European Route Network Improvement Plan/ERNIP Implementation Monitoring

Monitoring Report: AIRAC 1510

17 September 2015 - 14 October 2015

Network Manager
nominated by
the European Commission

EUROCONTROL

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European Route Network Improvement Plan (ERNIP) Implementation Monitoring

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NETWORK MANAGER

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1. INTRODUCTION

1.1 SUMMARY

This Report provides an update on the evolution of the environment indicators[1] listed in the *Network Manager Performance Plan* and plots on the progress achieved in improving airspace design and utilisation flight efficiency, in line with the improvement proposals implemented in the relevant AIRAC cycle.

This edition focuses on **AIRAC 1510** (17 SEPTEMBER 2015 - 14 OCTOBER 2015).

The methodology used for assessing flight efficiency is described in WP/9 of RNDSG/64. This document can be found at:
https://extranet.eurocontrol.int/ftp/?t=4df773eea3ffaea31e3d1768150125b3

1.2 ACHIEVING THE EUROPEAN TARGET

The Performance Scheme for air navigation services and network functions includes two important key performance areas and associated indicators, related to the operational performance of the European ATM network for the period 2015 - 2019.

- ***Environment***
  - ***average horizontal en-route flight efficiency of the actual trajectory****, defined as follows:*
    - *the indicator is the comparison between the length of the en-route part of the actual trajectory derived from surveillance data and the corresponding portion of the great circle distance, summed over all IFR flights within or traversing the European airspace;*
    - *"en-route" refers to the distance flown outside a circle of 40 NM around the airports;*
    - *where a flight departs from or arrives at a place outside the European airspace, only the part inside the European airspace is considered;*

    This KPI is applicable at both network and Functional Airspace Block level.

  - ***average horizontal en-route flight efficiency of the last filed flight plan trajectory****, defined as follows:*
    - *the difference between the length of the en-route part of the last filed flight plan trajectory and the corresponding portion of the great circle distance, summed over all IFR flights within or traversing the European airspace;*
    - *"en-route" refers to the distance flown outside a circle of 40 NM around the airports;*
    - *where a flight departs from or arrives at a place outside the European airspace, only the part inside the European airspace is considered;*

    This KPI is only applicable at network level.

- ***Capacity***
  - ***minutes of en-route ATFM*** *delay per flight, calculated for the full year and including all IFR flights within European airspace and all ATFM delay causes, excluding exceptional events.*

[1] **FPL**: Flight Plan data provided by NM systems; SAAM analysis carried out by NM.
DES/RAD: Traffic demand provided by NM systems; airspace environment data, profile calculations and SAAM analysis provided by NM.

For the second performance Reference Period starting on 1st January 2015 and ending on 31st December 2019, the European Union-wide performance targets will be as follows:

- ***Environment target***:
  - *Actual trajectory (KEA) - an average of 2.6% route extension by 2019, decreasing from 3.17% in 2012 (based on PRB measurements)*
  - *Last filed flight plan trajectory (KEP) - an average of 4.1% route extension by 2019, decreasing from 5.15% in 2012 (based on PRB measurements)*

- ***Capacity target****: average en route Air Traffic Flow Management (ATFM) delay of 0.5 minutes per flight for each year of the second Reference Period.*

The ERNIP Part 2 - ARN Version 2014 - 2018/19 also responds to the targets included in the Network Performance Plan (NPP) 2015 - 2019 as described below:

- **Route extension - airspace design**
  - **Targets:**
    - **achieve an improvement of the DES indicator by 0.57 percentage points between the baseline year of 2012 and 2019**
- **Route extension - last filed flight plan**
  - **Targets:**
    - **This is a European-wide indicator in RP2 and the NM target for RP2 is to achieve 4.1% value for KEP indicator by 2019 for the entire NM area, fully consistent with the EU-wide target, i.e. a reduction by 1.05 pp (percentage points) between the baseline year of 2012 and 2019**
- **Route extension - actual trajectory**
  - **Targets:**
    - **The NM target for RP2 is to achieve 2.6% value for KEA indicator by 2019 for the SES area, fully consistent with the EU-wide target**
- **NM direct contributions to flight efficiency savings**
    - **The NM objectives is that these FE direct savings will amount to 5% (2015 - 2016) and 7% (2017 - 2019) of the savings required to achieve the annual 0.15 pp reduction (or alternatively 5% of the actual KEP reduction) each year**
- **Increase the CDR1/2 usage**
    - **NM objective is to increase the CDR availability (CD-RAI) and CDR usage (CDR-RAU) by 5% between the baseline year 2012 and 2019**

1.3 AIRSPACE DESIGN DEVELOPMENT AND IMPLEMENTATION MONITORING

The Network Manager coordinates the following activities to achieve the required improvement in flight efficiency:

- Enhancing European en-route airspace design through annual improvements of European ATS route network, high priority being given to:
  - the implementation of a coherent package of annual improvements and shorter routes;
  - improving efficiency for the most penalised city pairs;
  - the implementation of additional Conditional Routes for main traffic flows;
  - supporting initial implementation of free route airspace.
- Improving airspace utilisation and route network availability through:
  - actively supporting and involving aircraft operators and the computer flight plan service providers in flight plan quality improvements;
  - gradually applying route availability restrictions only where and when required;
  - improving the use and availability of civil/military airspace structures.
- Efficient Terminal Manoeuvring Area design and utilisation through:
  - implementing advanced navigation capabilities;
  - implementing Continuous Descent Operations (CDO), improved arrival/departure routes, optimised departure profiles, etc.
- Improving awareness of performance.

1.4 EXTERNAL DOCUMENT RELEASE

The **latest AIRAC report** is available on the EUROCONTROL *Airspace design* website under the sub section → *ERNIP* → *ERNIP Implementation Monitoring* → *Latest monitoring report*:
http://www.eurocontrol.int/articles/airspace-design

as well as on the EUROCONTROL *Network Operations Monitoring and Reporting* website under → *European Route Network Improvement Plan - Monitoring Report*:
http://www.eurocontrol.int/articles/network-operations-monitoring-and-reporting

The full list of monitoring reports is available on the EUROCONTROL *Media & Info Centre* website:
http://www.eurocontrol.int/publications?title=&field_term_publication_type_tid=205&year[value][year]=

A copy of the AIRAC Report of the European Route Network Improvement Plan is also available via the restricted EUROCONTROL OneSky Online websites for access by other interested members of the RNDSG, ASMSG and NETOPS *(see ref sub-sections under main section "LIBRARY"):*

https://ost.eurocontrol.int/sites/NETOPS/SitePages/Home.aspx
https://ost.eurocontrol.int/sites/RNDSG/SitePages/Home.aspx
https://ost.eurocontrol.int/sites/ASM-SG/SitePages/Home.aspx

2. LIST OF PROPOSALS IMPLEMENTED AIRAC 1510 (17 SEPTEMBER 2015)

2.1 SUMMARY OF MAJOR PROJECTS IMPLEMENTED ON 17 SEPTEMBER 2015

During the AIRAC cycle 31 (thirty-one) airspace improvement packages co-ordinated at network level were implemented. Apart from several ATS route network and RAD improvements the list below provides an overview of the major enhancements implemented on 17 September 2015:

- Serbia
  - Implementation of PBN SID/STAR and APCH procedures in Beograd FIR.

A detailed list of all improvement measures implemented on 17 September is attached in Annex A. The list is an extract of the ***European Route Network Improvement Plan database*** accessible via:

https://ext.eurocontrol.int/ernip_database/Index.action

A description of the airspace changes and improvements together with an orientation map due for implementation on the relevant AIRAC cycle is provided in the *RNDSG Airspace Improvements Synopsis* (*RAIS)* via the restricted EUROCONTROL OneSky Online website for RNDSG.

The latest situation of the European route network structure is available and updated at each AIRAC cycle through the publication of Regional Electronic Charts that can be found here: http://www.eurocontrol.int/articles/eurocontrol-regional-charts

3. EVOLUTION OF PERFORMANCE INDICATORS

3.1 AIRSPACE DESIGN INDICATOR EVOLUTION

The graph below shows the yearly evolution of airspace design flight efficiency (RTE-DES[2]) over the period 2007 - 2014 and its evolution until 14 October 2015. *(Note: inclusion of new measurements will be done as soon as all data will become available)*

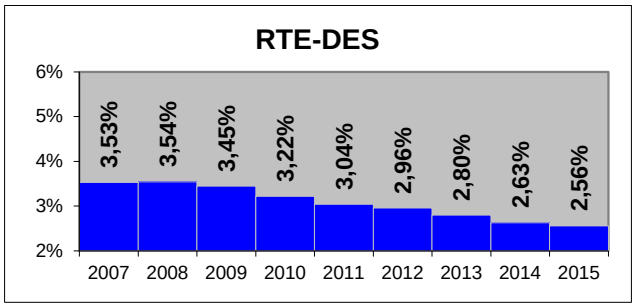


Figure 1 : *Airspace Design indicator evolution*

3.2 FLIGHT PLANNING INDICATOR EVOLUTION

The graph below shows the yearly evolution of the last filed flight plan indicator (RTE-FPL[3]) over the period 2007 - 2014 and its evolution until 14 October 2015. *(Note: inclusion of new measurements will be done as soon as all data will become available)*

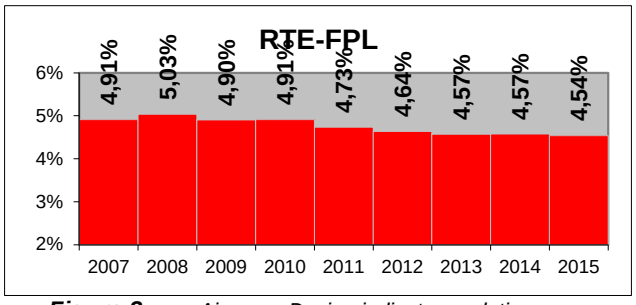


Figure 2 : *Airspace Design indicator evolution*

3.3 ROUTE AVAILABILITY INDICATOR EVOLUTION

The impact of the civil route restrictions included in the Route Availability Document (RAD) is measured through a specific RAD indicator (RTE-RAD[4]). The graph below shows the yearly evolution of the RTE-RAD indicator between January 2012 and 14 October 2015. *(Note: inclusion of new measurements will be done as soon as all data will become available)*

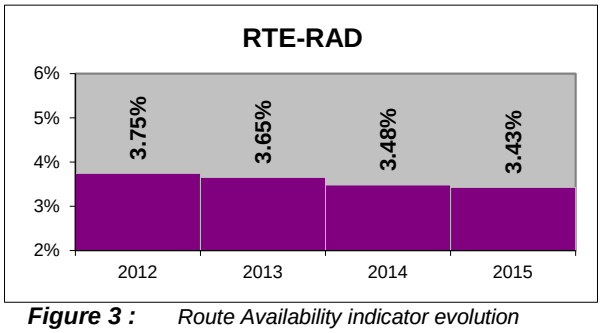


Figure 3 : *Route Availability indicator evolution*

2 **RTE-DES** (Flight Extension due to Route Network Design) This KPI will be calculated by measuring the difference between the shortest route length (from TMA exit and entry points) and the great circle distance. For this KPI the RAD will not be taken into account and all the CDR routes will be considered as open.

