

EUROCONTROL Products & Services Catalogue

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INTRODUCTION

EUROCONTROL is a pan-European and civil-military organisation dedicated to supporting European aviation. Its expertise spans research, concept development, Europe-wide project implementation, operations and performance. EUROCONTROL is committed to the European Union's vision for a Single European Sky and supports its 41 Member States, 2 Comprehensive Agreement States and a wide range of stakeholders in a joint effort to make aviation in Europe safer, more efficient, more cost-effective and sustainable. EUROCONTROL provides **customised support to its Member States and stakeholders** in accordance with the Support to States Policy approved by its Permanent Commission and other relevant arrangements.

It offers multiple products (tools, models, webinars, training and services) to support the work of aviation stakeholders in Europe, and also globally.

This document provides an overview of all the products & services offered by EUROCONTROL.

EUROCONTROL States¹ can have free access to a wide range of these tools and services and are also entitled to obtain assistance under the conditions established in the Support to States Policy. In other cases, the products and services may be chargeable. Furthermore, not all stakeholders may have access to all the available tools and services.

In this catalogue reference is made to "beneficiaries" and "availability". These terms are defined as:

- **Beneficiaries:** suggested entities that could benefit from the services & products listed in this catalogue, or are already using them.
- **Availability:** geographical regions in which the service or product can be made available. Certain services or products are, however, not available in all regions.

¹ The 41 Member States plus Morocco and Israel as Comprehensive Agreement States and Iceland who is currently engaged in a transitional arrangement to become a full Member State.

CONTACT POINTS AT EUROCONTROL

For any questions relating to the products and services listed in this catalogue coming from EUROCONTROL Member States, the contact point is: **Support to States Programme (STS)**: sts@eurocontrol.int

All other stakeholders should contact **Business Coordination Service (BCS)**: sales@eurocontrol.int

Whenever the products and services listed in this catalogue are chargeable, EUROCONTROL can also provide you with a price offer in case you are eligible to use that specific product or service. Certain products and services may have restricted end-user access due to Agency rules, EU Regulations or civil-military considerations.



1// AIRPORTS

Learn more about our activities here:

www.eurocontrol.int/airport-integration



1 Strategic Airport and Adjacent

Airspace Performance

Service/tool description



Strategic Airport and Adjacent Airspace Performance – Assessment and Solutions.

States, European and government bodies, airports and ANSPs are increasingly scrutinising aviation performance issues. Understanding performance issues, possible mitigations and best practice is essential for airports who wish to improve their performance.

EUROCONTROL provides support to stakeholders by undertaking an in-depth and neutral airport performance assessment, covering airline, airspace and airport operational procedures including TMA sectorisation and route structure, A-CDM, runway and airside performance, environment, weather and non-nominal event management, and comparison with other airports and network performance data.

The output focuses on identifying performance challenges and proposing related mitigations for improving runway and airport throughput, use of existing infrastructure and future plans, communications between stakeholders and other measures and best practices existing in Europe.

For more information: www.eurocontrol.int/airport-integration

Beneficiaries



ANSPs, airports, private entities, others

Availability



Tool is available worldwide

Product code



1P1001

2 Advanced Network Integrated Airport

Service/tool description



Advanced Network Integrated (ANI) Airport – Implementation of AOP-NOP Integration.

Sharing the content of an airport’s operation plan with EUROCONTROL as Network Manager is a key step in having a complete picture of the expected traffic situation.

At EUROCONTROL, our goal is to establish a common, bi-directional data exchange between airports and the network through our system-wide information management (SWIM) concept. Thus, EUROCONTROL and SESAR partners have developed the Collaborative NOP concept to further connect airports to the network.

Our efforts are in support of the Commission Implementing Regulation (EU) 2021/116, section 4.1.4. Such legislation requires EUROCONTROL, in its capacity as Network Manager, to establish a collaborative NOP with exchange of information from the operation plans of the main airports (AOP) in the NM area into the Network Operations Plan (NOP).

With the Collaborative NOP and AOP-NOP integration, airports share operational arrival and departure planning information earlier (beyond the current A-CDM process) with EUROCONTROL. This helps to optimise predictability thus helping airports with limited runway capacity and enhancing network performance.

For more information: www.eurocontrol.int/concept/connected-airports

Beneficiaries



ANSPs, airports, private entities, others

Availability



Tool is available worldwide

Product code



1P1002

3 Airport Collaborative Decision Making

Service/tool description



Airport Collaborative Decision Making (A-CDM) – Implementation and Performance Assessment Solutions.

A-CDM aims to improve the efficiency and resilience of airport operations by optimising the use of resources and improving the predictability of air traffic by encouraging the airport partners (airport operators, aircraft operators, ground handlers and ATC) and the EUROCONTROL Network Manager to work transparently and collaboratively, exchanging relevant accurate and timely information. It focuses especially on aircraft turn-around and pre-departure processes.

At EUROCONTROL, we support the implementation of A-CDM to help the exchange of more accurate departure information, particularly target take-off times, with the European ATFCM network, leading to improve en-route and sectoral planning.

For more information:

www.eurocontrol.int/concept/airport-collaborative-decision-making

Beneficiaries



ANSPs, airports

Availability



Tool is available to the EUROCONTROL Member States only

Product code



1P1003



4 Advanced ATC TWR

Service/tool description	 <p>For smaller airports where there is no justification for a full A-CDM implementation, the possibility to integrate with the ATFCM Network is offered by the Advanced ATC Tower concept, sharing a very small sub-set of A-CDM information with the network. This option is also available to those airports who want to take a step towards full A-CDM.</p> <p>For more information: www.eurocontrol.int/concept/airport-collaborative-decision-making</p>
Beneficiaries	 <p>ANSPs, airports</p>
Availability	 <p>Tool is available to the EUROCONTROL Member States only</p>
Product code	 <p>1P1004</p>



5 European Connection of Regional Airports (ECRA)

Service/tool description



The service incorporates two major processes.

Firstly, it replaces DPI based on less precise information gathered manually (or using unverified sources) at airports with automatically generated information based on ADS-B data. When the information is exchanged with the Network Manager, it improves traffic demand predictability. This change supports local coordination and improves turnaround monitoring.

Secondly, it provides an Airport Centric Overview with up-to-date information on IFR traffic including the impact that other airports may have on those flights to the airport stakeholder. This improved situational awareness provided by the Network can help airports to optimise the use of airport infrastructure and support fulfilling passenger expectations towards punctual travel.

Beneficiaries



ANSPs, airports

Availability



Tool is available to the EUROCONTROL Member States only

Product code



1P1005



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6 Airport Capacity and Performance (ACAP) Assessments

Service/tool description



At EUROCONTROL, we offer two services/functions, through our ACAP Platform to face the continuous challenge of improving airport capacity and performance:

Monitoring of performance indicators through the Continuous Capacity & Performance Monitoring web application (CCPM) - providing a set of configurable & default performance indicators visualised through a modern business intelligence interface. The end-user is able to analyse, share and report on key indicators for airport capacity and performance.

Detailed airport capacity studies using the PIATA NEO tool (migrated to the Airport Capacity Assessment web application (ACAT), in the new Platform) - providing a detailed analysis and insight on airport capacity issues and their relation between airport infrastructure, environment and terminal airspace. Each study provides a set of recommendations to improve capacity and performance.

For more information:

www.eurocontrol.int/service/airport-capacity-and-performance

Beneficiaries



ANSPs, airports

Availability



Tool is available to the EUROCONTROL Member States only

Product code



1P1006

7 Surface Management Deployment Support

Service/tool description



Airport surface operations (gate-runway-gate) are increasingly complex. EUROCONTROL offers support to airports and ANSPs to understand the latest developments of advanced surface movement guidance and control systems (A-SMGCS), surface and runway safety nets and new capabilities, such as follow the greens. We also provide A-SMGCS Specifications, guidance material, a prototyping platform and operational expertise.

Support includes transferring knowledge on the latest capabilities through to common projects to define updated procedures and future Controller working position design, and use of our Tower simulation capability.

For more information:

www.eurocontrol.int/service/advanced-surface-movement-guidance-and-control-system

Beneficiaries



ANSPs, airports

Availability



Tool is available worldwide

Product code



1P1007



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8 Runway Throughput Package – Deployment Support

Service/tool description



The EUROCONTROL Runway Throughput Package proposes a set of operational solutions, based either on procedural, light or advanced automation, to integrate controller support tools, and addressing factors such as wake vortex separation, headwind, separation delivery performance or runway occupancy time spacing. The package includes variants of:

- **RECAT:** the optimised wake vortex separation minima covering ICAO through to pairwise minima;
- **ROCAT:** Runway Occupancy Categorisation that incorporates optimised spacing with best practice in runway management and reduced radar separation with focus on airports with a significant medium type aircraft category;
- **TBS,** Time Based Separation, with a controller support tool that can be configured to include RECAT, ROCAT and to deliver efficient separation in distance or time, with optimised indicators for final approach spacing
- **OSD,** Optimised Spacing on Departure, with a controller support tool for take-off clearance delivery, that can be configured to include RECAT and deliver more efficient separation/spacing in distance or time

EUROCONTROL's runway package will soon include an additional component focused on noise reduction through use of increased glideslope and second threshold concepts. This reduces noise and also avoids wake, providing significant performance enhancements.

The deployment support covers knowledge transfer, EUROCONTROL operational and technical specifications and guidance material, generic safety cases, analytics and deployment advice based on experience with different stakeholders.

For more information:

<https://www.eurocontrol.int/project/airside-airport-and-runway-throughput>

Beneficiaries



ANSPs, airports

Availability



Tool is available worldwide

Product code



1P1008

9 Generalisation of Good Practice and Harmonisation

Service/tool description



The first subject addressed by this new airport service was to identify harmonised operational best practices that facilitate the handling of adverse weather in a collaborative manner whilst minimising the disruption to airport and network operations.

