

<b>Description &amp; areas impacted</b>	Operations with new system
<b>Milestones and dates</b>	Transition period: 15 <sup>th</sup> January – 12 <sup>th</sup> February 2017
<b>Sector capacities</b>	EDDFARR 51/60 DFAN 32/60 DFAS 32/60
<b>Configurations</b>	Maximum configuration and staffing
<b>Expected network impact</b>	Medium
<b>Possible bottleneck sectors</b>	Inbound Sectors: GED, PSA (possible holdings)
<b>Mitigation measures</b>	None
<b>Remarks</b>	Capacities and possible ATFCM measures will be handled on tactical basis, according hourly departure and arrival demand.

**Return to normal operations 13<sup>th</sup> February 2017**

## SWITZERLAND

## ZURICH ACC

### Implementation of the "Harmonization Release" project

2<sup>nd</sup> of March 2017

The implementation of an optimized sectorization within Zurich Upper airspace is planned to be implemented in Zurich ACC on 2<sup>nd</sup> March 2017.

A new version of the Stripless system will also be deployed to enhance its features.

#### Point of contact:

Project Manager: [fabrice.pourraz@skyguide.ch](mailto:fabrice.pourraz@skyguide.ch)

Training Manager: [ulrich.stamm@skyguide.ch](mailto:ulrich.stamm@skyguide.ch)

ATFM Manager: [jonas.wobmann@skyguide.ch](mailto:jonas.wobmann@skyguide.ch)

#### Project description:

- **Upper Airspace Harmonisation & Optimisation (UHO)**

L7		M7
L6	FL385 FL375	M6
L5	FL355	M5
L4	FL335	M4
L3	FL315	M3
L2	FL285	M2
L1	FL245	M1

- Remove the bottleneck-effect of the Zurich M4 sector and ensure a more balanced traffic distribution amongst the upper sectors
- Achieve a more flexible and dynamic sector opening scheme
- Swiss wide sector configuration and harmonization for the benefit of efficiency and compatibility of the upper airspace operations
- *Implement the optimized sectorisation before the start of the copflex1 transition phase and the associated system freeze*
  - *to avoid engineering of an outdated and inefficient sectorisation into copflex1 and*
  - *to pave the way for a smoother copflex1 transition with a harmonized upper sectorisation in GVA and ZRH*
  - *to provide the required capacity increase to cope with the expected traffic development over the next few years*
- **Enhanced the existing Stripless functions** implemented on ACC Sectors by the SLCH project. In addition to UHO, some changes will be introduced as well for the lower airspace.

#### Expected benefits:

- Safety
- Capacity

TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

Implementation phases:

	Period	Impact on network performance	Mitigation measures
Training	03 Jan. 2017 – 21 Feb. 2017	None	No
Switch over	Night from 01 to 02 Mar. 2017	Low	No
Transition period 1	02 Mar. 2017 - 03 Mar. 2017	Low	Additional shifts
Transition period 2	04 Mar. 2017 – 06 Mar. 2014	Low	Additional shifts
Transition period 3	07 Mar. 2017 – 13 Mar. 2017	Low	Additional shifts
Normal operations	14 Mar. 2017	None	No

Training:

<b>Description &amp; areas impacted</b>	Training to operate with the Harmonisation Release.
<b>Milestones and dates</b>	03 Jan. 2017 – 21 Feb. 2017
<b>Sector capacities</b>	No reduction of sector capacities
<b>Configurations</b>	No reduction of maximum configuration
<b>Expected network impact</b>	No impact
<b>Possible bottleneck sectors</b>	None
<b>Mitigation measures</b>	None
<b>Remarks</b>	None

Planned Cutover Date: 02 March 2016

Transition period 1: 02 March 2017 – 03 March 2017

<b>Description &amp; areas impacted</b>	Operations with the Harmonisation Release
<b>Milestones and dates</b>	02 Mar. 2017 – 03 Mar. 2017
<b>Sector capacities</b>	LSAZUTA – Capacities reduced by 25% LSAZCTA – Capacities reduced by 10%
<b>Configurations</b>	Maximum configuration: - 4 sectors LSAZCTA - 5 sectors LSAZUTA

TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE  
WINTER 2016 / 2017

<b>Expected network impact</b>	Low
<b>Possible bottleneck sectors</b>	LSAZM4, LSAZM5
<b>Mitigation measures</b>	CP, STAM, RR/ FL Scenarios
<b>Remarks</b>	Configuration expanded by approximately 4-6 shifts