[3] **RTE-FPL** (Flight Extension due to Route Network Utilisation - last filled FPL) This KPI will be calculated by measuring the difference between the route from the last filed flight plan for each flight (from TMA exit and entry points) and the great circle distance.

[4] **RTE-RAD**: (Flight Extension due to Route Network Utilisation - RAD active) This KPI will be calculated by measuring the difference between the shortest plannable route length (from TMA exit and entry points) and the great circle distance. For this KPI the RAD will be taken into account and all the CDR routes will be considered as open.

3.4 FLIGHT EFFICIENCY EVOLUTION PER AIRAC CYCLE

The graph below shows the evolution per AIRAC cycle of the two main flight efficiency indicators RTE-DES and RTE-FPL over the period 2010 - 2014 and the evolution until 14 October 2015. *(Note: inclusion of new measurements will be done as soon as all data will become available)*

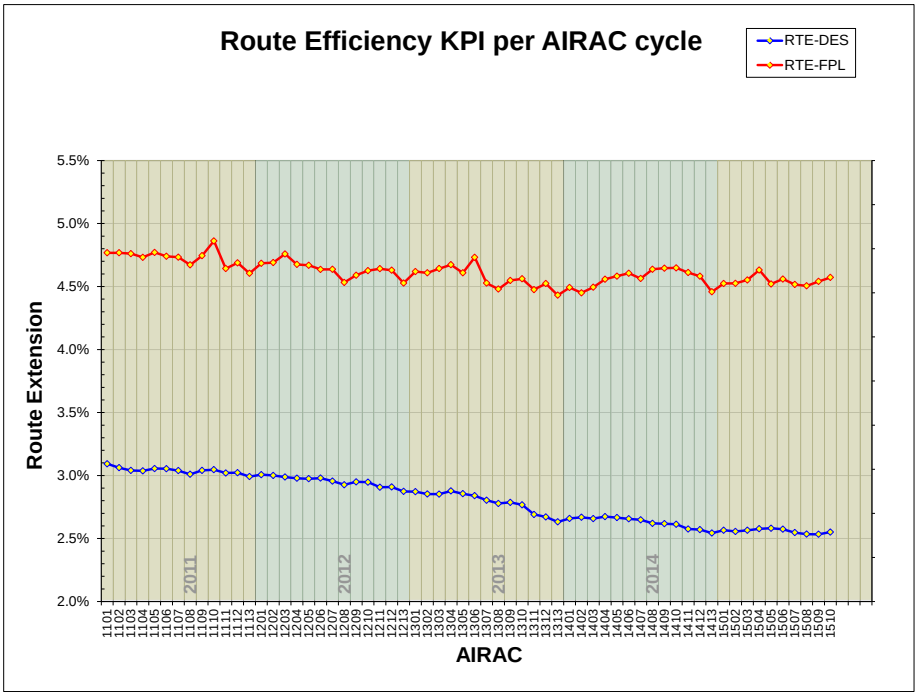


Figure 4 : *Flight efficiency (DES, FPL) evolution per AIRAC cycle*

The graph below shows the evolution per AIRAC cycle of the two main efficiency indicators RTE-DES and RTE-FPL in relation to the RTE-RAD indicator between January 2012 and 14 October 2015. *(Note: inclusion of new measurements will be done as soon as all data will become available)*

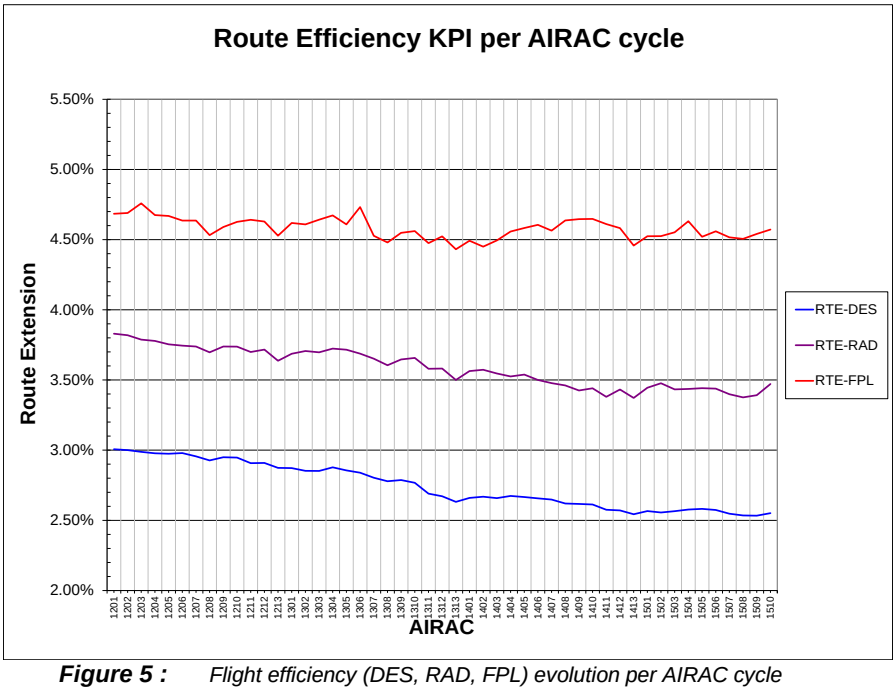


Figure 5 : *Flight efficiency (DES, RAD, FPL) evolution per AIRAC cycle*

The difference between the three indicators (DES, FPL, RAD) clearly indicate that additional efforts must be made to further improve the efficiency of airspace utilisation and to ensure that the indicator based on the latest filed flight plan/ FPL and the RAD indicator follow similar to the airspace design indicator/ DES.

3.4.1 EVOLUTION OF RTE-DES AND RTE-FPL INDICATORS

The current data indicates that, the average yearly route extension due to airspace design was reduced between 2009 and 14 October 2015 by 0.89 percentage points (same in AIRAC 1508 and 1509). The evolution of the airspace design indicator is on the right path and the contributions of the airspace design projects are key for improving flight efficiency.

The current data indicates that, the average yearly route extension based on the last filed flight plan was reduced between 2009 and 24 June 2015 by 0.36 percentage points (same in AIRAC 1507-1509).

The difference between the airspace design indicator and the last filed flight plan indicator was 1.45 percentage points in 2009 and was 1.98 percentage points in October 2015 (same in AIRAC 1508 and 1509).

The current data indicates that the route extension due to airspace design slightly increased to 2.55% in September and October 2015 (2.53 % in AIRAC 1508 and 1509).

The current data show that the route extension based on the last filed flight plan went up to 4.57% in September and October 2015 (4.54 % in AIRAC 1509).

3.4.2 EVOLUTION OF RTE-RAD INDICATOR

As shown in Figure 3 above the impact of the RAD decreased by 0,32 percentage points in October 2015 compared with 2012. More actions will be required to further diminish this impact still further and to ensure that the target set in the Network Manager Performance Plan is reached.

3.4.3 BENEFITS AND ASSESSMENT OF RTE-DES AND RTE-FPL EVOLUTIONS

Thanks to the airspace enhancements implemented during AIRAC 1510 as well as the airspace design improvements put in place since AIRAC 1410 in connection with changing traffic patterns and structure, the potential savings offered during the AIRAC cycle 1510 amount to 270 000 NMs flown less compared with the equivalent AIRAC cycle in 2014. This translates into 1 620 tons of fuel, or 5 400 tons of CO2, or €1 350 000.

Based on the last filed flight plan indicator and as a result of the series of events indicated below, the actual gains calculated during the AIRAC cycle 1510 amount to 357 000 NMs flown less compared to the equivalent AIRAC cycle in 2014. This translates into 2 142 tons of fuel, or 7 140 tons of CO2, or € 1 785 000.

No losses are recorded on the last filed flight plan data during AIRAC cycle 1510 compared to the equivalent AIRAC cycle in 2014. **The actual savings recorded are still higher than the potential savings offered (this being mainly due to the significant losses in the equivalent AIRAC cycle in 2014)** despite of different flight planning/ airline choices, traffic composition and/or scenarios applied due to capacity problems in the network as well as special events:

- **Overall crisis situation in Ukraine** that lead a significant number of flights to avoid the entire Ukrainian airspace moving to neighbouring countries (Turkey, Bulgaria, Romania, Poland, Slovakia, etc.); as a result of the Ukrainian crisis adjacent ACCs/ UACs were on-loaded by Far Eastern traffic avoiding the Ukraine airspace leading to increased route extensions.
- **Closure of Libyan airspace** for over flights due to the security situation required procedures with impact on flight efficiency for traffic between Europe and Africa re-routed via Egypt and Tunisia.
- **Avoidance of Syrian** and **Iraqi airspace** due to the security situation with impact on flight efficiency for traffic between Europe and Middle East and Asia re-routed via Iran and Turkey with additional impacts on the flows from the Ukrainian crisis situation.
- **Capacity and staffing issues in Nicosia ACC** required regulations with impact on flight planning route extension.
- **French ATC industrial action** - 8 October 2015 - approximately 66,800 min of ATFM delay.

Figure 6 below shows the unchanged airspace unavailability and closed areas during October 2015.