Aerodrome adverse weather remains the main reason for air traffic flow management delays at European airports. While we cannot control the weather, the aviation community can improve the operational response to adverse weather effects on aerodrome operational capacity.

The SMART Weather Task Force delivered two volumes of Guidance material – the first volume is dedicated to best operational practices for local stakeholders' collaboration for managing adverse weather at European aerodromes; the second volume is dedicated to the advanced technology products, implemented at some aerodrome locations, that support the procedures for bad weather: SWIM, Airport Operations Plan and Demand-Capacity Balancing tools, advanced MET products for now-casting and high precision MET forecasting, and Artificial Intelligence.

[SMART Weather Task Force \(SMART WX TF\) | EUROCONTROL](https://www.eurocontrol.int/user-group/smart-weather-task-force)
(<https://www.eurocontrol.int/user-group/smart-weather-task-force>).

[EUROCONTROL | OneSky Teams - Logon Page](#) (protected website of the SMART Wx TF. Requires access request).

The SMART Weather Task Force provides implementation support with regards to ATFCM procedures for managing of weather of short duration with impact on long sector flights (Estimated Elapsed Time > 3,5 hours), described in the NM ATFCM Operations Manual chapter. 5.9.12.

For more information:

<https://www.eurocontrol.int/publication/atfcml-operations-manual>

Beneficiaries



ANSPs, airports

Availability



Tool is available worldwide

Product code



1P1009

10 Airport Function

Service/tool description



The Airport Function is embedded within the Network Manager Operations Centre at EUROCONTROL's headquarters in Brussels. It provides input, advice and airport coordination to the decision-making process of the NMOC in relation to flow management and demand/capacity balancing.

The importance of Airports, the nodes of the network where every flight departs and lands, is increasingly appreciated and there is now greater understanding of how airport operations will directly affect the efficiency of en-route flying and capacity management. The role of the Airport Function is to liaise directly with Airport Operators both on a strategic basis and tactically on the day (usually via an APOC) to ensure the NMOC is aware of any operational challenges and difficulties.

Activities include the monitoring of airport slots balanced on capacity, the monitoring of traffic demand through Air Traffic Flow Management Systems and regulation measures and recommending tactical intervention to reduce flight delay and whilst maximise available airport resources.

Additionally, there is a requirement to provide Day -1 capacity management analysis to the NMOC Pre-tactical Team and a post-operations debrief to the NMOC management team.

This is supported by a dedicated dashboard providing a single interface showing DCB issues and general KPIs indicative of airport operations performance that are relevant for the NMOC (arrival/departure on-time performance, local impact of regulations, A-CDM derived KPIs, etc.). It supports the operational exchange between an APOC and NMOC in the pre-tactical and tactical phases by highlighting the main issues in a consolidated view. Therefore it enhances the common situational awareness and enable better decision-making for the network partners, who can then jointly implement optimal actions/measures that support airport operations, while improving the network performance.

A weekly airport briefing is also organised by the Airport Function to provide Network vision on up-coming weather events, perturbations, passenger demand, and traffic evolution to the Airports.

For more information: www.eurocontrol.int/airport-integration

Beneficiaries



ANSPs, airports

Availability



Tool is available worldwide

Product code



1P1010

11 Airport Corner (Airport Network Digital Data Centre)

Service/tool description



To support the effective management of the European ATM network, the Network Manager (NM) regularly captures airports information through its planning and operational processes. To enable airports to provide information in an efficient and harmonised manner, NM provides the Airport Corner service, an airport focused data repository supported by a secure web application enabling information provision from European airports to NM at any time.

The underlying process facilitates collaboration between the local ANSP and Airport Operators resulting in a “coordinated airport view”. The information scope covers a wide range of information from strategic, pre-tactical, tactical operations to post-operations and enables real time sharing between airports, NM and airlines, providing customizable subscription services and making the information available via a number of dedicated interfaces. The information scope can be easily expanded to attend to new business needs.

By regularly providing information via the Airport Corner, airports can comply with the obligations stated by the NM Implementing Rule 677/2011 (refer to Annex V – Appendix 2) as well as the EU Regulation 255/2010 (“Laying down common rules on Air Traffic Flow Management”).

In 2021 the Airport Corner has evolved towards an “Airport Network Digital Data Centre”, a new name to better label the new scope of offered services, from “airports information provision to NM” towards “information services to airports and airlines” as well. This new approach aims to increase the benefits to airports in return to their efforts in regularly providing information to NM.

For more information:

<https://www.eurocontrol.int/project/airside-airport-and-runway-throughput>

Beneficiaries



ANSPs, airports

Availability



Tool is available worldwide

Product code



1P1011

12 The Performance Indicator and Analysis Tool for Airports (PIATA Neo)

Service/tool description



The Performance Indicator and Analysis Tool for Airports (PIATA) is a key tool developed by EUROCONTROL to analyse runway system throughput and airside performance.

The PIATA Neo is a powerful analysis tool to study airport performance while allowing users to customise it according to their needs. Stakeholders are given a set of recommendations to improve their airport's airside performance. PIATA: main performance indicators and facilitates maximum throughput for airport airside operations; easy customisability – any airport, any indicators can be used; use of real data collected at the airport under study; two main functions – analysis and modelling.

The PIATA Neo having the following functionalities:

graphical Interface displaying RWY operations – users will be able to display operations for data collection and as a simulation. The display will also serve as an interface for modelling;

TMA consideration – dedicated TMA data collection together with a new module for TMA analysis will facilitate the study of controllers' tasks, sequence efficiency, usage of arrival and departure procedures.

For more information: www.eurocontrol.int/tool/performance-indicator-and-analysis-tool-airports

Beneficiaries



ANSPs, airports

Availability



Tool is available to the EUROCONTROL Member States only

Product code



1P1012

13 EUROCONTROL Wake Knowledge Factory (EWKF)

Service/tool description



The EUROCONTROL Wake Knowledge Factory (EWKF) is a wake platform, which automatically compares the recorded local wake behaviours with the wake databases used in the generic safety cases and then confirm the suitability of the associated separations.

Concepts like RECAT and Time Based Separations allow wake separations to be reduced and this leads to increased runway throughput.

These separation reductions have been validated by safety cases which were developed by EUROCONTROL and then reviewed and endorsed by EASA. They were based on extensive wake measurement campaigns carried out at various European airports. Even if these concepts can and have been deployed without additional local wake measurements, the national ANSP or local regulation authority might require additional evidence that EUROCONTROL's generic safety case can be applied to their specific local conditions. This can be done by deploying a LIDAR system to measure wake vortices generated by arriving and departing aircraft. However, the post-processing of the LIDAR data and merging this data with traffic data can be an extremely complicated and time-consuming process. EUROCONTROL has developed a platform that automates this process. It uses quantitative monitoring throughout the data collection campaign and incorporates stringent quality controls. These features make for a clean database which can then be used for advanced analyses.

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P1013

14 Passenger Demand Prediction

Service/tool description



The service for Passenger Demand Prediction aims to support airports to manage the high volatility of traffic and subsequent passenger demand and can support your airport operations planning, by predicting passenger demand, anticipating issues and enabling enhanced staff planning.

This support service has been developed using machine learning principles through monitoring of commercial flights i.e. seats offered in the market. Complementary features such as day of the week, time of the day, airline ID, or airport ID are also used to further support the passenger demand prediction accuracy.

The service provides users with different information views that are linked to predicted number of passengers, flights, and even cancellations. Primary objective is to provide users with the opportunity to anticipate trends in passenger volumes, which further supports operational planning and on-time performance on the day of operations linked to smooth passenger handling process. This service is available through a Power BI dashboard.

Beneficiaries



Airports

Availability



Worldwide

Product code



1P1014



2// SAFETY

Learn more about our activities here:

www.eurocontrol.int/safety



1 Toolkit for ATM Occurrence Investigation and the Risk Analysis Tool

Service/tool description



Toolkit for ATM Occurrence Investigation (TOKAI) and the Risk Analysis Tool (RAT)

The TOKAI and RAT are essential safety tools enabling users to report, investigate and take corrective actions following incidents and accidents, known as occurrences. Via TOKAI, users, in particular ANSPs, can collect, investigate, store and analyse occurrences. The tool allows its users to replace many legacy systems (inc. paper-based systems) and adopt modern electronic tools. It is ideal for use in operational, engineering and support environments. The RAT (Risk Analysis Tool) is one of several tools in the eTOKAI's suite of Tools. It implements a methodology that has since been adopted into the EU legal order and EASA. CANSO Global decided in 2016 that all its member ANSPs should adopt TOKAI/RAT tools. More than 80 users worldwide currently use TOKAI and RAT.

For more information on TOKAI: www.eurocontrol.int/tool/toolkit-air-traffic-management-occurrence-investigation

For more information on RAT: www.eurocontrol.int/tool/risk-analysis-tool

Beneficiaries



Network Manager, ANSPs, CAAs, MET/AIS and ATM data providers, airports and airlines

Availability



Tool is available worldwide

Product code



1P2001

2 Automatic Safety Monitoring Tool (ASMT)

Service/tool description



ASMT is EUROCONTROL's unique tool that monitors safety and safety performance, and supports the identification of systemic issues and operational risks. ASMT is designed to accomplish multiple objectives in the complex field of air safety management to support the enhancement of the safety of the overall ATM system. The information obtained can help ANSPs gain a broader and more objective perspective of current safety issues, such as airspace/route structures, hotspots and weak signals. ASMT has operational detection capabilities through both internal modules (SMI, and Quasi SMI, Altitude Deviation, Airspace Infringement, Time to Conflict, MAGA – Missed Approach Go Around, EMS – Extended Minima Separation) and external modules based on safety nets (STCA, MSAW, APW, ACAS-RA). ASMT's user-friendly features provide a complete picture of all safety-related events occurring in a local airspace. It automatically records and stores relevant data in order to build a customised dashboard, replay events and allows the export of data for further statistical analysis. ASMT provides immediate benefits, as it provides ANSPs with necessary information they can base safety decisions through the gathering and storing of safety data.