**Transition period 2: 04 March 2017 – 06 March 2017**

<b>Description &amp; areas impacted</b>	Operations with the Harmonisation Release
<b>Milestones and dates</b>	04 Mar. 2017 – 06 Mar. 2017
<b>Sector capacities</b>	LSAZUTA – Capacities reduced by 20% LSAZCTA – Normal operation
<b>Configurations</b>	Maximum configuration: - 5 sectors LSAZUTA
<b>Expected network impact</b>	Low
<b>Possible bottleneck sectors</b>	LSAZM4, LSAZM5
<b>Mitigation measures</b>	CP, STAM, RR/ FL Scenarios
<b>Remarks</b>	Configuration expanded by approximately 4 shifts

**Transition period 3: 07 March 2017 – 13 March 2017**

<b>Description &amp; areas impacted</b>	Operations with the Harmonisation Release
<b>Milestones and dates</b>	07 Mar. 2017 – 13 Mar. 2017
<b>Sector capacities</b>	LSAZUTA – Capacities reduced by 10% LSAZCTA – Normal operation
<b>Configurations</b>	Maximum configuration: - 5 sectors LSAZUTA
<b>Expected network impact</b>	Low
<b>Possible bottleneck sectors</b>	LSAZM4, LSAZM5
<b>Mitigation measures</b>	CP, STAM, RR/ FL Scenarios
<b>Remarks</b>	Configuration expanded by approximately 4 shifts

**Return to normal operations 14 MAR 2016**

## UKRAINE

## L'VIV ACC

### NEW SYSTEM

#### September 2016 – December 2016

The new ATM system in L'viv ACC is planned to be implemented without restrictions starting from December 2016.

#### Point of contact:

UkSATSE – Head of Lviv ACC – [Novakovskiy\\_VM@uksatse.aero](mailto:Novakovskiy_VM@uksatse.aero)

#### Project description:

The implementation of the new system and ops room will include:

- 5 ACC sector positions (+ 2 back up sectors)
- New ATM system
- Stripless system
- MTCD
- OLDI
- Enhanced functionality (System Coordination, Monitoring Aids, etc.)
- Advanced HMI

#### Expected benefits:

- Increased ACC capacity
- Possibility to open additional sector
- Increased sector capacities thanks to new functionalities
- Airspace structure optimisation
- Improved configuration management
- Free route
- Flexible sectorisation

#### Implementation phases:

	Period	Impact on network performance	Mitigation measures
Training	September 2016 – October 2016	None	No
Cutover	30 October 2016	None or low	No
Transition phase	30 October 2016 – 30 November 2016	None or low	No
Normal operations	01 December 2016	None	No



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**Training: September 2016 – October 2016**

<b>Description &amp; areas impacted</b>	Training
<b>Milestones and dates</b>	
<b>Sector capacities</b>	No reduction of sector capacities
<b>Configurations</b>	No reduction of maximum sector configuration
<b>Expected network impact</b>	None
<b>Possible bottleneck sectors</b>	
<b>Mitigation measures</b>	None
<b>Remarks</b>	

**Planned Cutover Date: 30 October 2016****Transition phase: 30 October 2016 – 30 November 2016**

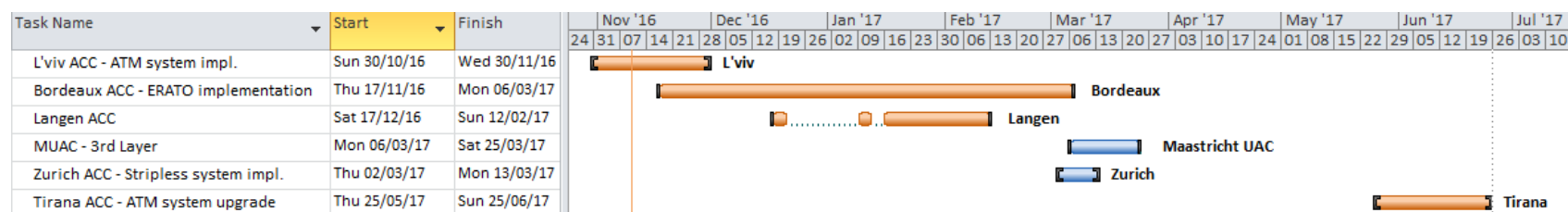
<b>Description &amp; areas impacted</b>	Operations on the new system
<b>Milestones and dates</b>	
<b>Sector capacities</b>	Sector capacities may be reduced by 10% (tactically according to situation)
<b>Configurations</b>	Maximum configuration: 5 ACC sectors
<b>Expected network impact</b>	None or low
<b>Possible bottleneck sectors</b>	None
<b>Mitigation measures</b>	None
<b>Remarks</b>	