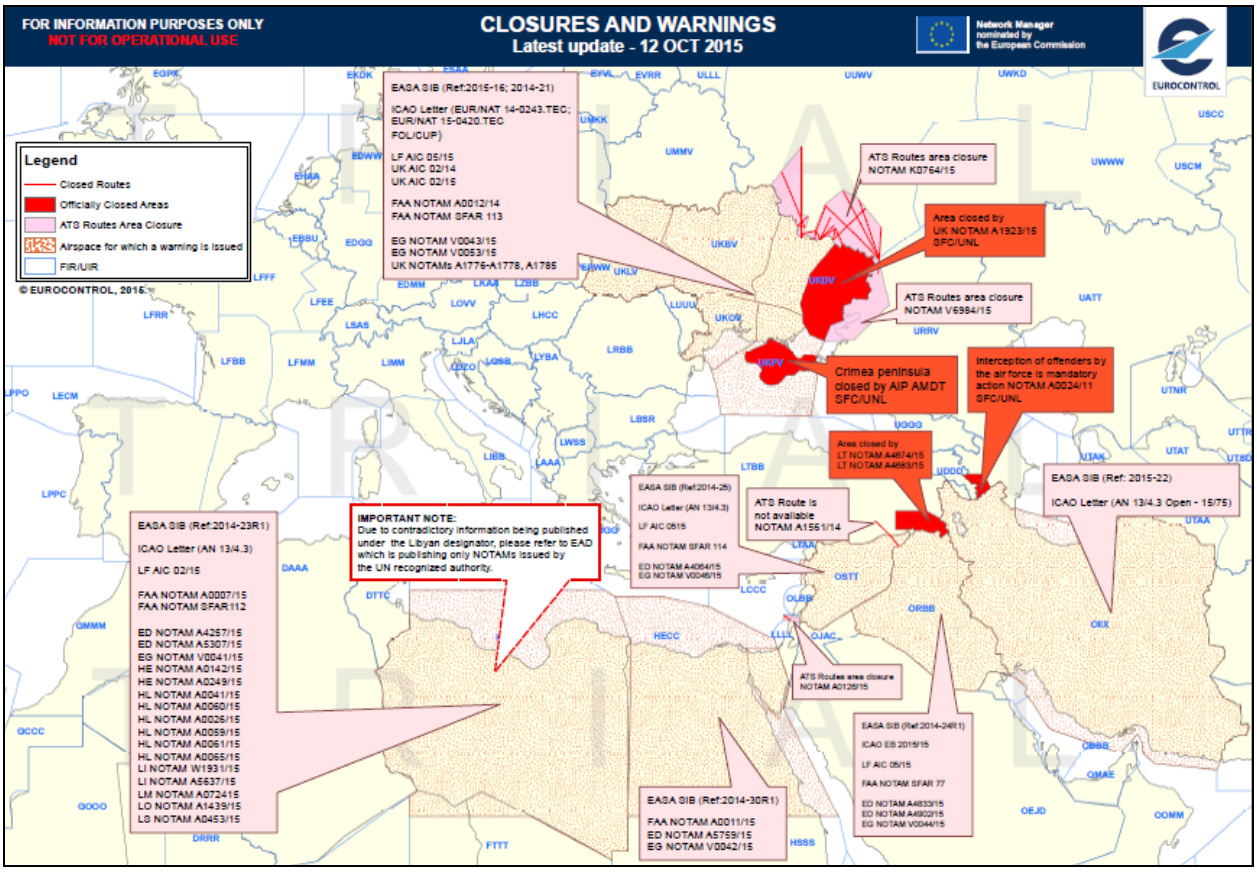


Figure 6 : *Airspace unavailability and closed areas October 2015*

Figure 7 and Figure 8 below visualise the impact of the mentioned airspace unavailability (see Figure 6 above) by comparing traffic flows in October 2014 and October 2015. Considering the disruptions listed above most of the flights are not only avoiding the closed areas but avoiding the entire Ukrainian airspace.

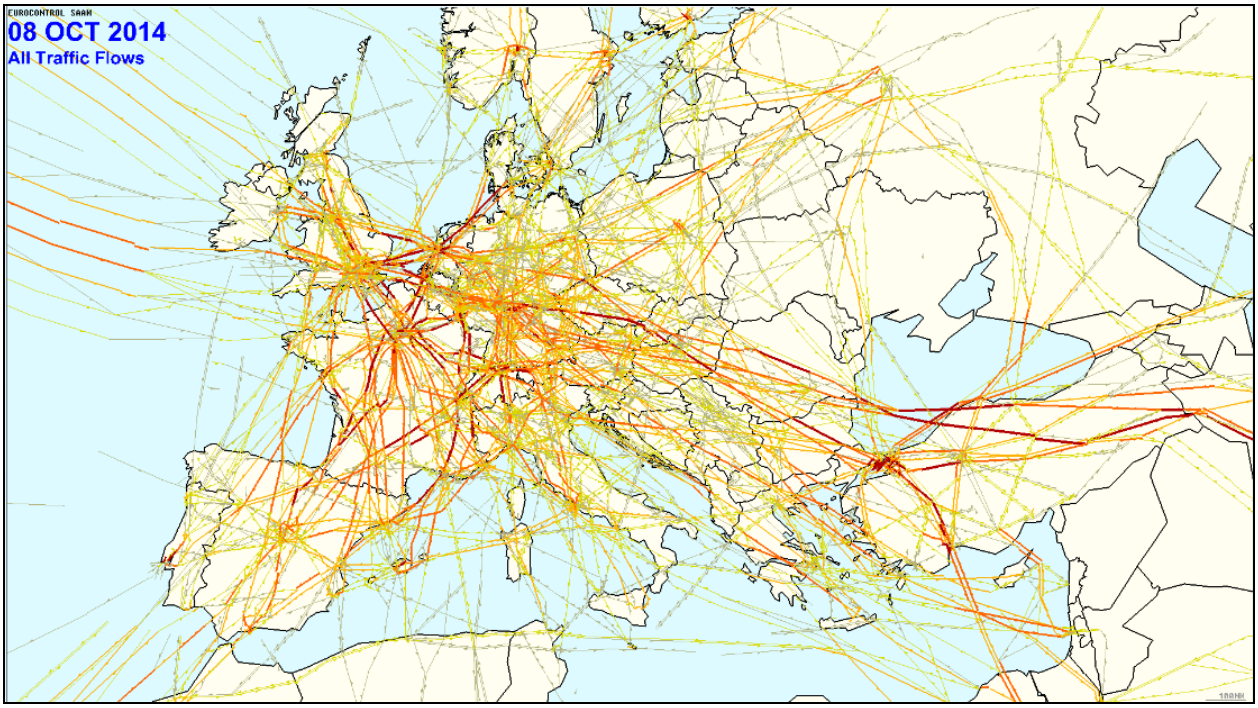


Figure 7 : *24h traffic situation Wednesday,08 October 2014 (flight planned)*

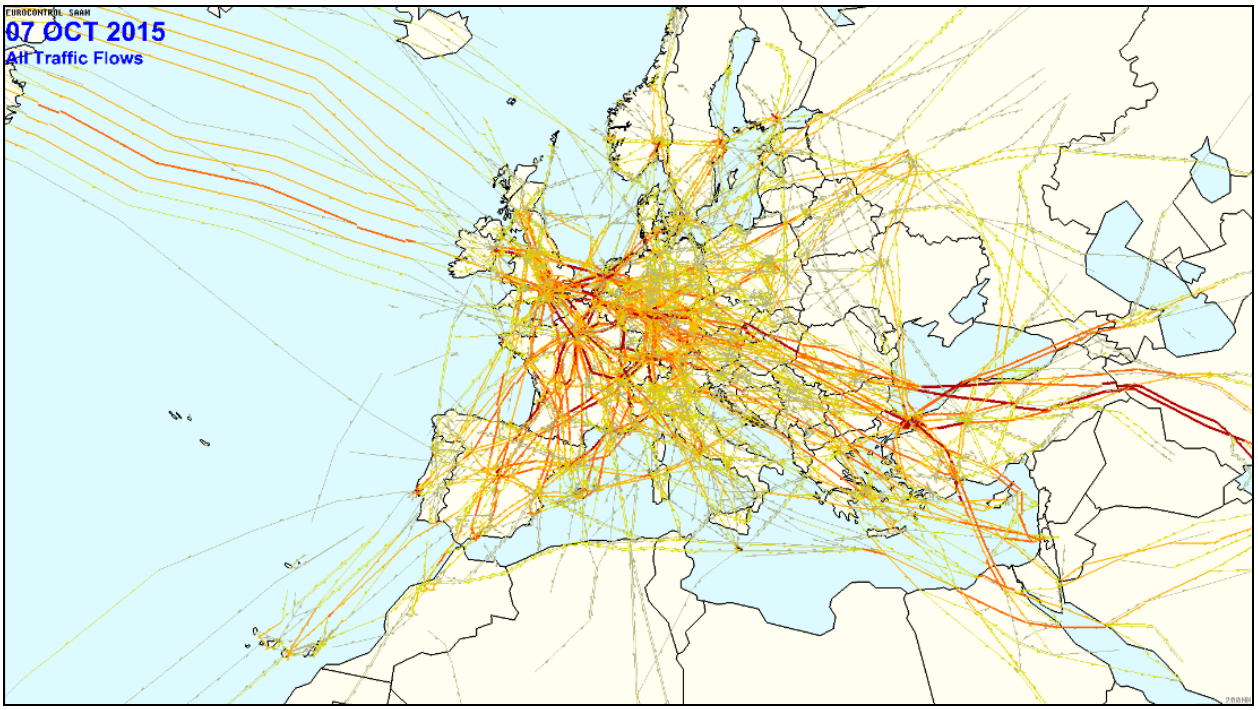


Figure 8 : *24h traffic situation Wednesday,7 October 2015 (flight planned)*

The comparison between the potential (RTE-DES) and actual (RTE-FPL) savings/ losses related to the different parameters is depicted in the graphs below (see Figure 9 to Figure 12).