For more information: [www.skybrary.aero/index.php/Automatic_Safety_Monitoring_Tool_\(ASMT\)](http://www.skybrary.aero/index.php/Automatic_Safety_Monitoring_Tool_(ASMT))

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P2002

3 Operational Safety

Service/tool description



At EUROCONTROL, as Network Manager, we contribute to safety management and operational safety across the network by identifying network safety issues (using SAFMAP - Safety Functions Maps analysis methodology), setting related action plans to reduce risks, monitoring progress in their implementation and providing implementation support. Our ultimate goal is to achieve a harmonised approach to managing new safety risks.

Through this activity, we help our stakeholders mitigate existing hazards and anticipating new operational risks at the network level. Our ultimate goal is to keep the network safe while increasing its capacity and efficiency.

For more information:

www.eurocontrol.int/project/operational-safety-priorities

Beneficiaries



ANSPs, CAAs

Availability



Tool is available worldwide

Product code



1P2003



4 Civil Aviation Resource Management Application (CARMA)

Service/tool description



The Civil Aviation Resource Management Application (CARMA) / Aviation Regulation Database (ARM) is a web-based application providing a common approach for the planning, monitoring and reporting on human resources issues for aviation oversight i.e. for ATM/ANS and Aerodromes (ADR) oversight domains. CARMA can be used to:

- manage staff planning and monitoring, competency management including developing and monitoring training plans;
- produce an HR Assessment which Commission Implementing Regulation (EU) 2017/373 requires to be done at least every two years. ICAO Annex 19 recommends that a State should use a methodology to determine its staffing requirements for personnel performing safety oversight functions.
- manage a pool of experts, if a group of states share resources;
- manage compliance with appropriate regulations and standards;
- access ARM – Aviation Regulation Database.

The Regulation Database called ARM aims to provide a stand-alone and up-to-date database on relevant common regulation (EU, ICAO, National etc) currently for the ATM/ANS and ADR oversight domains. ARM enables:

1. A user with “Read Only” access to view, search any “published” regulation in the database.
2. A link to CARMA for the Compliance Management Component.

Learn more about CARMA here: www.eurocontrol.int/tool/carma

Beneficiaries



CAAs, ANSPs, others

Availability



Tool is available worldwide

Product code



1P2004

5 Safety Culture Questionnaire (SCQ)

Service/tool description



The Safety Culture questionnaire is a set of statements that respondents are asked to agree or disagree with by marking their choice on a five-point scale. The statements are divided into four sections; a general section for everyone, one section for controllers, another for technical staff (engineers, technicians and maintenance support) and a third set for managers. Two open-ended questions are included to collect further comments on the questionnaire itself and other relevant issues that personnel feel have not been covered by the questionnaire. The questionnaire is designed to elicit responses on a variety of topics that indicate how the ANSP approaches and manages safety in practice.

For more information: www.eurocontrol.int/safety

Beneficiaries



ANSPs

Availability



The Safety Culture questionnaire is available worldwide

Product code



1P2005



6 Safety Assessment Methodology (E-SAM)

Service/tool description



SAM is a framework, a toolbox, containing methods and techniques to develop safety assessments of changes to functional systems.

SAM allows users to perform:

- FHA (identify hazards, assess their effects and the related severity);
- PSSA (fault tree analysis, event tree analysis, common cause analysis, etc.);
- SSA (documentation of the evidence, collecting data, test and validation, etc.).

SAM is organised in three levels:

- level 1 explains the “what”;
- level 2 provides details on “how” to perform a safety assessment;
- level 3 provides real life examples from air navigation service providers and the industry.

SAM has an electronic version - e-SAM - that allows users to navigate through the various documents of the regulatory framework. It works on all MS-Windows platforms.

Although there have been many changes in the regulatory framework (successively EU 2096/2005 and CIR.1035/2011), SAM is still relevant for risk assessment and mitigation purposes.

For more information:

www.eurocontrol.int/tool/safety-assessment-methodology

Beneficiaries



ANSPs, CAAs, industry manufacturers

Availability



Tool is available worldwide

Product code



1P2006

7 The Call-Sign Similarity Tool (CSST)

Service/tool description



The use of similar call signs by aircrafts operating in the same area on the same radio frequency is referred to as 'call sign similarity'.

The danger of a pilot taking and acting on a clearance intended for another aircraft due to this phenomenon is a common occurrence and can lead to flight safety incidents.

The purpose of the call sign similarity tool is to help aircraft operators (AOs) to de-conflict similar call signs embedded in their schedules.

This helps to reduce the incidence of call sign confusion events and improves the safety of the Network.

More details on the CSST, the Service levels, the Similarity rules can be found at : www.eurocontrol.int/service/call-sign-similarity-service

Beneficiaries



ANSPs, airports, airspace users, military stakeholders.

Availability



Service is available to the ECAC region but could be extended worldwide

Product code



1P2007



3// DIGITALISATION AND INFORMATION MANAGEMENT

Learn more about our activities here:

www.eurocontrol.int/digitalisation-and-information-management



1 B2B Web-services

Service/tool description



The business-to-business (B2B) data services enable the automatic exchange of digital information supporting network-wide collaborative processes, as they integrate them seamlessly with local processes.

The interface provided by Network Management Directorate (NMD) gives system-to-system access to NM's services and data, allowing customers to provide, retrieve and use the NM information in their own systems, depending on their business needs.

NM's B2B automatic data exchange brings several benefits, including enhanced data quality, better accuracy, more timely information, simplified processes, reduced costs and improved safety.

Moreover, the Common Pilot Projects Regulation decrees that these flight information exchanges have to be compliant with System Wide Information Management (SWIM) and the so-called Yellow Profile in the near future. The B2B Data services are an enabler for SWIM compliance.

For more information: Network Manager business-to-business web services (NM B2B)

<https://www.eurocontrol.int/service/network-manager-business-business-b2b-web-services>

Beneficiaries



ANSPs, airports, Computerised flight plan service providers (CFSPs) and other operational stakeholders in the sense of the Network Functions Implementing Rule

Availability



Service is available worldwide

Product code



1P3001

2 Aeronautical Data Quality (ADQ)

Service/tool description



At EUROCONTROL, we support our stakeholders in the implementation of several European Commission regulations with the aim of ensuring the availability of optimum quality aeronautical data and aeronautical information in Europe. We take specific account of changes applied to global (ICAO) and regional (EASA and EC) regulations, standards and recommended practices. We actively share our technical knowhow on the broader change process in aeronautical data exchange with a wide range of users through stakeholder meetings, workshops, training courses or events dedicated to wider audience.

For more information:

www.eurocontrol.int/service/aeronautical-data-and-information-quality

Beneficiaries



ANSPs, CAAs, others

Availability



Service is available worldwide

Product code



1P3002



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4// AERONAUTICAL INFORMATION & CYBER SECURITY

Learn more about our activities here:

<https://www.eurocontrol.int/digitalisation-and-information-management>



1 European AIS Database (EAD)

Service/tool description



The European aeronautical information services database (EAD) is a centralised reference database of quality-assured aeronautical information that enables users to retrieve and download AIS data in real time.

It provides instant access to the most up-to-date digital aeronautical information from the ECAC and ECAC+ areas, from Notices to Airmen (NOTAMs), pre-flight information bulletins (PIBs), briefing facility services and the AIP library.

The EAD is the world's largest aeronautical information management (AIM) system.

EAD offers:

- a reliable and cost-effective integrated AIS solution that meets user needs;
- access to real-time data of guaranteed integrity and quality;
- consistency with ICAO and EUROCONTROL standards and recommendations;
- a secure channel for a timely electronic distribution of aeronautical information;
- support to clients during their transition to the EAD;
- service availability 24h per day, 7 days per week.

For more information:

www.eurocontrol.int/service/european-ais-database

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P4001

2 System Wide Information Management (SWIM)

Service/tool description



SWIM enables seamless information access and interchange between all providers and users of ATM information and services. It takes information management business practices from the ICT sector, such as Service-Oriented Architecture (SOA) and the use of open standards and web technologies, and applies them to ATM.

The EUROCONTROL SWIM Specifications form the foundation for European and global SWIM implementations. Together with supporting guidance material and training, EUROCONTROL offers a suite of services to assist (candidate) providers and consumers of ATM Information Services in their implementation of SWIM-based information exchanges.

For more information:

www.eurocontrol.int/concept/system-wide-information-management

Beneficiaries



ANSPs

Availability



Services are available worldwide

Product code



1P4002

3 Aeronautical Information Management (AIM)

Service/tool description



All users, including airspace users and ANSPs need to have access to high quality and timely aeronautical information delivered in a harmonised way. EUROCONTROL offers a number of services to ensure the availability and access to aeronautical information, and supporting aeronautical information service providers in making their aeronautical information available.

In support of aeronautical information collection, processing and distribution, EUROCONTROL offers specifications and practical guidance on:

- AIXM 5.1;
- ICAO Digital Data Sets Encoding using AIXM 5.1;
- Aerodrome mapping data;
- Electronic terrain and obstacle data provision;
- Aeronautical Digital Data Management Processes and Procedures;
- Implementation of respective regulations in States, notably Commission Implementing Regulation (EU) 2017/373 (Part-AIS).

Training, workshops or generic technical advice are offered by EUROCONTROL on technical and regulatory aspects of aeronautical information service provision incl. The transition from traditional AIS to (digital) aeronautical information management (AIM) considering the evolution towards providing aeronautical information in a System Wide Information Management (SWIM) context.

For more information:

www.eurocontrol.int/concept/aeronautical-information-management

Beneficiaries



ANSPs, airspace users, others

Availability



Service is available worldwide

Product code



1P4003

4 EATM-CERT

Service/tool description



There is an increasing need to protect ATM systems and services from cyber threats.

