



# EAD 2019 Annual Plan

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## Document Control

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## 1 Introduction

In accordance with the EC Regulation 1035/2011, Annex 1 part 2.2.2 & part 9, EAD is tasked with the production of the EAD Annual Plan on its activities. The Annual plan is a summary of the information agreed by the EUROCONTROL Agency and the EAD Service Steering Group.

The EADAP proposed issue will be submitted to SSG for acknowledgement. Comments received from the SSG will be evaluated and, when accepted, incorporated in the EADAP draft issue. The EADAP incorporating any last changes made by the SSG will become the EADAP final version.

The EADAP final version will be published by EAD on its website.

## 2 Scope

This Annual Plan describes the activities carried out in 2019 by EAD as a system, which entails:

- EUROCONTROL/NS/EAIM as the system and service manager;
- The operations carried out by the data operations and training services provider;
- The operations carried out by the IT service centre and application maintenance provider.

These activities are linked to the following business objectives described in the Agency Work Programme:

- Airspace / AIS Information Management Service Provision;
- Airspace / AIS Information Management Development;
- European ATM Information Management Service.

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### 3 EAD Business Objectives

#### 3.1 Airspace/AIS Information Management Service Provision (ADS)

Actions	Deliverables (Milestones/Targets)
<u>Airspace/AIS Data Management</u> <ul style="list-style-type: none"> <li>• Development and maintenance of operational guidance material related to aeronautical data quality and consistency improvements;</li> <li>• Organise the relevant consultation and working arrangements on AIS/AIM operational issues;</li> <li>• Monitoring EU regulations and ICAO SARPS changes related to AIS/AIM relevant topics having operational and/or technical impact on EAD;</li> </ul>	<p>Data harmonisation and consistency operational requirements.</p> <p>AIM related technical specifications for implementation and maintenance in EAD.</p>
<u>Airspace/AIS Information Operations</u> <ul style="list-style-type: none"> <li>• Delivery of EAD operation services encompassing the provision of static data, dynamic data, and aeronautical Publications (outsourced);</li> <li>• Maintenance of world-wide static data and world-wide NOTAM processing (outsourced);</li> <li>• Provision of data quality/consistency reviews to data providers (outsourced);</li> <li>• Ensure data providers' data is complete, and that identification of missing data and data responsibility is performed;</li> </ul>	<p>Delivery of EAD operations service according to service level specifications.</p> <p>Bi-yearly data consistency report.</p> <p>Yearly data completeness report.</p> <p>Monthly performance report.</p>

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<p><u>Airspace/AIS Information System</u></p> <ul style="list-style-type: none"> <li>• Delivery of EAD IT services in order to perform H24 EAD data operations (outsourced);</li> <li>• Development and maintenance of the EAD application software (outsourced);</li> <li>• Management of the evolution of the EAD system by providing change proposals (CP) specifications for each subsystem.</li> <li>• Monitoring of EAD system development including review, assessment and verification activities;</li> </ul>	<p>Delivery of EAD IT service according to service level specifications.</p> <p>Regular EAD system release.</p>
<p><u>Maintenance of EASA Certification for EAD Service</u></p> <ul style="list-style-type: none"> <li>• In line with European Law, mainly (EC) IR 373 (677). 1035 &amp; 73 EAD Service Certification by EASA has been finalized in December 2016. The certification results now requires maintenance to keep up with the standards as required and to stay compliant to the above mentioned regulations.</li> </ul>	<p>EAD Service</p>
<p><u>Client Migration</u></p> <ul style="list-style-type: none"> <li>• Migration of data providers (civil and military) and data users, worldwide, including negotiation of client agreements and technical/operational support/assistance. Participating in regional hub initiatives in cooperation with ICAO.</li> </ul>	<p>Signature of an EAD Agreement defining the rights and obligations of the parties.</p> <p>Establishment of a Migration Plan.</p> <p>The management and coordination of the transition through regular project follow up meetings with all partners involved.</p>

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### 3.2 Airspace / AIS Information Management Development (ADD)