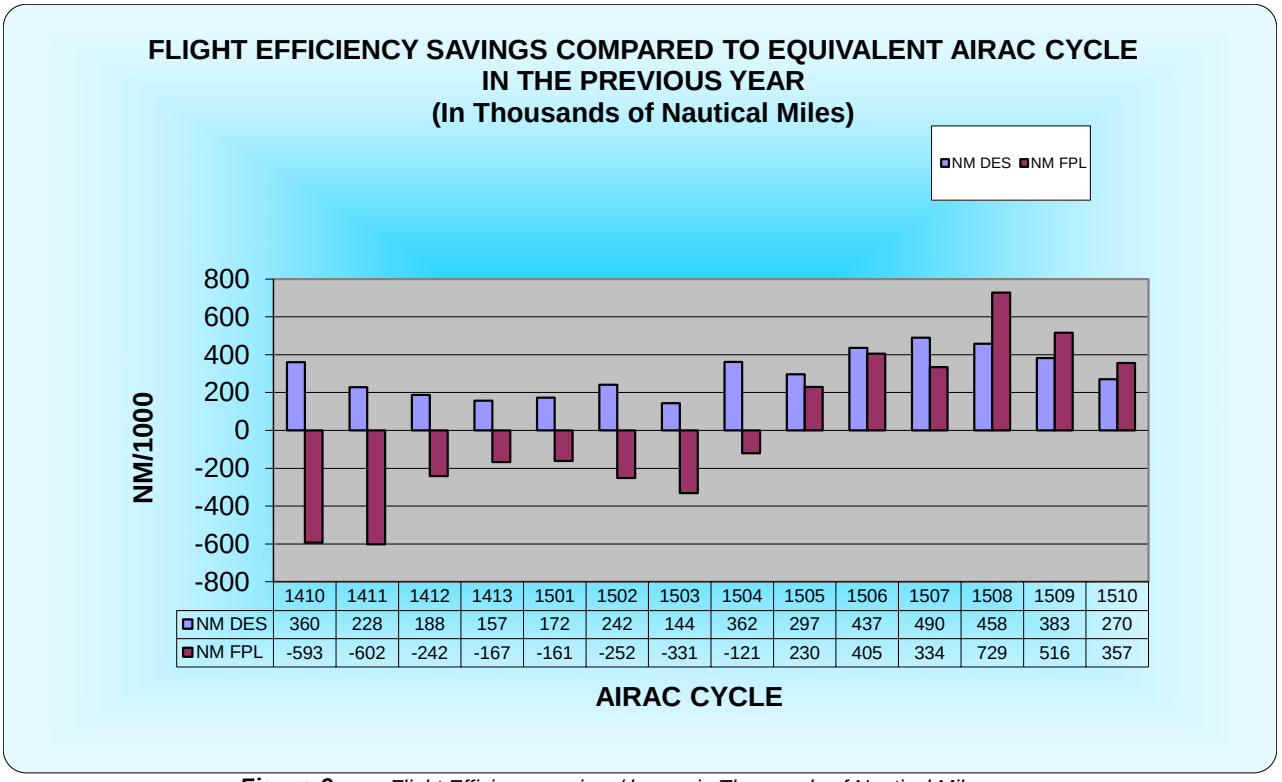


Figure 9 : *Flight Efficiency savings/ losses in Thousands of Nautical Miles*

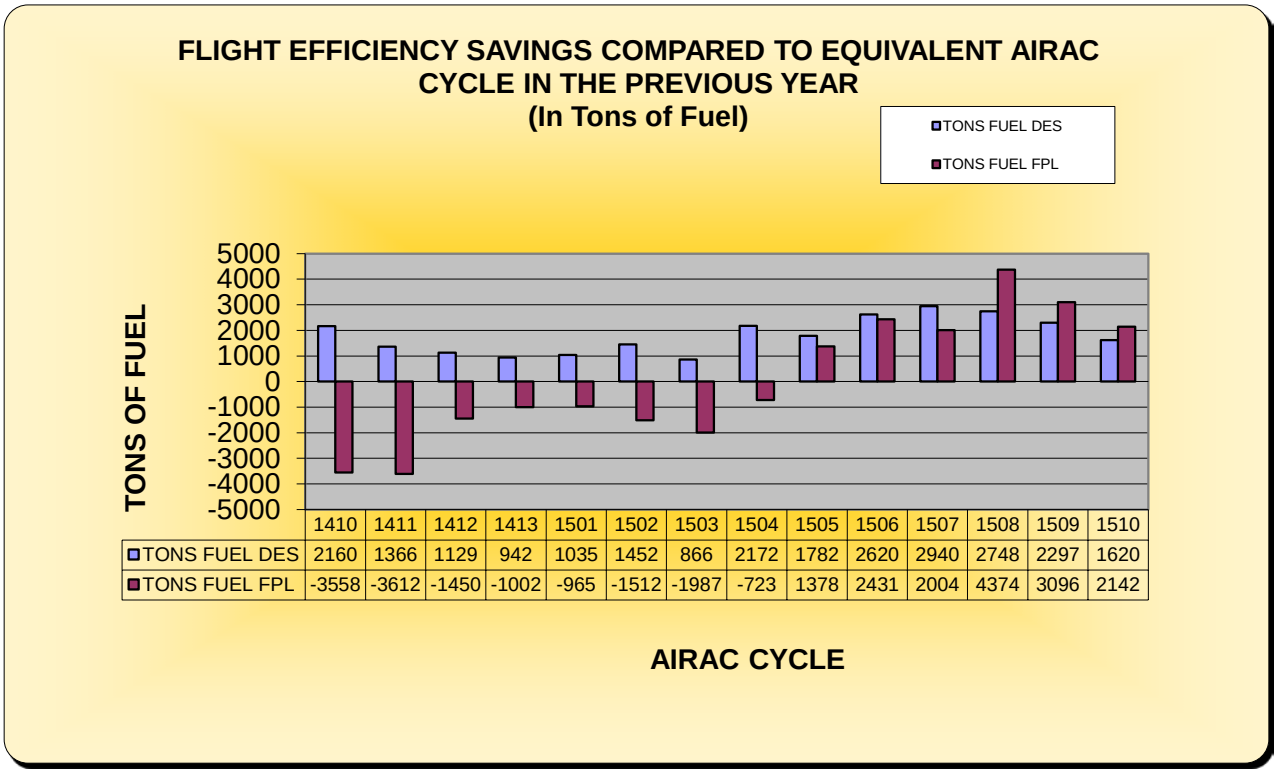
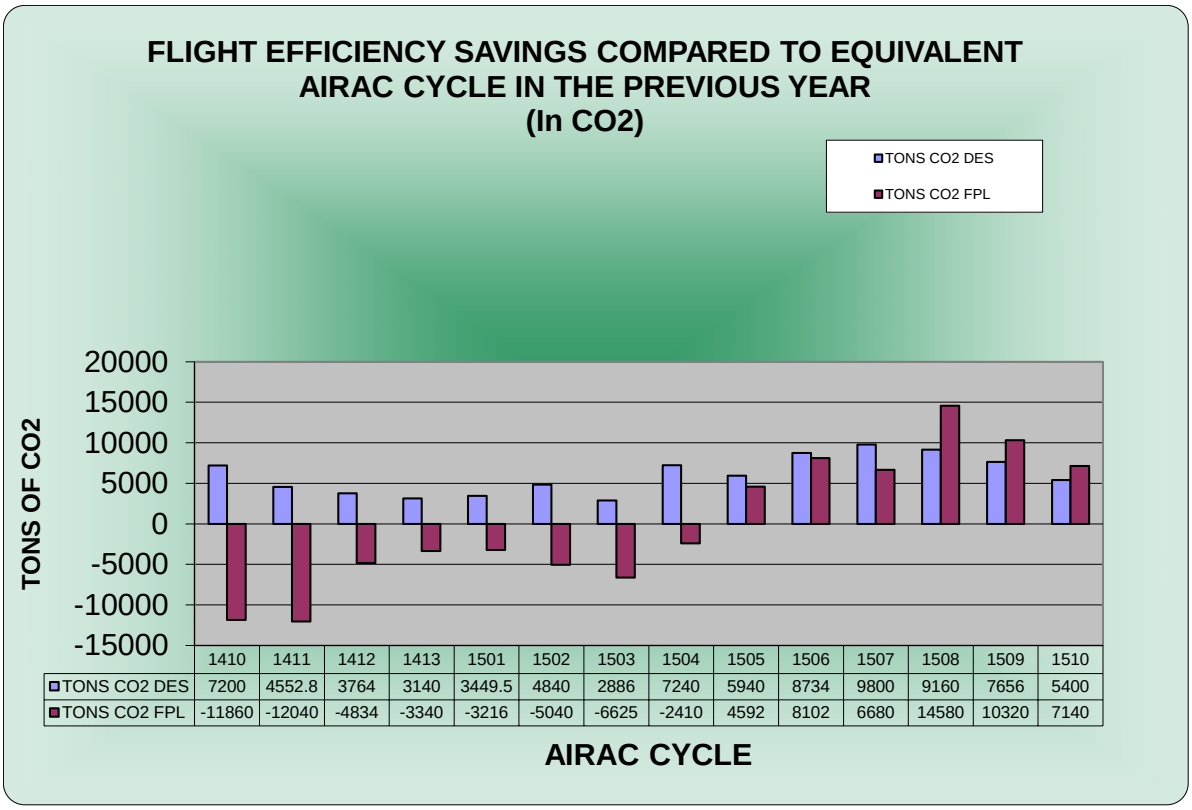
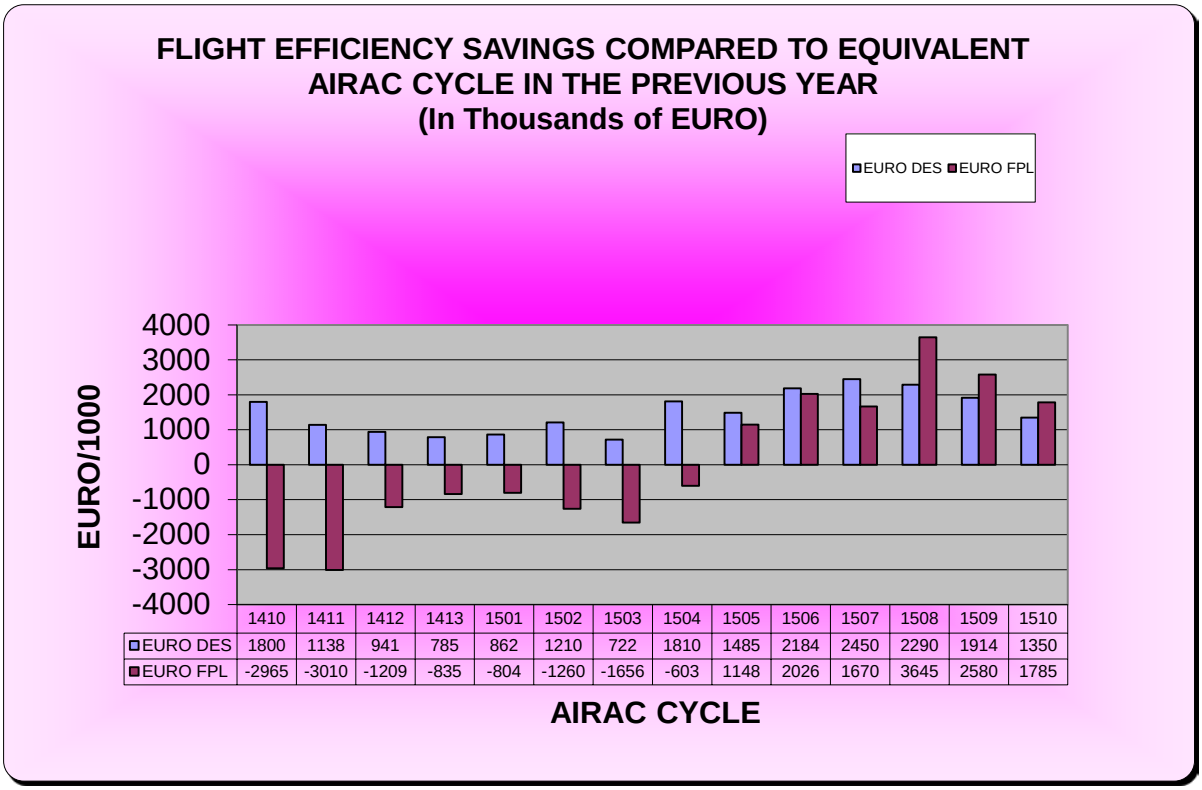


Figure 10 : *Flight Efficiency savings/ losses in Tons of Fuel*



	1410	1411	1412	1413	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510
TONS CO2 DES	7200	4552.8	3764	3140	3449.5	4840	2886	7240	5940	8734	9800	9160	7656	5400
TONS CO2 FPL	-11860	-12040	-4834	-3340	-3216	-5040	-6625	-2410	4592	8102	6680	14580	10320	7140

Figure 11 : *Flight Efficiency savings/ losses in CO2*



	1410	1411	1412	1413	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510
EURO DES	1800	1138	941	785	862	1210	722	1810	1485	2184	2450	2290	1914	1350
EURO FPL	-2965	-3010	-1209	-835	-804	-1260	-1656	-603	1148	2026	1670	3645	2580	1785

Figure 12 : *Flight Efficiency savings/ losses in Thousands of EURO*

Note: For additional information on ATFM delay that could impact on network efficiency consult the NM Monthly Network Operations Reports, accessible via:
http://www.eurocontrol.int/publications?title=&field_term_publication_type_tid=207&year[value][year]=.