EUROCONTROL is increasingly starting to cooperate in the area of cybersecurity worldwide, sharing the European experience.

EUROCONTROL offers a set of cyber-security services to the aviation stakeholders of EUROCONTROL Member States (so-called constituents) provided by the EATM-CERT.

It spans from exchange of cyber-information, cyber threat intelligence, alerts and detection of fraudulent websites provided to all its constituents to specific services provided only to those constituents subscribing to on a voluntary basis (e.g. credential leak detection, vulnerability scanning, IOC scanning, penetration test).

EUROCONTROL also runs workshops at national or regional levels addressing: framework evolution (technical and regulatory aspects) and training; implementation of solutions to improve protection such as Security Operations Centre (SOC), European Air Traffic Computer Emergency Response Team (EATM-CERT) and European Aviation Common Public Key Infrastructure (PKI).

EUROCONTROL/EATM-CERT currently cooperates with entities based in non-EUROCONTROL Member States to share cyber-information for the benefit of the European aviation community (including EUROCONTROL itself).

Services are available for Member-States only. Users fill forms to access to some services (e.g. credential leak detection, vulnerability scanning, MISP). Sometimes a cooperation agreement is signed to formalise the cooperation (e.g. penetration test, sharing of sensitive information). Currently EATM-CERT services are not subject to payment by their users/constituents.

For more information: www.eurocontrol.int/cybersecurity

Beneficiaries



ANSPs, airspace users, airport operators, CAAs

Availability



Services are available to the EUROCONTROL Member-States only

Product code



1P4004



5// COMMUNICATIONS, NAVIGATION AND SURVEILLANCE

Learn more about our activities here:

www.eurocontrol.int/communications-navigation-and-surveillance



1 Surveillance Avionics

Service/tool description



The interoperability between airborne surveillance sub-systems and ground surveillance subsystems is a key element to achieving surveillance performance with modern independent or dependent cooperative surveillance systems. Using its experience in international surveillance Standards and a set of tools, EUROCONTROL can provide the following support:

- Verification of surveillance avionics operation against international standards and regulations;
- Verification of ground surveillance systems against international standards;
- Investigation of problems of surveillance in ground surveillance systems and in airborne surveillance systems, for example to find the causes of non-detection of aircraft and propose resolutions or mitigation plans.

Aircraft operators might consider these services to verify the correct installation of their airborne surveillance installation. Aircraft operators and manufacturers might consider these services when investigating surveillance issues. ANSPs might consider these services to resolve specific surveillance issues encountered by their surveillance systems or for the ongoing system monitoring.

For more information:

www.eurocontrol.int/function/surveillance-avionics-monitoring

Beneficiaries



ANSPs, aircraft operators, manufacturers, others

Availability



Service is available worldwide

Product code



1P5001

2 ATM Surveillance Tracker and Server (ARTAS)

Service/tool description



The optimum use of all available surveillance information in an inter-operable manner is a key element for safe and efficient ATM operations.

ARTAS is the well-known EUROCONTROL surveillance data processing system that, over many years of continuous improvement, became the most deployed Tracker in Europe for both civil and military ANSP's. With millions of hours of accumulated service, it remains one of the most advanced and mature surveillance data processing systems worldwide, applying best-of-class multi-sensor tracking technology to deliver the highest level of performance using PSR, SSR, Mode-S (Elementary & Enhanced), ADS-B and Multilateration surveillance sources. Not only a high performant tracker, ARTAS provides server interface to deliver customised track messages and the capability that adjacent systems can exchange their tracks to ensure smooth continuity from one site to the other.

Today, ARTAS tracks close to 90% of European daily flights at 43 air traffic control centres. In total, around 100 ARTAS units are currently deployed or are being deployed.

ARTAS is also being deployed operationally in various Non-EUROCONTROL Member States Organisations (NEMSO), such as Iceland, SA, UAE, Qatar, Indonesia, Papua New Guinea and USA.

For more information: www.eurocontrol.int/product/artas

Beneficiaries



ATM operators

Availability



Tool is available worldwide

Product code



1P5002

3 Surveillance Analysis Support System for ATC Centres (SASS-C)

Service/tool description



The Surveillance Analysis Support System for ATC Centres (SASS-C) is software developed, maintained and supported by EUROCONTROL. It is distributed to civil and military ANSPs, R&D organisations and the ATM industry.

SASS-C comprises 2 main functions:

The **VERIF**ication function to verify the compliance of the surveillance infrastructure with EUROCONTROL's current surveillance standards and specifications;

The **PREDI**ction function to estimate the performance of a surveillance infrastructure, the probability of receipt of messages, the environments interference and the position measurement accuracy.

Access to the SACMAS service is granted once a proper User license has been signed between EUROCONTROL and the end-user(s).

Interface between the SACMAS service team and the User community is done throughout the iSACMAS portal for managing events, communicating and transferring files.

For more information:

www.eurocontrol.int/online-tool/surveillance-analysis-support-system-atc-centres

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P5003

4 Surveillance Data Distribution System (SDDS)

Service/tool description



The EUROCONTROL Surveillance Data Distribution System (SDDS) is a versatile, high-performance communications gateway that provides value-added services for the safe and secure distribution of surveillance information. SDDS enables ANSPs to exchange surveillance data in an efficient manner, contributing to the reliable and efficient operation of the pan-European ATM network.

With the objective to protect ATC system from deficient data from upstream systems that may harm it, SDDS:

- checks surveillance data for syntactic and semantic errors (deep packet filtering);
- provides firewall services;
- filters out data that may cause processing problems.

SDDS provides:

- Safety-related features including a high availability hardware platform, alternative data path selection, syntax and range checking, static and dynamic filtering
- Security-related features including a top-level architecture that separates payload and management information, as well as separation between the inter-centre and intra-centre communications
- Interoperability based on gateway functions that allow the simultaneous use of a wide variety of communication protocols.
- An ADS-B server able to process reports from multiple sensors.

For more information: www.eurocontrol.int/system/sdds

Beneficiaries



SDDS is currently used in four European countries by the following partners: SKEYES, Belgian Air Force, LVNL, Royal Nederland Air Force, ANA-LUX, EUROCONTROL MUAC and DFS

Availability



Service is available for the pan-European ATM network

Product code



1P5004

5 System Map Generator and Extractor Tool (SMGET)

Service/tool description



SMGET is used to configure the surveillance and lockout coverage (the surveillance range and lockout range, the Interrogator Code, the network address, the SAC/SIC, etc. for a stand-alone Mode S interrogators or a set of Mode S interrogators operating in a cluster) that will be used to program Mode S radar. The coverages are exported in the European Mode S (EMS) Map ICD format which can be loaded in the radar.

For more information:

www.eurocontrol.int/tool/system-map-generator-and-extractor-tool

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P5005



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6 Distance Measuring Equipment Tracer (DEMETER)

Service/tool description



DEMETER is a software tool that supports the implementation of performance-based navigation (PBN), as well as the optimisation and rationalisation of navigation infrastructure.

The tool facilitates collaboration between airspace planners, procedure designers, nav aids engineers and flight inspectors. It helps them establish distance measuring equipment DME/DME positioning as a continuous ground-based back-up solution to the Global Navigation Satellite System (GNSS) for PBN.

For more information:

www.eurocontrol.int/online-tool/distance-measuring-equipment-tracer

Beneficiaries



DEMETER is currently used by air navigation service provider (ANSP) organisations in most ECAC (European Civil Aviation Conference) member states.

It is used globally by:

- organisations providing flight inspection or procedure design services;
- research institutes;
- universities.

Availability



Tool is available worldwide

Product code



1P5006

7 EUROCONTROL Voice over Internet Protocol in ATM Test Tool (VOTER)

Service/tool description



EUROCONTROL Voice over Internet Protocol (VoIP) in ATM test tool (VOTER) is a software which provides the means to test the VoIP in ATM implementations based on Voice Communication Switches (VCS), Ground Radio Stations (GRS) and Recorders (REC) products developed according to the EUROCAE document ED-137 "Interoperability Standards for VoIP ATM".

VOTER is an essential element to facilitate timely interoperability with multi-vendor VCS, GRS and REC equipment based VoIP implementations for Air Navigation Service Providers (ANSPs). VOTER is used worldwide.

For more information:

www.eurocontrol.int/initiative/air-traffic-management-voice
or send a mail to voipatm@eurocontrol.int

Beneficiaries



VOTER is used by industry and organisations developing VoIP systems that must be compliant with EUROCAE document ED-137.

Availability



Tool is available worldwide

Product code



1P5007

8 Aircraft Communication, Navigation and Surveillance Dashboard

Service/tool description



The aircraft CNS dashboard provides useful information for monitoring fleet capabilities declared in ICAO Flight Plans (e.g. flight plan fields that are related to PBN, communication capabilities, such as 8.33/25kHz, SATCOM, and datalink).

The dashboard provides reports and statistics on flights and aircraft with certain capabilities for time periods, airports, airlines and aircraft types.

The data is also enhanced with the data collected from other sources, such as that collected from infrastructure monitoring.

For more information:

www.eurocontrol.int/dashboard/communication-navigation-and-surveillance-dashboard

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P5008

9 Advanced Frequency Manager (MANIF)

Service/tool description



MANIF is an analysis tool for aeronautical frequencies. It imports Spectrum And Frequency Information Resource (SAFIRE) data and analyses frequency assignments to determine whether they comply with applicable requirements and best practices. It also supports the search for suitable frequencies to meet a request.

Access to MANIF is managed by the National Frequency Managers nominated by individual States.