**Return to normal operations: 01 December 2016**

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# TRANSITION PLAN FOR MAJOR PROJECTS IN EUROPE WINTER 2016 / 2017

## ANNEX C. VIEW ON THE TRANSITION PROJECTS – AUTUMN 2016 / SPRING 2017



### Legend:

- ATM systems, new OPS room
- Airspace reorganisations (en-route, TMA, new RWYs, TWYs, etc.)

## **Annex D. ACRONYMS AND ABBREVIATIONS**

<b>ACC</b>	Area Control Centre
<b>AIP</b>	Aeronautical Information Publication
<b>AIRAC</b>	Aeronautical Information Regulation and Control
<b>ANSP</b>	Airspace Navigation Service Provider
<b>AO</b>	Aircraft Operator
<b>ARN</b>	ATS Route Network
<b>ARR</b>	Arrival
<b>ASM</b>	Airspace Management
<b>ATC</b>	Air Traffic Control, Air Traffic Control Domain
<b>ATFCM</b>	Air Traffic Flow and Capacity Management
<b>ATFM</b>	Air Traffic Flow Management
<b>ATM</b>	Air Traffic Management
<b>ATS</b>	Air Traffic Services
<b>AUP</b>	Airspace Use Plan
<b>CBA</b>	Cross-border Area
<b>CDA</b>	Continuous Descent Approach
<b>CDM</b>	Cooperative Decision Making
<b>CDR</b>	Conditional Route
<b>NMOC</b>	Network Manager Operations Centre
<b>DCT</b>	Direct
<b>DEP</b>	Departure
<b>DNM</b>	Directorate Network Management
<b>e-AMI</b>	Electronic ASM Information
<b>ERNIP</b>	European Route Network Improvement Plan
<b>EU</b>	European Union
<b>EUROCONTROL</b>	European Organisation for the Safety of Air Navigation
<b>FAB</b>	Functional Airspace Block
<b>FIR</b>	Flight Information region
<b>FL</b>	Flight Level
<b>FPL</b>	Flight-Plan
<b>FUA</b>	Flexible Use of Airspace
<b>GAT</b>	General Air Traffic
<b>IACA</b>	International Air Carrier Association
<b>IATA</b>	International Air Transport Association
<b>ICAO</b>	International Civil Aviation Organisation
<b>IFPS</b>	Initial Flight planning Processing System
<b>IFR</b>	Instrument Flight Rules
<b>LoA</b>	Letter of Agreement
<b>min</b>	Minute/s

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<b>N.A.</b>	Not applicable
<b>NEST</b>	Network Strategic Tool
<b>NM</b>	Network Manager
<b>Nm / nm</b>	Nautical Mile
<b>OAT</b>	Operational Air Traffic
<b>RAD</b>	Route Availability Document
<b>RAIS</b>	RNDSG Implementation Summary
<b>RNDSG</b>	Route Network Development Sub-Group
<b>SAAM</b>	System for traffic Assignment and Analysis at Macroscopic level
<b>SES</b>	Single European Sky
<b>SID</b>	Standard Instrumental Departure
<b>SRD</b>	Standard Routing Document
<b>STAR</b>	Standard Arrival Route
<b>TAS</b>	Terminal Airspace System
<b>TMA</b>	Terminal Control Area
<b>TRA</b>	Temporary Reserved Area
<b>TSA</b>	Temporary Segregated Area
<b>VFR</b>	Visual Flight Rules
<b>WE</b>	Weekend
<b>UAC</b>	Upper Area Control Centre
<b>UIR</b>	Upper Flight Information region

# Contact details

**DNM/COO/NOM/OPL**

[razvan.bucuroiu@eurocontrol.int](mailto:razvan.bucuroiu@eurocontrol.int)

**DNM/COO/NOM/OPL/PLA**

[stephanie.vincent@eurocontrol.int](mailto:stephanie.vincent@eurocontrol.int)

**DNM/COO/NOM/OPL/PLA**

[vladimir.jevtic@eurocontrol.int](mailto:vladimir.jevtic@eurocontrol.int)



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