3.4.4 BENEFITS AND ASSESSMENT OF RTE-RAD EVOLUTIONS

The constant decrease of the RAD indicator is due to improvements in airspace design and the removal of RAD restrictions. More actions will be required to ensure that the KPI based on the RAD indicator follows trends similar to the airspace design indicator/ DES as well as to ensure that the target set in the Network Manager Performance Plan is reached.

3.5 FREE ROUTE AIRSPACE EVOLUTION

Until 17 September 2015 Free Route Airspace has been partially and/or fully implemented in the following ACCs: Beograd ACC, Brest ACC, Brindisi ACC, Bordeaux ACC, Bucuresti ACC, Chisinau ACC, Karlsruhe UAC, Kobenhavn ACC, Lisboa ACC, London ACC, Ljubljana ACC, Maastricht UAC, Madrid ACC (SAN and ASI sectors), Malmo ACC, Malta ACC, Marseille ACC, Milano ACC, Padova ACC, Praha ACC, Prestwick ACC, Reims ACC, Roma ACC, Shannon ACC, Skopje ACC, Sofia ACC, Stockholm ACC, Tampere ACC, Warsaw ACC, Wien ACC and Zagreb ACC (see Figure 13 below).

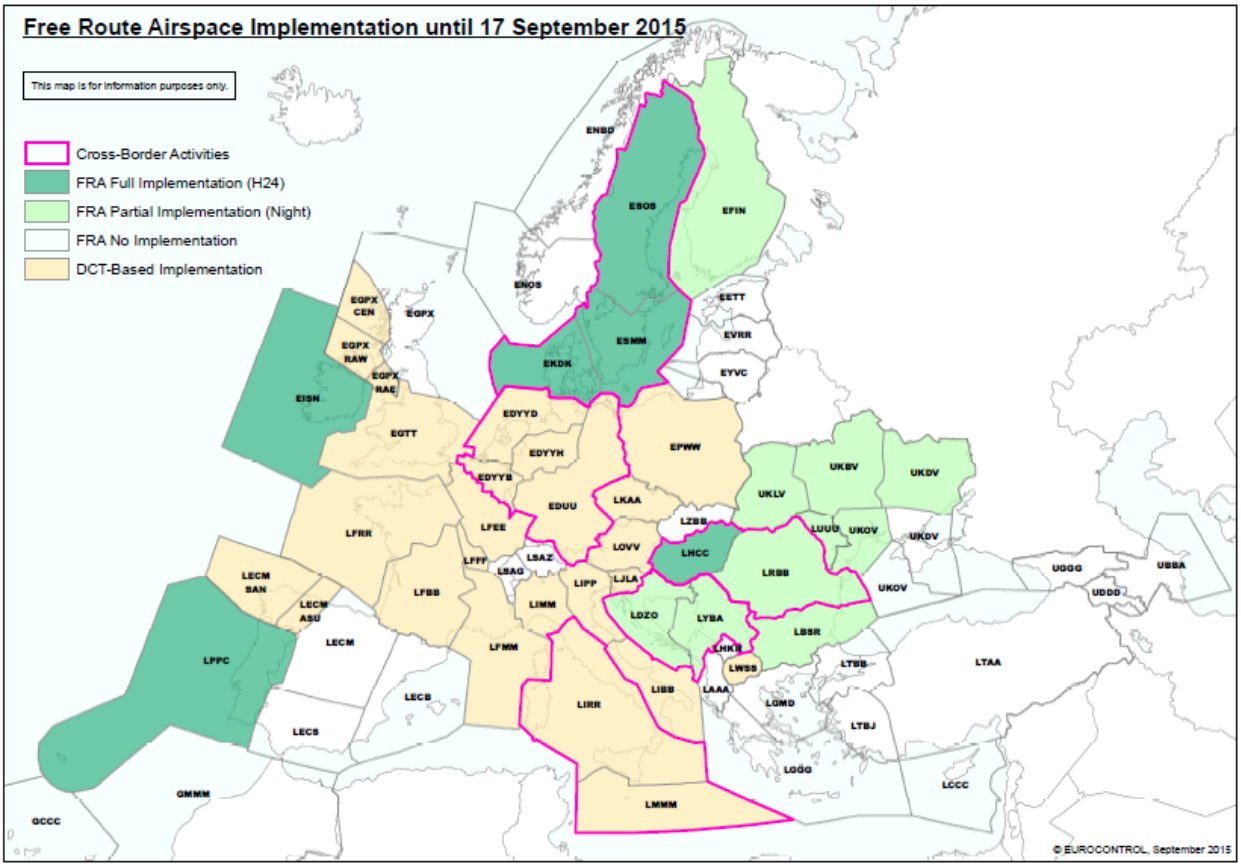


Figure 13 : *Free Route Airspace Implementation*

3.6 ASM PERFORMANCE ASSESSMENT

The present ASM performance reporting is based on the major FUA KPIs as they are described in detail in Section 7 of the ERNIP Part 3 - ASM Handbook.

The FUA indicators are calculated separately for two CDR basic categories: CDR1 and CDR2.

Those CDRs, defined as CDR1/2, CDR1/3 or CDR2/3, are measured over time for each category and their individual contribution is added to either CDR1 or CDR2 type reports. The method allows us to align the calculation of the indicators with the way the CDRs' availability is presented in AUP/UUP Lists A and B respectively.

The values for each AIRAC cycle were aggregated by measuring the indicators on a daily basis. By doing this, we could differentiate between each CDR1/2, CDR1/3 or CDR2/3 routes, categorising CDR1 and CDR2 routes with the appropriate metrics.

We measure airspace utilisation with the Rate of Aircraft Interested (RAI) and Rate of Aircraft using CDRs (RAU). The first indicator shows which flights could potentially use available CDRs; the second one indicates the actual CDR uptake.

3.6.1 CDRs OVERVIEW

Figure 1 below is an ECAC map of published CDRs per AIRAC cycle for the third quarter in 2015 (AIRAC 1507 - AIRAC 1509). It is worth noting the diversity of CDR categories: this is one of the consequences of establishing night routes; they are often CDR1 at night but CDR3 by day.
A similar situation may be observed for CDR1/2: CDR2 by day and CDR1 by night and at weekends.

One element that adds a significant level of complexity to the calculation of ASM performance indicators is the published timesheet or activation schedule of various categories of CDRs. The way this schedule is described in the national AIP varies significantly from State to State, and especially so when referring to the switchover from winter/summer, week/weekend and day/night time.

Regarding the basic definition of CDRs, CDR is mostly made up of several elementary segments, spatially sequenced. There are cases when this definition was modified for various reasons, leading to a change in the number of CDRs counted, although the number of elementary segments remained the same.

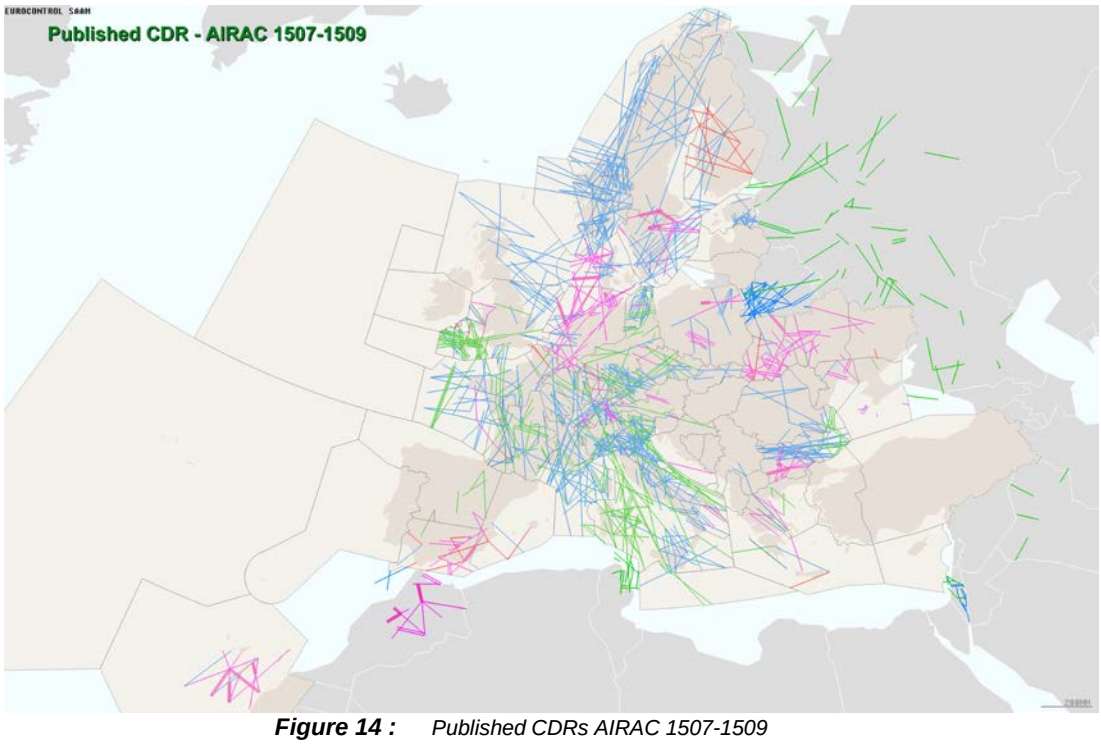


Figure 14 : *Published CDRs AIRAC 1507-1509*

"Flights interested" represents the maximum number of flights that could potentially have made use of an available CDR in their flight plans.

The absolute numbers for the third quarter/ Q3 in 2015 are:

- Averaged number of daily flights for 3 AIRAC cycles (1507, 1508, 1509): 32265
- Flights potentially interested of using CDR1: 13814
- Flights actually planning on CDR1: 9198
- Flights potentially interested of using CDR2: 1394
- Flights actually planning on CDR1: 859

3.6.2 FUA PERFORMANCE INDICATORS

Figures 2 and 3 below show the aggregated values of the three FUA KPIs[5] (RoCA, RAI, RAU) for the third quarter 2015/Q3 compared with the same period in 2014 for CDR1 and CDR2.