For more information:

www.eurocontrol.int/function/radio-frequency-function-and-spectrum-management

For more information on MANIF:

www.eurocontrol.int/tool/advanced-frequency-manager

Beneficiaries



ANSPs, CAAs, regulators

Availability



Service is available for the ICAO EU Region

Product code



1P5009



10 Central Register of European Radio Frequency Assignments

Service/tool description



Central Register of European Radio Frequency Assignments and the European Frequency Request Coordination System.

The Spectrum and Frequency Information Resource (SAFIRE) is a web-based system used by National Frequency Managers for the international coordination and the registration of frequency assignments in the ICAO EUR Region. Access to SAFIRE is managed by the National Frequency Managers, nominated by States and is currently limited to the Network Manager, ICAO and the users authorised by the National Frequency Managers of the ICAO EUR Region.

For more information:

www.eurocontrol.int/function/radio-frequency-function-and-spectrum-management

For more information on SAFIRE:

www.eurocontrol.int/online-tool/central-register-european-radio-frequency-assignments-and-european-frequency-request

Beneficiaries



ANSPs, CAAs, regulators

Availability



Service is available for the ICAO EU Region

Product code



1P5010

11 Air Traffic Services Messaging Management Centre

Service/tool description



Air Traffic Services Messaging Management Centre and European Directory Services (AMC/EDS).

EUROCONTROL's Air Traffic Services (ATS) messaging management centre (AMC) provides offline network management services to support European air navigation service providers' (ANSPs) ground ATS messaging network. The offline management has been enhanced with the European Directory Service (EDS) that provides an equivalent service with more automation (automatic exchange of routing table via directory services).

The AMC/EDS also serves as the European focal point for ATS Messaging Management, and coordinates with communication and management centres in other ICAO Regions.

Learn more:

www.eurocontrol.int/tool/air-traffic-services-messaging-management-centre

Beneficiaries



ANSPs

Availability



Service is available for the ICAO EU Region

Product code



1P5011

12 European Performance-Based Navigation Portal (e-PBN)

Service/tool description



At EUROCONTROL, we have developed the e-PBN portal to provide access to a wide range of information on all aspects of performance-based navigation (PBN). In addition, we provide helpful navigation tools to the different actors involved in PBN implementation.

The portal is a great place for stakeholders implementing PBN to find technical and operational information, guidance material, PBN handbooks, navigation tools and solutions fit for their specific needs and operational environment.

For more information:

www.eurocontrol.int/portal/european-performance-based-navigation-portal

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P5012

13 Final Approach Segment Data Block (FAS DB)

Service/tool description



The FAS DB is an online tool specially designed for satellite-based augmentation systems (SBAS)–based procedures and, in particular, for final approach segment data block calculations. It is primarily used to generate a cyclic redundancy check (CRC) value for FAS DB based on user-input data. The tool checks the format and range of the data entered before making the CRC calculation. The results (CRC and non-CRC-wrapped data) can be copied, printed or exported in a binary format for subsequent use or put into PDF format to support RNP APCH publication in the aeronautical information publication (AIP).

EUROCONTROL provides this tool to all interested parties free of charge. Access to the tool does not require authentication.

Learn more:

www.eurocontrol.int/online-tool/final-approach-segment-data-block

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P5013



14 AUGUR

Service/tool description



AUGUR is a web-based tool that checks the availability of GPS integrity (RAIM – receiver autonomous integrity monitoring) for a variety of operations, including in the terminal area and on final approaches.

Part of a pilot's duty is to check whether navigation aids will be available on their intended route and at their destination airport to ensure that navigating during the flight and on landing will be possible. This becomes more complicated if the navigation aid is orbiting in space. AUGUR tracks known satellite outages and scheduled maintenance activities and informs operators if they will have an impact on the availability of RAIM. AUGUR supports the GPS RAIM NOTAM services provided by national NOTAM offices via the EAD service desk.

For more information: www.eurocontrol.int/online-tool/augur

Beneficiaries



ANSPs, airline operators and pilots

Availability



Tool is available worldwide

Product code



1P5014

15 PEGASUS

Service/tool description



A toolset designed to help ANSPs and users evaluate the performance of satellite navigation signals in space as well as their augmentation.

PEGASUS analyses GNSS data collected from different SBAS and GBAS systems, implementing the algorithms issued in MOPS documents. This set of tools is designed to help ANSPs and users evaluate the performance of satellite navigation signals in space as well as their augmentation.

Learn more: www.eurocontrol.int/tool/pegasus

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P5015



16 Turn Calculator

Service/tool description



The turn calculator helps ATM specialists, including airspace planners, visualise and comprehend the impact of aircraft turn performance primarily in the en-route phase of flight.

The user can input the aircraft, route and weather data and then to predict the turn performance. The tool computes the geometry of both the 'Fixed Radius Transition' (FRT) and 'Fly By' for the given turn angle and displays the expected earliest 'Fly By' turn as well as the FRT.

The tool also gives information on aircraft performance through the turn, including the evolution of the bank angle, calculated groundspeed and load factor.

For more information: www.eurocontrol.int/tool/turn-calculator

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P5016

An aerial photograph of an airport tarmac. In the upper right, a white commercial airplane is parked at a gate with its boarding bridge extended. In the lower right, another white commercial airplane is parked. The tarmac is marked with dashed white lines and orange dashed lines. Two black signs with orange text '7L' and '6L' are visible on the tarmac. A yellow semi-transparent box is overlaid on the left side of the image, containing the title and a link. A white mouse cursor icon is pointing at the link.

6// PLANNING AND PERFORMANCE MONITORING

Learn more about our activities here:

<https://www.eurocontrol.int/air-navigation-services-performance-review>

1 Air Traffic Management Cost-Effectiveness Dashboard

Service/tool description



Quick and easy access to our benchmarking data.

Our dashboard allows you to access the latest available data and analysis provided in the ACE benchmarking reports prepared by the EUROCONTROL Performance Review Unit. Through its interactive functionalities, it also allows you to design and customise original analyses and presentations based on ACE data covering the 2002-2016 period. The portal is public and openly accessible to all users.

For more information: www.eurocontrol.int/ACE/ACE-Home.html

Beneficiaries



ANSPs, CAAs, airspace users and others

Availability



Service is available worldwide

Product code



1P6001

2 Pan-European Air Navigation Service Performance Data Portal

Service/tool description



We have developed an online air navigation services (ANS) performance data portal covering all 41 EUROCONTROL Member States.

The portal:

- ensures that interested stakeholders have relevant high quality information on pan-European ANS performance readily available in a transparent, accurate, clear, complete and unbiased manner;
- stimulates an informed dialogue between all stakeholders for the benefit of the entire aviation network; and
- further develops the ANS performance analysis framework and the understanding of key ANS performance issues.

For more information: <https://ansperformance.eu/>

Beneficiaries



ANSPs, CAAs

Availability



Service is available worldwide

Product code



1P6002



3 Service Unit Dashboard

Service/tool description



We have developed an interactive dashboard as an innovative and intuitive tool to explore the evolution of en-route service units in all European States part of EUROCONTROL's route charges system.

The dashboard presents different views of the monthly evolution of en-route service units. It is updated every month, a few days following the billing of airspace users, in accordance with the EUROCONTROL billing calendar.

For more information:

www.eurocontrol.int/dashboard/service-units-dashboard

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P6003

4 Single European Sky Online Monitoring Dashboard

Service/tool description



We have developed, on behalf of the European Commission, a web page providing all relevant information within the Single European Sky performance scheme, including monthly operational data and meta data explaining the performance indicators.

The portal ensures that 28 European Union Member States, Norway and Switzerland have up-to-date information on their performance with regard to the targets of the Single European Sky performance scheme.

For more information: www.eurocontrol.int/dashboard/single-european-sky-online-monitoring-dashboard

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P6004

5 ATM Master Plan

Service/tool description



Aviation stakeholders need to work together to modernise and transform air traffic management (ATM) in the face of ever-increasing complexity. We help exchange information, define a European ATM architecture, reach a common understanding of ATM challenges and identify solutions. We support our Member States in planning, monitoring and reporting on the practical implementation of their ATM improvement plans so that ATM modernisation in Europe continues in the right direction: <https://www.eurocontrol.int/master-plan-architecture-and-monitoring>

The eATM Portal provides an integrated view of the European ATM system, outlining the essential operational and technology changes foreseen to deliver the SESAR contributions to the Single European Sky performance objectives.

EUROCONTROL provides guidance on the use of the ATM Master Plan Portal. EUROCONTROL, together with the SESAR Joint Undertaking, may participate to workshops with non-European States and ANSPs to share the European experience, such as in terms of planning and implementation monitoring. Such workshops may be tailored to the main priority areas of a given State or region.

For more information: www.atmmasterplan.eu/

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P6005

7// AVIATION SUSTAINABILITY

Learn more about our activities here:

<https://www.eurocontrol.int/aviation-sustainability>



1 Emission Trading Scheme Support Facility (EU ETS) and CORSIA

Service/tool description



To help aircraft operators comply with EU ETS and CORSIA rules, EUROCONTROL provides support to stakeholders to implement the EU ETS scheme for aviation in a fair, equitable and efficient manner. In addition, we support the implementation of CORSIA both within Europe and internationally.

Learn more here <https://www.eurocontrol.int/service/emissions-trading-system-support>

We have developed and established a central Emission Trading Scheme Support Facility (ETS SF). EUROCONTROL's ETS Support Facility gives relevant information and data on ETS to help aircraft operators and competent authorities meet their regulatory obligations for the EU ETS. In the context of CORSIA, we are also interested in implementing a data exchange with non-ECAC States, offering access to data pertinent to flight/flight legs in the ECAC area.

For more information: www.eurocontrol.int/tool/european-union-emissions-trading-system-support-facility

Beneficiaries



Beneficiaries include different parties such as the competent authorities in the European Economic Area (EEA) Member States, the European Commission (the regulator) and aircraft operators (the regulated entities) which can, via this service, discharge their obligations under the EU ETS.