<b>Actions</b>	<b>Deliverables (Milestones/Targets)</b>
<u>EAD Data Completeness and Extensions</u>  <ul style="list-style-type: none"> <li>The upgrade of the Static Data Completeness tool (SDC) in order to allow data providers to monitor the completion of their static dataset also in to AIXM5.1 (SDD) is planned for 2019. The maintenance of the SDC however, will proceed until final EAD System Shutdown (2024) as required by EASA DQR.</li> </ul>	SDC tool for data providers and associated reporting facility
<u>Digital NOTAM in EAD</u>  <ul style="list-style-type: none"> <li>The preparation of the transition for the deployment of the Digital NOTAM concept based on AIXM 5.1 has to be covered in a step by step approach until the deployment of eEAD in 2023.</li> </ul>	Interface for data providers to create digital NOTAM for airspace
<u>AIM System Service improvement and Development</u>  <ul style="list-style-type: none"> <li>Analysis and deployment of additional functionalities in order to meet EU regulations and ICAO standards, Amendment 40 and 39B to Annex 15, will be part of EAD R12/13</li> </ul>	Extension of EAD functionalities compliant with EU regulations and ICAO standards, Amendment 40 and 39B.
<u>Data Alignment with NM-Systems</u>  <ul style="list-style-type: none"> <li>Data Alignment in particular between CACD and EAD.</li> </ul>	Data Alignment with NM-Systems



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### 3.3 European ATM Information Management Service (EAIMS)

<b>Actions</b>	<b>Deliverables (Milestones/Targets)</b>
<u>Development of eEAD</u> <ul style="list-style-type: none"> <li>• Manage the eEAD project aiming at the replacement of the EAD by an enhanced EAD system and services that meet the requirements approved by stakeholders and described in CONOPS 6.0.</li> <li>• During this reporting period EUROCONTROL will issue a Call For Tender for the replacement of the various technical components of the EAD and select the appropriate new industry partners.</li> </ul>	Issue of the eEAD Call For Tender Selection of the appropriate new industry partners.
<u>ADQ compliance and Conversion of AIXM 4.5 to 5.1</u>	The objective is to ensure that the EAD system is recognised as ADQ compliant. In order to reach this objective EAD will: <ul style="list-style-type: none"> <li>- Develop and implement a procedure for the transition from SDO to SDD for B2B and B2C clients</li> <li>- Develop additional facilities to further support data provision via SDD in AIXM 5.1 format, and to aid the EAD Data Operations Provider (DOP) in supporting AIXM 5.1 during daily operations.</li> <li>- As a business requirement, backward mapping to AIXM 4.5 may be provided during the transition phase.</li> </ul>
<u>Integrated Briefing</u>	Evaluation and definition of the specification and contract initiation.  Implementation of Amendment 39-B to ICAO Annex 15 - SNOWTAM format change, with milestone – evaluation and definition of requirements and specification
<u>Compliance with the EUROCONTROL eAIP specification</u>	Implement the requirements for eAIP in accordance with the updated eAIP specification.
<u>Service development</u>	EUROCONTROL will operate, maintain and develop EAD in order to provide a system and services in line with the service performance level agreed with its stakeholders and in line with the related legal requirements.

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## 4 Cost-base for 2019

The table below shows the total cost base of EAD for the period covered by the Annual Plan:

(Amounts in k€)

	<b>2019</b>
<b>FTE</b>	<b>11,25</b>
Staff Remuneration	2552
Staff related expenditure	195
External Effort	4020
Operating	12869
Depreciation Inv ABP 2019-2023	5
Cost of capital Inv ABP 2019-2023	<b>0</b>
Depreciation Investments 2018	4
Depreciation Past Investments before 2018	167
Cost of capital Past Investments	16
Staff Receipts (Acc.Ins + Special Levy)	-32
Sales of services UPP	-308
Sales of services UPP Indirect Costs	-92
Indirect Costs	2485
<b>Cost-Base</b>	<b>21.881</b>

Note: The cost-base may change depending on the pending decisions by NM Board and the Provisional Council regarding EAD & e-EAD staffing and budgets.

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The EUROCONTROL EAD is a centralised service that relies on external industry partners for the provision of Data Provision Operations and IT development and infrastructure services. As such, investment costs are directly supported by these industry partners. EAD costs are therefore broken down by business objectives as follows:

- Staff Remuneration: Salaries.
- External Effort: Consultancy and temporary staff.
- Operating costs: Service, maintenance and training costs.
- Depreciation costs: Costs related to the depreciation of very specific investments for oversight management.
- Indirect costs: Costs of human resources management and facility management.
- Sales of services UPP: Income from Service Charges.