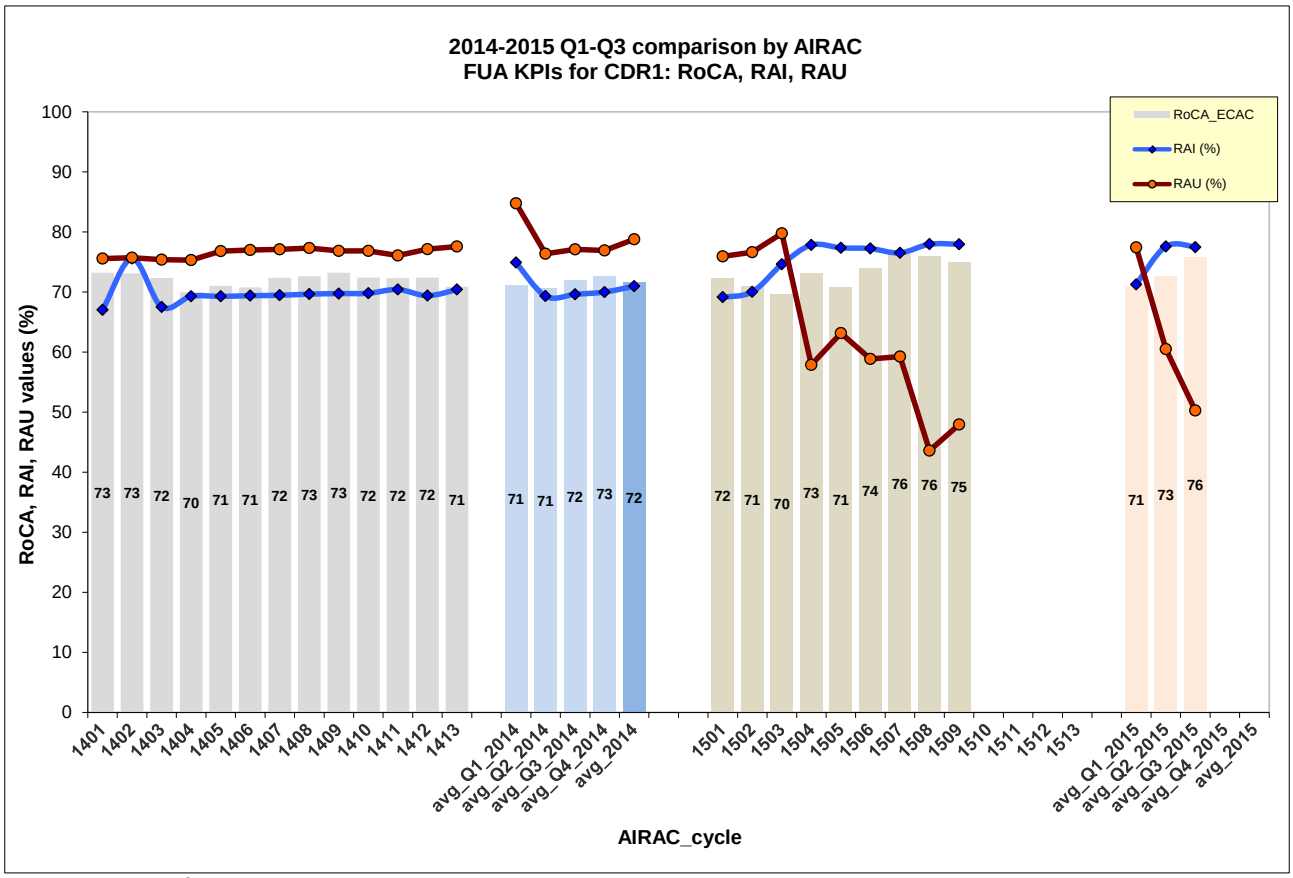


Figure 15 : *CDR1 RoCA, RAI and RAU per AIRAC cycle for Q3 2015 compared with 2014*

[5] **RoCA** (Rate of CDR availability) represents the average CDR availability according to the EAUP/EUUP related to a given time period. RoCA (in %) is calculated as the ratio of the total CDR segment opening, whatever category it may be, to the total time of days (D).

RAI (Rate of Aircraft Interested) represents the average number of aircraft interested in filing flight plans to take advantage of an available CDR. RAI represents (in %) the ratio of the number of flights planned on an available CDR to the number of potential users of this CDR.

RAU (Rate of Actual Use of CDR) represents the average number of aircraft having actually used an available CDR during a given time period. RAU represents (in %) the ratio of the number of flights (AU) having actually used an available CDR to the number of potential users (PU) of this CDR.

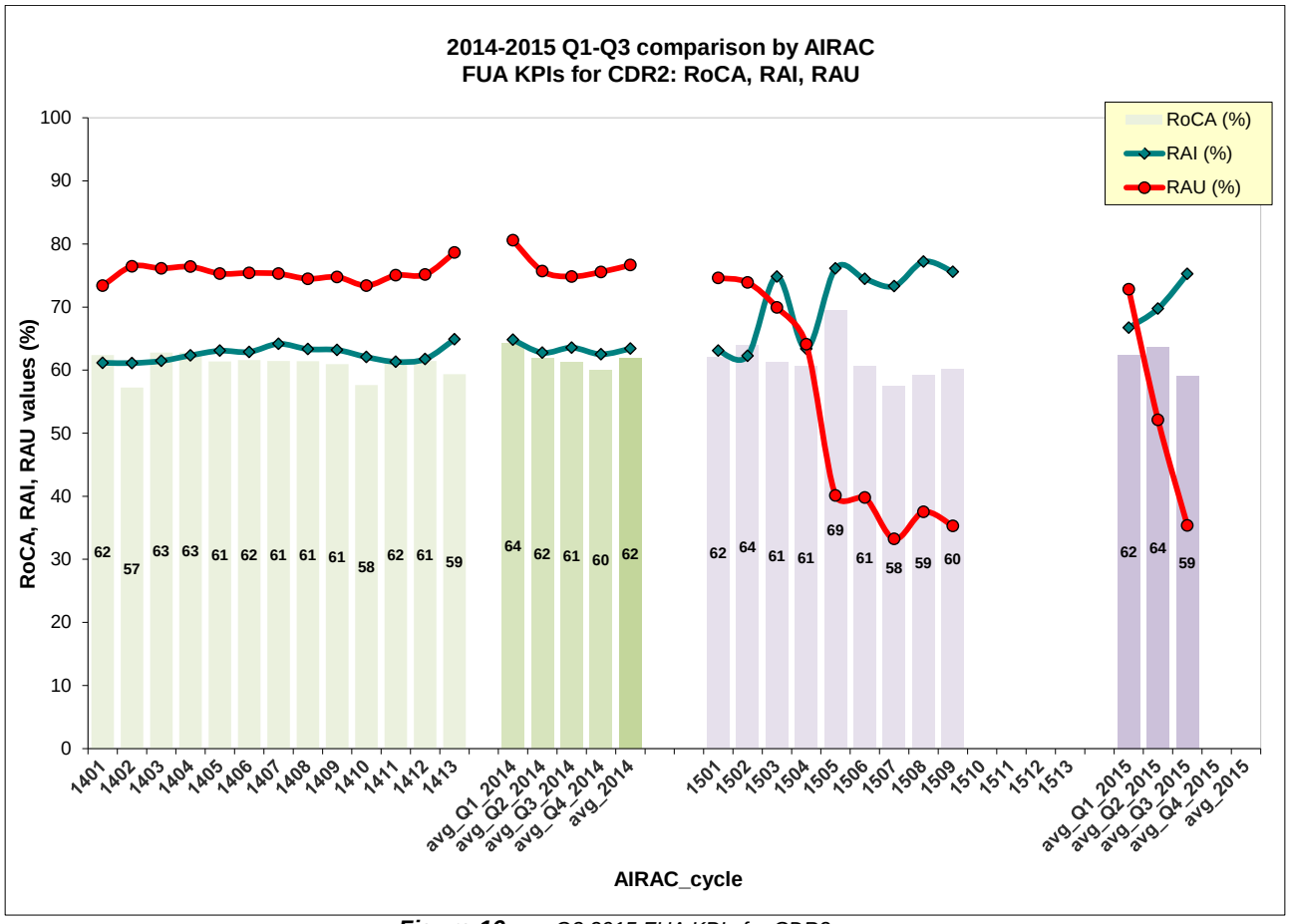


Figure 16 : *Q3 2015 FUA KPIs for CDR2*

The CDRs' availability is quantified by the RoCA indicator (rate of CDR availability – as defined by the ASM Handbook) and represents (in percentage terms) the ratio of the total opening of the CDR segment, no matter which category, in a given period.

For CDR1 the RoCA is increasing in the third quarter of 2015, compared with the same period in 2014 (72% in 2014 versus 75.8% in 2015).

RAI increases in Q3 2015 compared to the same period in 2014 from 69% in the Q3 2014 to 77.5% for the same period of 2015. However RAU dropped from 77% in Q3 2014 to 50.3% in Q3 2015.

The situation for CDR2 for Q3 2015: availability (RoCA) slightly dropped from 61% in 2014 to 59% in Q3 2015. RAI increased slightly from 62.5% in Q3 2014 to 75.3% in 2015. RAU however dropped significantly from 75% in Q3 2014 to 35.4% in Q3 2015.

The indicators characterising the utilisation of the available CDRs are represented by the Rate of Aircraft Interested (RAI) for flight planning using available CDRs and the Rate of Actual Use of CDR (RAU). The AIRAC variation is shown by Figures 2 and 3 above, whereas averaged values for the third quarter 2015 are shown in Figures 4 and 5 below.

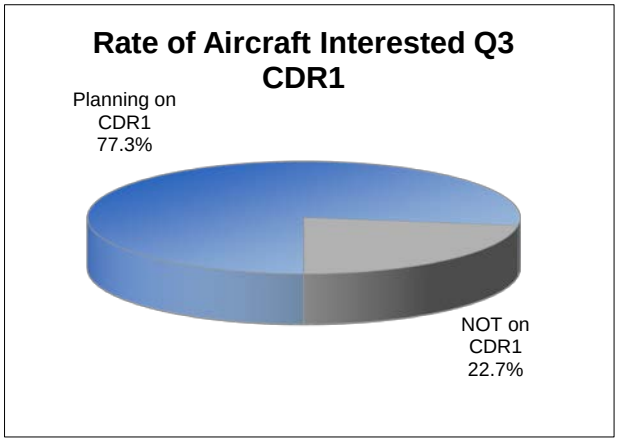


Figure 17 : *RAI for CDR1 averaged for Q3 2015*

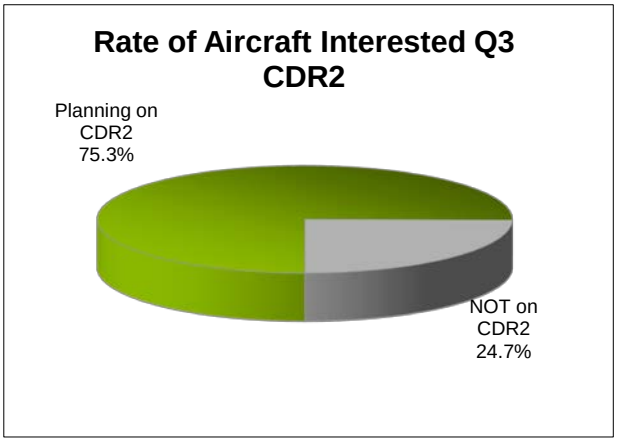


Figure 18 : *RAI for CDR2 averaged for Q3 2015*

Figures 4 and 5 show, for the third quarter 2015, the average percentage of flights which could potentially have made use of CDR in their flight plans. For CDR1, 22.7% of flights did not make use of a CDR1, so missing some opportunities. The percentage of flights missing planning opportunities on CDR2s is 24.7%.