Availability



Tool is available worldwide

Product code



1P7001

2 Integrated Aircraft Noise and Emissions Modelling Platform (IMPACT)

Service/tool description



IMPACT is a web-based modelling platform that enables trade-off analyses between fuel burn and emissions, on the one hand, and noise, on the other, for a given traffic.

We provide access to IMPACT, and support in the conduct of fuel/emissions and noise assessments analysis.

For more information: www.eurocontrol.int/platform/integrated-aircraft-noise-and-emissions-modelling-platform

Beneficiaries



ANSPs, CAAs, airspace users, industry, universities, others

Availability



Tool is available worldwide

Product code



1P7002

3 Airport Local Air Quality Studies (ALAQS)

Service/tool description



ALAQS is an application designed to help airports estimate emissions from aircraft operations and various airport sources, as well as those from airport infrastructure such as roads. Our application is compatible with AUSTAL2000.

We provide access to and training for Open-ALAQS to help you conduct local air quality studies.

For more information:

www.eurocontrol.int/online-tool/airport-local-air-quality-studies

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P7003



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4 Advanced Emission Model (AEM)

Service/tool description



Our AEM application estimates aircraft fuel burn and emissions. AEM can process flight profile data on a flight-by-flight basis for air traffic scenarios of almost any scope, from local studies around airports to global aircraft emissions.

We provide access to AEM and can support you in conducting AEM assessment of aircraft emissions.

For more information:

www.eurocontrol.int/model/advanced-emission-model

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P7004



5 Climate Change and Adaptation

Service/tool description



At EUROCONTROL, we are taking action with, and in support of, our partners to adapt the sector to this changing environment, and to build resilience in a timely and effective manner.

Among other initiatives, we have gathered information on the range of potential climate impacts for the aviation sector to better understand the potential risks to planning, infrastructure and operations. See our 'Challenges of Growth' report for more details on potential adaptation and resilience measures.

EUROCONTROL can offer information sessions via webinars, facilitated workshops and documentation.

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P7005

6 Sustainable Aviation Fuels (SAF)

Service/tool description



A step further to carbon-neutrality for aviation is the usage of Sustainable Alternative Fuels (SAF). SAF are:

- a clean substitute for fossil jet fuels.
- produced from sustainable resources such as waste oils from a biological origin, agricultural residues, or non-fossil CO₂.
- generate lower carbon emissions than conventional kerosene - by 80% when measuring their full life cycle from production to combustion.
- are compatible with current aircraft, used blended with kerosene without any need to change neither in the engines nor in the fuel supply chain at the airport.

At EUROCONTROL, we develop expertise and support for SAF uptake. We contribute to decision-making and advisory working groups regarding SAF usage.

EUROCONTROL facilitates the uptake of SAF also through contributing knowledge and expertise to stakeholder workshops. The implementation and uptake of SAF can be facilitated through the CEM Working Arrangements at airports.

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P7006



7 Collaborative Environmental Management (CEM)

Service/tool description



EUROCONTROL's CEM Working Arrangement, described in our CEM Specification, is a process that brings together the core operational stakeholders at airports (airport and aircraft operators and the ANSP) to identify the environmental impact of combined operations and to enable a coordinated response that minimises these impacts whilst maximising the airport's current and future sustainable performance. Our CEM Working Arrangements help you identify interdependencies and synergies, quantify impacts, and reach compromises on trade-offs from both an operational and environmental perspective.

Learn all about CEM, download the specifications and see our webinars on CEM implementation, facilitated workshops, training and guidance material.

For more information: www.eurocontrol.int/initiative/collaborative-environmental-management

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P7007

8 Continuous Descent Operations (CDO) / Continuous Climb Operations (CCO)

Service/tool description



At EUROCONTROL, we support the deployment of Continuous Climb and Descent Operations (CCOs and CDOs) - aircraft operating techniques enabled by airspace design, instrument procedure design and facilitated by air traffic control (ATC). CCO and CDO allow aircraft to follow a flexible, optimum flight path that delivers major environmental and economic benefits - reduced fuel burn, gaseous emissions, noise and fuel costs - without any adverse effect on safety.

For more information on the CCO/CDO Tool Kit for implementing and delivering the performance benefits of CCO and CDO in Europe, as well as our Action Plan and much more, visit our dedicated page:

www.eurocontrol.int/concept/continuous-climb-and-descent-operations

www.eurocontrol.int/airport-integration

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P7008

8// STATE AND NSA CAPABILITIES

Learn more about our activities here:

<https://www.eurocontrol.int/customised-support-stakeholders>



1 Understanding the Impact of New Rules

Service/tool description



Advice on the development of specific amendments to primary and secondary legislation, in order to allow States to meet their commitments under agreements to which they are a signatory (e.g. SES, ECAA Agreement, Horizontal Aviation Agreement, etc.).

We can assist in producing a gap analysis of national legal frameworks against the relevant international and European requirements, and help identify actions required to address areas of non-compliance.

Although this is not similar to the oversight activities conducted by ICAO or EASA, this can provide the State with a self-assessment to evaluate its situation and assist in the preparation for formal auditing.

Beneficiaries



ANSPs, CAAs

Availability



Service is available worldwide

Product code



1P8001

2 Enabling Development of a State Safety Programme (SSP)

Service/tool description



Support to State Aviation Authorities in the development and implementation of their State Safety Programme (SSP) to ensure the State's compliance with the Standards and Recommended Practices (SARPs) of ICAO Annex 19, as well as meeting the relevant objectives of the ICAO Global Aviation Safety Plan (GASP) and the associated European Plan for Aviation Safety (EPAS).

Beneficiaries



ANSPs, CAAs

Availability



Service is available worldwide

Product code



1P8002



3 Support the Implementation of the Airspace Regulation

Service/tool description



Support the Implementation of the Airspace Regulation and its Implementing Rules.

Assistance in the implementation of relevant Single European Sky (SES) legislation. This includes supporting the definition of the processes and organisational structure required in accordance with the applicable European rules.

Beneficiaries



ANSPs, CAAs

Availability



Service is available for the EU region

Product code



1P8003



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4 SERA

**Service/tool
description**

Support the Implementation of Standardised European Rules of the Air (SERA). This includes supporting the definition of the processes and the organisational structure required in accordance with Commission Implementing Regulation (EU) No. 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation (SERA).

Beneficiaries

ANSPs, CAAs

Availability

Service is available for the EU Region

Product code

1P8004

5 Development of an Airspace Policy

Service/tool description



This activity consists of facilitating the familiarisation of States' civil and military authorities with the applicable ATM regulations and specifications on ASM and FUA, and cooperating in the development of Airspace Policy documents for all ASM levels (Commission Regulation (EC) No. 2150/2005 requires States to have an Airspace Policy for all three FUA levels).

To support NSAs at national and regional levels to develop and maintain their key tasks and responsibilities, we offer support on a wide range of topics.

Beneficiaries



ANSPs, CAAs

Availability



Service is available for the EU region

Product code







1P8005



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6 Development of NSA Procedures

Service/tool description	 Assist NSAs in the development of their procedures and processes, from the planning phase, through the conduct of audit activities, to the monitoring and follow-up of corrective actions.
Beneficiaries	 ANSPs, CAAs
Availability	 Service is available worldwide
Product code	 1P8006

7 ATM Safety Data Quality - Coding Link with ECCAIRS2

Service/tool description



Support stakeholders in the implementation of Regulation (EU) No. 376/2014 provisions, especially in the area of safety data coding and quality.

This work focusses on improving the quality of the ATM safety data transferred by the Member States to the European Central Repository within the ECCAIRS 2.0 environment, taking into account the results of the safety data coding harmonisation undertaken at European level.

Beneficiaries



ANSPs, CAAs

Availability



Service is available for the EU Region





Product code



1P8007



8 Regional Initiative Working Arrangements

Service/tool description	 At the request of Regional Initiatives' governing bodies, managerial and technical assistance can be provided to established bodies (e.g. Council, NSA Co-ordination Committee) and working groups. This assistance includes the development of common procedures and assisting NSAs in drafting a common NSA Handbook. The establishment of an effective pool of experts can also be facilitated by providing guidance on how to develop and establish a suitable process, including access to administrative software tools/databases.
Beneficiaries	 ANSPs, CAAs
Availability	 Service is available worldwide
Product code	 1P8009

9 Secondment Programme

Service/tool description



The main purpose of the secondment is to facilitate the exchange of technical information through cooperation (including the transfer of knowledge and coaching when needed), as well as to create synergies with the support projects for the common interest of EUROCONTROL and its Member States.

It is important to notice that although the development of certain deliverables is done in cooperation with EUROCONTROL experts, the tasks of the secondment are managed by State or Regional Initiative staff in order to give them ownership of the deliverables and processes.

Beneficiaries



ANSPs, CAAs

Availability



Tool is available to the EUROCONTROL Member States only

Product code



1P8010



9// ATS OPERATIONS



1 Support to TMA

Service/tool description



Terminal Manoeuvring Areas (TMAs) are often sources of significant inefficiencies (fuel, noise), in particular during peak periods.

EUROCONTROL applies the outcome of the latest research in data analysis and route design to support the improvement of TMA operations.

EUROCONTROL provides the following support:

- Characterisation of current operations (identification of best practices, potential inefficiencies and improvement areas).
- Support the design of new systematised operations (determination of requirements, design of new route structure and definition of new operating method).
- Assess the impact of future operations (assessment of expected benefits and potential limitations using simulations).
- Monitor operations during transitions and measure evolution of performance.

Beneficiaries



ANSPs, CAAs

Availability



Service is available worldwide

Product code



1P9001



2 ATC Conflict Detection System Tuning

Service/tool description



Support to conflict detection and resolution (TP/MTCD) is sometimes ineffective due to inadequate adaptation to the uncertainty on trajectory prediction.