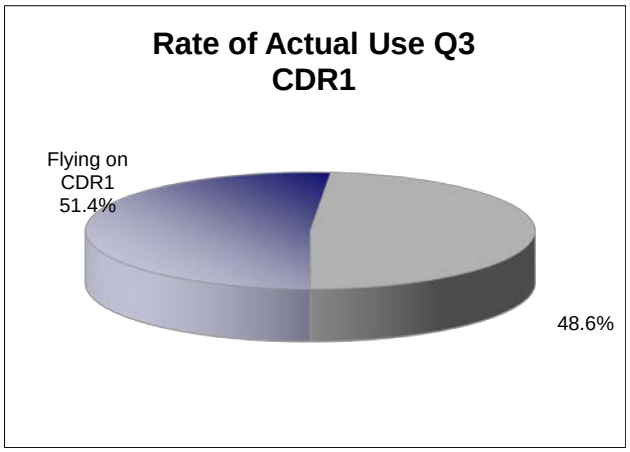


Figure 19 : *RAU for CDR1 averaged for Q3 2015*

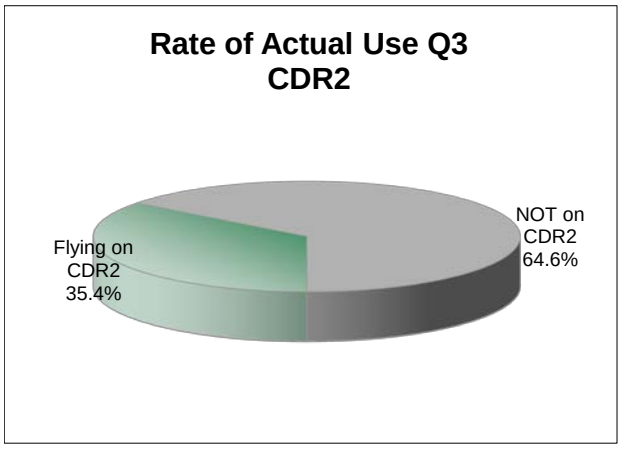


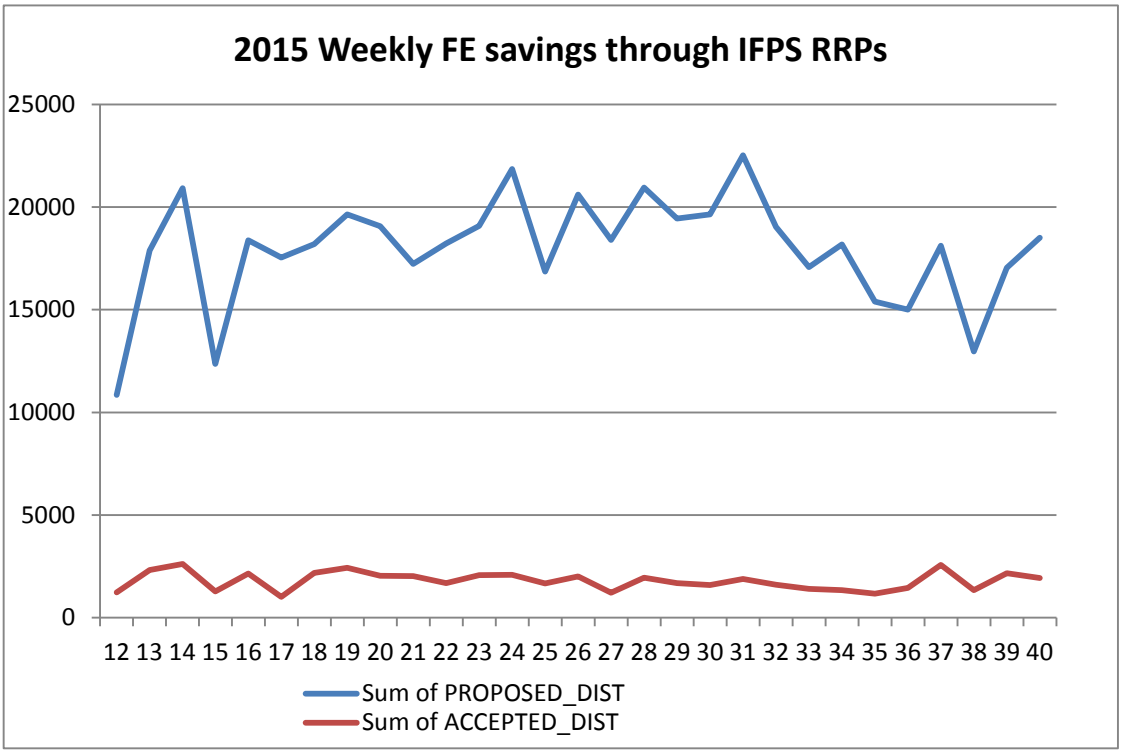
Figure 20 : *RAU for CDR2 averaged for Q3 2015*

Figures 6 and 7 show, for the third quarter 2015, the average percentage of flights which actually flew on a CDR. For CDR1, 48.6% of flights did not fly on CDR1, while for CDR2 64.6% of flights are missing planning opportunities.

The data originated from the NM data warehouse; the use of FIND in conjunction with other internally developed tools enabled us to gain a comprehensive view of the evolution of the major FUA KPIs used in ASM performance reporting. The CDR environment's growing complexity means that additional effort is needed to carry out a proper assessment.

4. NETWORK MANAGER CONTRIBUTION TO FLIGHT EFFICIENCY IMPROVEMENTS

During this AIRAC cycle, more than 2000 re-routing proposals were made with approximately 11% of those being accepted. Just 12% of the proposed distance savings were achieved resulting in approximately 8000 NM saved.



ANNEX A: DETAILED LIST OF PROJECTS IMPLEMENTED 17 SEPTEMBER 2015

The following table presents detailed information about each of the improvement proposals developed within the RNDSG and implemented during the relevant AIRAC cycle. The description of the proposals is based on the information available from different sources (e.g. AOs, ANSPs and EUROCONTROL). The table includes:

- Proposal ID number:
  A reference number to identify each proposal allowing tracing at which RNDSG it was initiated.
- Project Name:
  Dedicated Name and Phase/ Step of the improvement project.
- Description:
  A detailed description of the planned improvement proposal.
- Objective:
  A brief description of the purpose of the enhancement measure.
- Implementation Status:
  The implementation status defined as Proposed, Planned, Confirmed or Implemented.
- Project Group:
  The Functional Airspace Block Group (FAB), Regional Focus Group (RFG), Sub-Group (SG) or any other Project Group(s) involved directly or indirectly by the proposed enhancement measure.
- Project Category:
  The nature of the proposed enhancement measure defined through Project Categories (e.g. Airspace Structure, ATC Sectors, ATS Routes, Free Route Airspace, TMA etc.).
- States and Organisations:
  The States and/or Organisations involved directly or indirectly by the proposed enhancement measure.
- Originator(s):
  The States and/or Organisations who have originated the proposal.
- Comments:
  The conditions and/or pre-requisites which have to be met in order to implement the proposal or any other relevant comment(s).

***Note:* The list of implemented changes for this AIRAC cycle does not claim to be complete. For the correctness and verification of the relevant aeronautical information consult official State AIP publications.**
The data from this document should not be used for operational purpose

	Proposal ID:	**85.048**	**Impl. Status:**	**State(s) & Org.**	**Comments:**
1.	**Project Name: RAD Promulgation** **Description:** To publish in AIP Switzerland, ENR 1.10 FLIGHT PLANNING under paragraph 1. Procedures for the submission of a flight plan common text for Adherence to Airspace Utilization Rules and Availability - RAD inside Switzerland FIR. **Objective:** To harmonize the RAD promulgation via the AIP by the ECAC States.		Implemented 17 SEP 2015 **Project Category:** AIP RAD	CHE **Originator(s):** EUROCONTROL	
	Proposal ID:	**82.047c**	**Impl. Status:**	**State(s) & Org.**	**Comments:**
2.	**Description:** 1. To create a new departure transition from EDDS via KUNOD to connect with UL607 (shorter route, improved vertical profile (Mil Off). 2. To create a shorter route option for EDDK arrival from S/SE (shorter by 1 - 5NM, improved vertical profile by 4000ft). 3. To re-align **Z79** as LUPOL - KUNOD - SUDEN (improved vertical profile for EDJA departure). **Objective:** To provide shorter route options and improved flight profiles for flights arriving and/or departing to/from EDDS, EDDK, EDJA.		Implemented 17 SEP 2015 **Project Category:** ATS Routes	DEU **Originator(s):** DEU	**Related proposals:** • 82.047a
	Proposal ID:	**84.075**	**Impl. Status:**	**State(s) & Org.**	**Comments:**
3.	**Description:** To implement northbound ATS route **T844** SUDEN - KOVAN - UMDAS - ASKIK. **Objective:** To further improve ATS route options for flights to Köln (EDDK) airport.		Implemented 17 SEP 2015 **Project Category:** ATS Routes	DEU **Originator(s):** DEU	
	Proposal ID:	**85.087**	**Impl. Status:**	**State(s) & Org.**	**Comments:**
4.	**Project Name: RAD Promulgation** **Description:** To publish in AIP Estonia, ENR 1.10 FLIGHT PLANNING under paragraph 1. Procedures for the submission of a flight plan common text for Adherence to Airspace Utilization Rules and Availability - RAD inside Tallinn FIR. **Objective:** To harmonize the RAD promulgation via the AIP by the ECAC States.		Implemented 17 SEP 2015 **Project Category:** AIP RAD	EST **Originator(s):** EUROCONTROL	
	Proposal ID:	**85.096**	**Impl. Status:**	**State(s) & Org.**	**Comments:**

5.	**Project Name: Unnamed significant points** **Description:** To replace by 5LNCs in ENR 3.2 the **3 (three)** unnamed boundary significant points on the following ATS routes: a. UT7 / UN512 - ADRUD; b. UN521 - XAVAP; c. UM142 - OGAGI. **Objective:** To further improve the AIP airspace data publication.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	FRA GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 67.005a	**Impl. Status:**	**State(s) & Org.**	**Comments:**
6.	**Description:** To implement the following bidirectional ATS route segments: 4. **UT7** LND - KARNO (Phase 1) as CDR1; 5. **UN21** GAPLI - MERLY as CDR1/3. **Objective:** To further improve the ATS route network within London FIR/UIR.	Implemented 17 SEP 2015 **Project Group:** RFG SW **Project Category:** ATS Routes CDRs	GBR **Originator(s):** GBR	• FL300 and above only. • Provide connectivity to/from UL180 and UP16. • Review greater use below FL300 post implementation. • BERUL - MERLY original proposal by IACA. **Related proposals:** • 67.005b
	Proposal ID: 85.059	**Impl. Status:**	**State(s) & Org.**	**Comments:**
7.	**Project Name: Unnamed Significant Points** **Description:** To add new 5LNC **OGAGI** to name an unnamed significant point on the France UK FIR boundary on ATS route **UM142**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR FRA **Originator(s):** EUROCONTROL	
	Proposal ID: 85.060	**Impl. Status:**	**State(s) & Org.**	**Comments:**
8.	**Project Name: Unnamed Significant Points** **Description:** To add new 5LNC **XAVAP** to name an unnamed significant point on the UK/France FIR boundary on ATS route **UN521**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR FRA **Originator(s):** EUROCONTROL	
	Proposal ID: 84.046	**Impl. Status:**	**State(s) & Org.**	**Comments:**

9.	**Description:** To replace existing 5LNC **BEKSA**. **Objective:** 1. To avoid 5LNCs duplication within the ECAC area of the ICAO EUR/NAT region; 2. To improve the aeronautical information provided; 3. To be compliant with ICAO Annex 11.	Implemented 17 SEP 2015 **Project Category:** 5LNC	GBR **Originator(s):** EUROCONTROL ICAO	• *BEKSA is reserved in ICARD for Russian Federation.* • *Proposal for replacement is based on "Common criteria for replacement of duplicated 5LNCs" as point is not reserved for UK.*
	Proposal ID: **85.042**	**Impl. Status:**	**State(s) & Org.**	**Comments:**
10.	**Project Name: Unnamed Significant Points** **Description:** To remove from ENR 3.1 the unnamed significant points from ATS route **L9** and add **UGBUD** and **INRUB**. **Objective:** To further improve the AIP airspace data publication.	Implemented 17 SEP 2015 **Project Category:** AIP Airspace Structure	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: **85.043**	**Impl. Status:**	**State(s) & Org.**	**Comments:**
11.	**Project Name: Unnamed Significant Points** **Description:** 1. To remove from ENR 3.1 unnamed significant points from ATS route **L10**. 2. To add new 5LNCs **RIGVA, TUVDO, LAMVI** to **L/UL10** and add **CASEL** to **UL10**. **Objective:** To further improve the AIP airspace data publication	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: **85.078**	**Impl. Status:**	**State(s) & Org.**	**Comments:**
12.	**Project Name: Unnamed Significant Points** **Description:** To add new 5LNCs **UGBUD** and **INRUB** to ATS route **L9** between AMMAN and BCN. **Objective:** To further improve the AIP Airspace data publication.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: **85.061**	**Impl. Status:**	**State(s) & Org.**	**Comments:**

13.	**Project Name: Unnamed Significant Points** **Description:** To add new 5LNC **ADRUD** to name an unnamed significant point on the UK/France FIR boundary on **UN512** and **UT7**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR FRA **Originator(s):** EUROCONTROL	
	Proposal ID: 85.062	**Impl. Status:**	**State(s) & Org.**	**Comments:**
14.	**Project Name: Unnamed Significant Points** **Description:** 1. To remove from ENR 3.1/3.2 unnamed significant points from ATS routes **L/UL620**. 2. To add two new 5LNCs **BEVUL** and **ABKIM** between GIBSO and SAM to **L/UL620** and to add **BRIPO** to **UL620**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.063	**Impl. Status:**	**State(s) & Org.**	**Comments:**
15.	**Project Name: Unnamed Significant Points** **Description:** 1. To remove from ENR 3.1 / 3.2 unnamed significant points from ATS routes **N/UN57**. 2. To replace by 5LNCs **BAMEP, OLPOP** and **IPNOX** in ENR 3.1 / 3.2 the **3 (three)** unnamed significant points on ATS routes **N/UN57**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.064	**Impl. Status:**	**State(s) & Org.**	**Comments:**
16.	**Project Name: Unnamed Significant Points** **Description:** To add new 5LNC **IPSIR** to ATS routes **P/UP17**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.065	**Impl. Status:**	**State(s) & Org.**	**Comments:**

17.	**Project Name: Unnamed Significant Points** **Description:** 1. To remove from ENR 3.1 unnamed significant points from ATS route **P18**. 2. To replace by 5LNCs in ENR 3.1 / 3.2 the unnamed significant points on the following ATS routes: a. **IDKOL, ELMUD, UPGET, OKPAL** and **RATPU** on ATS routes **P/UP18;** b. **ABKAT** to **P18;** c. **UVAVU** and **GIRLI** to **UP18**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.044	**Impl. Status:**	**State(s) & Org.**	**Comments:**
18.	**Project Name: Unnamed Significant Points** **Description:** 1. To withdraw from ENR 3.1 unnamed significant points from ATS route **L26**. 2. To replace by 5LNCs in ENR 3.1 / 3.3 the unnamed significant points on the following ATS routes: a. **NISBI and MOGMO** on **L/UL26**; b. **ARTIX** on **L26;** c. **DOPEK** on **UL26**. **Objective:** To further improve the AIP airspace data publication.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.045	**Impl. Status:**	**State(s) & Org.**	**Comments:**
19.	**Project Name: Unnamed Significant Points** **Description:** 1. To remove from ENR 3.1 unnamed significant points from ATS route **L151**. 2. To add new 5LNCs **TUBSU** to **L/UL151**, to add existing 5LNC **LINDY** to **L151** and existing 5LNC **PEPUL** to **UL151**. **Objective:** To further improve the AIP airspace data publication.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.066	**Impl. Status:**	**State(s) & Org.**	**Comments:**

20.	**Project Name: Unnamed Significant Points** **Description:** 1. To remove unnamed significant points and **DITOB** from ATS routes **M/UM604**. 2. To add new 5LNC **OTBAP** to ATS routes **M/UM604**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.067	**Impl. Status:**	**State(s) & Org.**	**Comments:**
21.	**Project Name: Unnamed Significant Points** **Description:** 1. To remove unnamed significant point from ATS routes **N/UN14**. 2. To add new 5LNC **UGNUS** to ATS route **N/UN14** and rename BEKSA (see proposal 84.046) as OKTAD. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.068	**Impl. Status:**	**State(s) & Org.**	**Comments:**
22.	**Project Name: Unnamed Significant Points** **Description:** To remove unnamed significant point from ATS route **N866**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.076	**Impl. Status:**	**State(s) & Org.**	**Comments:**
23.	**Project Name: Unnamed Significant Points** **Description:** 1. To remove unnamed significant points from ATS route **P25**. 2. To add new 5LNCs **RURIS** and **MIPVO** to ATS routes **P/UP25**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.072	**Impl. Status:**	**State(s) & Org.**	**Comments:**
24.	**Project Name: Unnamed Significant Points** **Description:** 1. To remove unnamed significant points from ATS route **P44**. 2. To add new 5LNC **PIXAM** to ATS routes **P/UP44**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.052	**Impl. Status:**	**State(s) & Org.**	**Comments:**

25.	**Project Name: Unnamed Significant Points** **Description:** To remove from ENR 3.1 unnamed significant points on ATS route **Y76**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.073	**Impl. Status:**	**State(s) & Org.**	**Comments:**
26.	**Project Name: Unnamed Significant Points** **Description:** To remove from ENR 3.1 unnamed significant points from ATS route **Y312**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.077	**Impl. Status:**	**State(s) & Org.**	**Comments:**
27.	**Description:** 1. To remove unnamed significant points from ATS route **N864**. 2. To add new 5LNCs **NAVOV, GOGIG** and **UMOLO** to ATS routes **N/UN864** and add **TINAN** to **UN864** and **TOPRO** to **N864**. **Objective:** To further improve the AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.074	**Impl. Status:**	**State(s) & Org.**	**Comments:**
28.	**Project Name: Unnamed Significant Points** **Description:** To replace by 5LNCs **SIVBU** and **GIPLO** in ENR 3.1 / 3.2 the **2 (two)** unnamed significant points on ATS routes **Y/UY70**. **Objective:** To further improve AIP airspace data promulgation.	Implemented 17 SEP 2015 **Project Category:** AIP ATS Routes	GBR **Originator(s):** EUROCONTROL	
	Proposal ID: 85.107	**Impl. Status:**	**State(s) & Org.**	**Comments:**
29.	**Description:** To allow point **XOMBA** for HUFRA operations. **Objective:** To further improve the HUFRA options.	Implemented 17 SEP 2015 **Project Group:** RFG SE **Project Category:** Free Route Airspace	HUN **Originator(s):** HUN IATA	• Currently XOMBA is only Exit (X) point for HUFRA and available for ARR LZIB. • As from 2 APR 2015 southbound ATS route UP974 TABIN - XOMBA within Bratislava FIR was implemented but cannot be used due to unavailability of XOMBA as Entry (E) HUFRA point.
	Proposal ID: 81.064b	**Impl. Status:**	**State(s) & Org.**	**Comments:**

30.	**Description:** To allow “Direct” H24 flight planning options **VAPOS DCT MOLIL**. **Objective:** To further improve the flight planning options within Warszawa FIR while providing additional shorter route options.	Implemented 17 SEP 2015 **Project Category:** DCTs	POL **Originator(s):** IATA	**Related proposals:** • 81.064a • 81.066 • 81.067 • 81.068c
	Proposal ID: 69.084b	**Impl. Status:**	**State(s) & Org.**	**Comments:**
31.	**Project Name: Implementation of PBN SID/STAR and APCH procedures in Beograd FIR** **Description:** To implement **GNSS RNP1 SID/STAR** and **RNP APCH** for Airport Konstantin Veliki (**LYNI**). **Objective:** To further improve the airspace structure within Beograd FIR.	Implemented 17 SEP 2015 **Project Group:** RFG SE **Project Category:** PBN TMA	SRB **Originator(s):** SRB	

ANNEX B: ACRONYMS AND TERMINOLOGY

1. The following ISO-3 coding of States is used in the column *States and Organisation*:

ALB	Albania		IRN	Iran, Islamic Republic of
ARM	Armenia		IRQ	Iraq
AUT	Austria		ITA	Italy
AZE	Azerbaijan		LBY	Libyan Arab Jamahiriya
BEL	Belgium		LTU	Lithuania
BGR	Bulgaria		LUX	Luxembourg
BIH	Bosnia and Herzegovina		LVA	Latvia
BLR	Belarus		MAR	Morocco
CHE	Switzerland		MDA	Moldova, Republic of
CYP	Cyprus		MKD	The former Yugoslav Republic of Macedonia
CZE	Czech Republic		MLT	Malta
DEU	Germany		MNE	Montenegro
DNK	Denmark		NLD	Netherlands
DZA	Algeria		NOR	Norway
EGY	Egypt		POL	Poland
ESP	Spain		PRT	Portugal
EST	Estonia		ROU	Romania
FIN	Finland		RUS	Russian Federation
FRA	France		SRB	Serbia
GBR	United Kingdom		SVK	Slovakia
GEO	Georgia		SVN	Slovenia
GRC	Greece		SWE	Sweden
HRV	Croatia		SYR	Syrian Arab Republic
HUN	Hungary		TUN	Tunisia
ISL	Iceland		TUR	Turkey
IRL	Ireland		UKR	Ukraine

MUAC	Maastricht UAC			

2. *BLUMED FAB, DANUBE FAB and FAB CE proposals referenced in proposal number box are coded with a unique identification number abbreviated as BM or DN or CE, respectively, following by four digits (XXXX) (example BM0001 or DN0001 or CE0001).*

3. *The content of each proposal is an indication of State's intention to implement the relevant airspace improvement but don't represent a copy of any official publication. For the correctness and verification of the relevant aeronautical information consult official State AIP publication. The data from this document should not be used for operational purposes.*

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