EUROCONTROL may provide the following support:

Tuning of the Trajectory Prediction (aircraft performance), achieved through measurement of trajectory prediction errors and identification of anomalies and their causes;

Detection of TP logic errors;

Tuning of the MTCD parameters (separation parameters and prediction horizon);

Verification of correct MTCD performance.

ANSPs might consider these services in support of system acceptance, system operational trials, safety assurance, development of the safety case, development of operational working methods and procedures and on-going system monitoring.

Recommendations can be provided in developing the procedures and approach for the maintenance of the MTCD parameters

Beneficiaries



ANSPs, CAAs

Availability



Service is available worldwide

Product code



1P9002

3 Air/Ground Trajectory-Based Operations

Service/tool description



The proportion of CPDLC-equipped flights continues to grow and new aircraft are being delivered with an ATN-B2 capability that provides downlink of the aircraft trajectory and allows auto-load of certain clearances. Validation exercises have shown that tactical controller workload can be reduced with the use of pre-tactical clearances enabled by Air/Ground Datalink (AGDL) and Conflict Detection and Resolution (CD&R) tools.

EUROCONTROL can demonstrate the latest research in the use of CD&R tools coupled with AGDL for the following uses:

Coordination and uplink of route clearances to avoid segregated airspace;

Use of CD&R tools to detect and resolve conflicts by means of a route clearance and the coordination and uplink of the clearance to the aircraft;

Use of CD&R tools to detect conflicts involving an aircraft passing through the level[s] of other aircraft and the resolution of these conflicts through the use of complex clearances;

Reducing controller workload through automated system proposals of conflict-free clearances (e.g. when ready descend) using CPDLC.

Beneficiaries



ANSPs, CAAs

Availability



Service is available worldwide

Product code



1P9003



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10// DRONES / UAM

For more information:

<https://www.eurocontrol.int/unmanned-aircraft-systems>



Drones / UAM

Drone, or unmanned aircraft system (UAS), operations are becoming more frequent. Unmanned Air Mobility (UAM), air taxis, etc., are on the horizon. The vast range of possible drone applications is creating a new and expanding market where technological progress is happening very quickly. These new airspace users need to be integrated into the European airspace, not just for military purposes, but also for civil, commercial and leisure use. This integration is essential in realising the potential of this growing industry.

As the challenges of this integration can be seen from many viewpoints and creating a common understanding is essential, our goal is to maintain, with all concerned stakeholders, the “big picture” necessary for this, and to ensure that busy European skies are safe and accessible to all, with manned and unmanned aircraft operating together safely and efficiently.

EUROCONTROL shares expertise, best practices and lessons learnt in various working groups, research projects, and events worldwide. This includes such areas as drone detection systems and associated contingency procedures, operational concept and concept of operations (ConOps), common altitude reference, and conducting drone airspace assessments.

For more information: <https://www.eurocontrol.int/unmanned-aircraft-systems>



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1 Airspace Assessment

Service/tool description



Airspace Assessment – the first step in safely integrating drones into European airspace.

Drones can pose a serious safety threat if they fly over or near crowds or urban landscapes, or close to roads or airports. They can also be a great danger to physical or economic security should they fly near sensitive areas. The safe integration of these drones into an airspace volume therefore requires this airspace to be assessed to determine the different air and ground risks involved.

EUROCONTROL and EASA have established a methodology for performing UAS airspace assessments. It involves taking a critical look at a certain airspace volume to identify the types of manned and unmanned operation currently conducted in that airspace. This involves interviews with interested parties: aviation and non-aviation entities; drone pilots; operators and manufacturers; air traffic control services; etc., as well as civil society. Static and dynamic data are obtained and analysed for their affect other airspace users, and people and infrastructure on the ground.

This work results in a reference scenario that defines areas and levels of air and ground risk, as mentioned in the Specific Operational Risk Assessment (SORA), that future developments can be measured against.

There are several courses of action possible after an airspace assessment, including a redesign of the airspace, of CNS requirements, or of geo-fencing requirements, that can mitigate the air and ground risks.

EUROCONTROL's experts are available to accompany States wishing to conduct a UAS airspace assessment.

For more information: www.eurocontrol.int/unmanned-aircraft-systems

Beneficiaries



ANSPs, CAAs

Availability



Service is available worldwide

Product code



1P1101

11// SIMULATIONS AND SIMULATORS

Learn more about our activities here:

<https://www.eurocontrol.int/simulations>



1 Validation of ATM Concepts through Simulations

Service/tool description



EUROCONTROL can validate ATM concepts, such as Free Routes, to improve network horizontal flight efficiency, or Time-Based Separation to reduce network delays through an increase in capacity. EUROCONTROL can help analyse the benefits of a new operational concept, assess its safety impact and help building a powerful business case. With extensive support, resources and expertise from a non-profit specialist like EUROCONTROL, you can validate any concept using realistic simulations to obtain hard data. EUROCONTROL experienced multidisciplinary team will provide a comprehensive case-based report to demonstrate the feasibility of your project and offer recommendations for optimisation.

For more information: www.eurocontrol.int/service/validation-air-traffic-management-concepts-through-simulations

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1201

2 Provision of Realistic ATC, Airport and Flow Management Systems

Service/tool description



Provision of Realistic ATC, Airport and Flow Management Systems for Simulations, Training and Research.

EUROCONTROL can help carry out an airport or airspace simulation at an R&D centre or train air traffic controllers in techniques like Time-Based Separation. Whatever kind of simulation you need to carry out, EUROCONTROL can provide you with solutions adapted to your training, validation and research needs. Drawing on over 50 years of experience in designing, developing and operating advanced ATC and Tower simulators, we have built two world-class platforms: ESCAPE for real-time en-route and approach ATC simulations; Digital Tower (based on eDEP), a digital tower simulator with our advanced Integrated Tower Working Position (iTWP).

Together, we can build an ATC/Tower simulator or training system based on your requirements and further customised with plug-ins for a full-scale simulation environment.

For network management R&D we use the Network Management Validation Platform (NMVP), a replica of the operational system, INNOVE for concepts at V2 maturity level and R-NEST a research-oriented version of the NEST tool for capacity planning and studies.

For more information: www.eurocontrol.int/service/realistic-air-traffic-control-airport-and-flow-management-systems-simulations-and-training

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1202

3 Assistance for External Airspace Simulations

Service/tool description



Take your airspace simulations to the next level with expert support. Whatever simulator you are working with or for whatever purposes (training, operational or research), you may well need assistance at some point during the design, development and implementation stages.

With more than 50 years of experience developing ATM simulations and a talented multi-disciplinary team, EUROCONTROL can provide you with invaluable support to keep your project on track.

Either at our premises near Paris or on-site, we can help you from start to finish, or at any stage along the way in line with the E-OCVM:

- Running workshops;
- Drafting your validation strategy with relevant cases;
- Designing your experimental plan;
- Configuring your platform;
- Collecting data;
- Building traffic samples and airspace;
- Analysing the data collected;
- Drafting the final report.

For more information: www.eurocontrol.int/service/assistance-and-consultancy-external-airspace-simulations

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1203

4 ESCAPE: World-Class ATC Real-Time Simulator

Service/tool description



ESCAPE is a scalable EUROCONTROL ATM real-time simulation platform supporting small- and large-scale simulations in the following areas:

- Airspace design for both en-route and TMA;
- Evaluation of new operational concepts and controller tools;
- Pre-operational validation (live trial);
- Controller training;
- Research & development.

To foster common research with academia and research centres EUROCONTROL offers, free of charge, a light version of its real-time ATC simulator: ESCAPE Light. It can also be used for the training of students in schools and universities.

For more information: www.eurocontrol.int/service/realistic-air-traffic-control-airport-and-flow-management-systems-simulations-and-training

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1204

5 Digital Tower Simulator with iTWP (integrated Tower Working Position)

Service/tool description



This real-time tower simulator is ideal for research and rapid prototyping of all possible airport related activities and concepts. It is based on our agile platform, eDEP and has already been used for the validation of several SESAR concepts and to support the implementation at airports in Europe.

Its main capabilities are A-SMGCS Airport Safety Nets for Controllers; A-SMGCS Routing function; A-SMGCS Guidance function: such as Airfield Lighting and Automated "Follow the greens"; RECAT and Time Based Separation and GBAS enabled concepts such as Adaptive Threshold and Glide Slope.

For more information:

www.eurocontrol.int/simulator/digital-tower-simulator

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1205

6 Base of Aircraft Data (BADA)

Service/tool description



BADA is an aircraft performance model designed for use in aircraft trajectory simulation and prediction. It provides theoretical model specifications and related aircraft specific datasets to realistically simulate the behaviour of any aircraft. BADA makes part of vast number of EUROCONTROL modelling and simulation tool, it is used in the NM system and provided to the ATM R&D and operational community worldwide free of charge.

For more information: www.eurocontrol.int/model/bada

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1206



7 Research Network Strategic Tool (R-NEST)

Service/tool description



Our Research Network Strategic Tool (R-NEST) is the research version of NEST, the NM operational tool for airspace design, capacity planning and network performance assessment. As integrated validation tool, R-NEST combines advanced dynamic ATFCM capabilities with powerful airspace design and capacity planning analysis functionalities (including latest SESAR operational solutions). R-NEST offers powerful scenario-based modelling engine to simulate ATM network operations, detect and observe various types of delays, identify and dynamically resolve demand vs capacity imbalances over the network, use concepts such as Short-Term ATFM Measures (STAMs), create dynamic airspace sectorisation using advanced genetic algorithms and measure performance improvements of new ATM concepts on a network level.

For more information: www.eurocontrol.int/solution/rnest

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1207

8 Innovative Network Operations Validation Environment (INNOVE)

Service/tool description



Innovative Network Operations Validation Environment (INNOVE) - Full-fledged Air Traffic Flow Management Real-Time Simulator.

INNOVE (Innovative Network Operations Validation Environment) is the EUROCONTROL real-time gaming platform for Network Management validations. INNOVE supports hybrid validation exercises, where either humans are in the loop or models emulate behaviours and operational processes. INNOVE's main features are rapid prototyping, scenario-based validation, time-based simulator, collaborative decision making, closed loop with ATC simulators, provides B2B services compliant with the NM operating system, connects with external platforms and tools (e.g. Airport, FOC), sharing of prototypes with the NMVP.

For more information: www.eurocontrol.int/simulator/innove

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1208

9 Network Manager Validation Platform (NMVP)

Service/tool description



The EUROCONTROL NMVP is a one-to-one copy of the NM operational system. It enables very detailed and realistic network validation for operational feasibility, performance and technical assessments, interoperable with live or test ATM/Airspace Users platforms (principally shadow mode trials).

For more information: www.eurocontrol.int/simulator/nmvp

Beneficiaries



ANSPs, Civil and military airspace users, Airports, Joint civil/military airspace management cells, Industrial service providers, Network Manager operational centres

Availability



Service is available worldwide

Product code



1P1209

10 Prototyping Service

Service/tool description



In order to support its R&D programme, EUROCONTROL has a small prototyping team, building web-based ATFCM applications connected to the NM system via B2B Services. This wealth of experience, gathered over 8 years, can be made available to stakeholders, to assist their own in-house developments.

This assistance typically takes the form of iteratively developed prototypes that not only consider operational needs, but equally demonstrate how to technically use and integrate the NM B2B services.

Examples of previous prototype developments include:

- **Airline Slot Swapping Decision Support Tool.** A tool that permitted airlines to identify slot swaps opportunities compliant with NM's operational rules and constraints. The tool was used for several years by participating airlines, whilst the equivalent functionality was integrated into the NOP portal.
- **PLANTA:** A prototype of an advanced ANSP Local Tool, demonstrating the most recent B2B services, giving access to NM simulations, Scenarios and Short Term ATFCM Measures. The application was used by numerous partners in SESAR validation exercises, and let to spin-off support to those ANSPs building their own in-house tools. This support allowed ANSPs to re-use parts of PLANTA's HMI look and feel, as well as technical assistance regarding B2B usage.
- **Network Performance Dashboard.** A prototype built in collaboration with the NM Operations Centre, demonstrating a rich network performance dashboard.

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1210

12// AVIATION LEARNING CENTRE

For more information:

<https://learningzone.eurocontrol.int/>



1 Training Courses

Service/tool description



The EUROCONTROL Aviation Learning Centre in Luxembourg (ALC) offers a high number of classroom courses, virtual classroom courses, e-learning courses and webinars. ALC provides aviation training for air traffic management staff, regulators, aircraft operators, flow management personnel and aviation experts and enthusiasts. Our training includes Airspace Management, Human Performance, CNS, Information Management, Safety Management, ATM Security, Airport, Environment, Artificial Intelligence and Drones (UAS).

ALC supports EUROCONTROL pan-European activities and the implementation of the Single European Sky's efforts. ALC also contributes to the SESAR programme by delivering unique high-quality training courses such as in the areas of Network efficiency and CNS, with instructors being fully aware of latest developments through their involvement in various SESAR research or Network Management deployment programmes. Our instructors have direct access to the European Safety Programme staff and SES regulations, and some are involved in EASA standardisation visits/audits and in rule drafting.

For more information: <https://learningzone.eurocontrol.int>

Beneficiaries



ANSPs, competent authorities, military authorities, airspace users, airports, equipment manufacturers, training organisations, aviation enthusiasts

Availability



Course dates are published within our online catalogue at <https://learningzone.eurocontrol.int>

Product code



1P1210

2 First European Air Traffic Controller Selection Test (FEAST)

Service/tool description



FEAST assesses the knowledge, skills and abilities of applicants for air traffic control (ATC) training that are relevant and necessary for the job of an air traffic controller.

The FEAST test battery is available worldwide to civil and military ANSPs and certified ATC aviation training academies and universities.

For more information: <https://feast-info.eurocontrol.int/>

Beneficiaries



Civil and military ANSPs, training organisations and universities

Availability



Service is available worldwide

Product code



1P1302

3 English Language Proficiency for Aeronautical Communication (ELPAC)

Service/tool description



ELPAC is a test to assess ICAO English Language Proficiency for pilots and air traffic controllers.

The ELAPC test is designed to help ANSPs, aircraft operators (AO), national supervisory authorities (NSA) and training organisations (TO) meet the ICAO language proficiency requirements.

ELPAC has been developed by EUROCONTROL, in partnership with the Zurich University of Applied Sciences (ZHAW) and ENOVATE.

Available to all organisations subject to signed ELPAC Licence Agreement.

More details at:

<https://elpac.eurocontrol.int/docs/CR.TPL.ELPAC-Licence.pdf>

For more information: <https://elpac.eurocontrol.int/>

Beneficiaries



Civil and military ANSPs, approved test organisations, competent authorities, training organisations

Availability



Service is available worldwide

Product code



1P1303

A full-page background image of an F-35 fighter jet in flight against a sunset sky with orange and blue clouds. The jet is shown from a side-on, slightly elevated perspective, flying towards the right. A semi-transparent grey box is overlaid on the upper left portion of the image, containing the title and a link.

13// CIVIL-MILITARY COORDINATION

For more information:

<https://www.eurocontrol.int/civil-military>



1 Flexible Use of Airspace Toolkit

Service/tool description



EUROCONTROL offers a toolkit constituted by a set of toolboxes to raise awareness of the benefits and promote the implementation of Advanced flexible use of airspace (FUA). The objective of the FUA Toolkit is to provide a package of presentations, documents and other media to support the training of AMC personnel on FUA matters, including the latest developments on the topic. The aim is to provide harmonised training material for staff involved in Airspace Management. Our toolkit helps to promote, implement and further evolve FUA. The toolkit was initially developed based on the request of the International Civil Aviation Organisation (ICAO).

For more information on the FUA toolkit:

www.eurocontrol.int/tool/flexible-use-airspace-toolkit

For more information on Advanced FUA:

www.eurocontrol.int/concept/advanced-flexible-use-airspace

Beneficiaries



ANSPs

Availability



The toolkit is available to users upon request

Product code



1P1401



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2 Local and Sub-regional Airspace Management Support System (LARA)

Service/tool description



The Local and sub-regional airspace management support system (LARA) is a software package developed by EUROCONTROL and provided free of charge to ECAC States. LARA supports and enhances the airspace management process according to advance flexible use of airspace (AFUA) principles. This enables collaborative decision-making and provides live situational awareness to civil and military partners to:

- automate the national airspace planning and cooperative decision making;
- deliver the airspace status at all times ensuring common situation awareness;
- collect all airspace management data for performance measurement.

For more information: www.eurocontrol.int/software/local-and-sub-regional-airspace-management-support-system

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P1402

2 Civil-Military ATM Coordination Tool (CIMACT)

Service/tool description



The Civil-Military ATM Coordination Tool (CIMACT) produces a correlated Air Traffic Control (ATC) picture by processing a wide variety of surveillance, flight plan and coordination data. The system provides tools, filters and safety nets found in modern Air Traffic Management and Air Defence systems and runs on standard off-the-shelf hardware.

CIMACT is being developed and maintained by EUROCONTROL to improve situational awareness of civil and military control units and facilitating the exchange between civil and military systems, thereby increasing safety and efficiency of air navigation.

CIMACT interfaces seamlessly with LARA (Local and sub-Regional Airspace Management Support System) to safely and efficiently handle airspace activations and deactivations

For more information: www.eurocontrol.int/tool/civil-military-air-traffic-management-coordination-tool

Beneficiaries



ANSPs

Availability



Tool is available worldwide

Product code



1P1403



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4 PRISMIL

Service/tool description



The Pan European Repository of Information Supporting Civil – Military (PRISMIL) performance indicators:

- Collect data provided by the national ASM system, mostly via LARA. A specific LARA-PRISMIL interface extracts the data in order to fit the PRISMIL indicators;
- Pre-built indicators based on the national data collected combined with AUP, UUP and civil traffic to assess the management of the airspaces conform to FUA at three levels, strategic, pre-tactic and tactic.
- PRISMIL supports civil-military to build indicators, national dashboard, reports and analysis in order to share them between civil and military parties which is in general composed by the national CAA, Defence and ANSPs.

For more information: www.eurocontrol.int/dashboard/pan-european-repository-information-supporting-civil-military-performance-monitoring

Beneficiaries



ANSPs

Availability



Service is available worldwide

Product code



1P1404

14// EUROCONTROL ON-REQUEST CONSULTANCY

Learn more about our activities here:

<https://www.eurocontrol.int/about-us>



1 Integrated Consulting Services

Service/tool description



EUROCONTROL offers an integrated consulting services upon request.

Our experienced consultants are available to give the expert advice in several areas, including: Network Planning; Flight Planning; Operational Systems; Fleet Management; Project Management; Procurement; Safety Management Systems; Airspace Management; Human Performance; Communications, Navigations and Surveillance; Information Management, Sustainability, Environment, ATM Security; Airport; Artificial Intelligence and Drones.

All EUROCONTROL's professionals have extensive international experience in working on international projects: SESAR research, Network Management deployment programmes, European Safety Programme, EUROCONTROL pan-European activities and the implementation of the Single European Sky's.

For more information: [/www.eurocontrol.int/about-us](http://www.eurocontrol.int/about-us)

Beneficiaries



ANSPs, CAAs, airports, universities, R&D institutions, competent authorities, other organisations

Availability



Service is available worldwide

Product code



1P1501

ABBREVIATIONS

Abbreviations and acronyms used in this document are available in the EUROCONTROL Air Navigation Inter-site Acronym List (AIRIAL) which may be found here:

<http://www.eurocontrol.int/airial/definitionListInit.do?skipLogon=true&glossaryUId=AIRIAL>



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