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## 5 Performance Indicators

The performance indicators mentioned in this chapter describe the planned performance of EAD, for the provision of its services to customers (principally Data Providers and Data Users).

These performance indicators are derived from the detailed performance indicators annexed to the Service Level Specifications signed between EUROCONTROL and respectively DOP, ITP and application maintenance.

### 5.1 Service availability

The minimum availability and maximum downtime of the services provided by EAD, as agreed with the industry partners for 2018 and acknowledged by the EAD Service Steering Group, is listed in the table below:

EAD Services	Minimum service availability	Planned unavailability	Unplanned outages
INO BF	99,975%	Shall not exceed 60 minutes in total and not more than two times in a month  180 minutes for release deployments	Shall not exceed 30 minutes
INO DP			
INO DU			
SDO			
PAMS			
CHARTS	98%		Downtime and system recovery based on best available effort
AIP			
ESI			
EAD Basic <sup>1</sup>	95%	Downtime and system recovery based on best available effort	

<sup>1</sup> Internet access for any user – Not for operational use

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## 5.2 Service capacity

The table below shows the average capacity per service made available by EAD to its customers: This yearly capacity corresponds to the calculated total for a year of the daily average capacity per service.

<b>EAD Services</b>	<b>Description</b>	<b>Yearly Capacity</b>
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<b>For Data Users (&amp; Data Providers)</b>		
Flight plans preparation	Creation of flight plan through EAD interface, validation against SDO and IFPUV	<b>5 Million</b>
Flight plans distribution	Submissions and reception of flight plans and associated messages	<b>11,5 Million</b>
PIB generation	Generation of Pre-flight Information Bulletins	<b>5,5 Million</b>
SDO reporting	Retrieval pre-defined standard aeronautical data reports	<b>2,5 Million</b>
Graphical reporting	Graphical representation of information stored in EAD	<b>200.000</b>
PAMS download	Browse and download the effective version of AIPs, AIP Supplements and Amendments, AICs and chart publications.	<b>30 Million</b>

<b>For Data Providers</b>		
NOTAM creation	Number of NOTAM created through EAD	<b>400.000</b>
NOTAM processed	Worldwide NOTAM processed by EAD (excluding NOTAM creation through EAD)	<b>1,4 Million</b>
SDO upload	Upload of static data based on AICM/AIXM specifications and static data changes	<b>50.000</b>
SDO download	Download of static data based on AICM/AIXM specifications	<b>500</b>
AIP operations	Validation and publication of AIPs	<b>5.000</b>
PAMS Upload	Upload of the effective version of AIPs, AIP Supplements and Amendments, AICs and chart publications.	<b>5.000</b>

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### 5.3 Service operations performance and quality

#### 5.3.1 Service operations performance

##### 5.3.1.1 Data Operations

EAD Data Operations maintains the ECAC full static data set and the operational worldwide (basic) data set. This data set has to be maintained as specified below, except for SDO migrated Data Providers or if otherwise agreed:

Changes received at least x days before the effective date	Maximum number of days for commitment before the effective date
Before 25	20
Between 25 and 15	10
Less than 15	by the effective date or within 5 working days after reception, whichever is later

NOTAM having an impact on static data (PERM NOTAM) are processed as follows:

- All changes based on PERM NOTAM with immediate effect or effective in the future, but not related to AIRAC information shall be committed within 2 calendar days after reception at the latest unless coordination with Data Provider is previously required;
- all changes based on PERM NOTAM with effective date in the future affecting incoming AIRAC information shall be committed at the latest two calendar days after the respective AIRAC information is committed unless coordination with Data Provider is previously required.

##### 5.3.1.2 NOTAM Processing

This activity includes the processing of NOTAM, SNOWTAM, and ASHTAM received via AFTN. It consists of ensuring that all messages received are validated, coherent, in the required format and that their syntax and structure conform to ICAO Annex 15 and OPADD, prior to storage in the INO database and further distribution. To increase the quality of the NOTAM, they are validated systematically against the static data object in SDO.

The TAM processing service is measured in terms of time and volume.

Manual processing targets for incoming TAM are as follows:

- Average processing time for messages: 10 minutes (elapsed time between reception by the system and storage after manual processing);

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- 98,5% of messages processed within 30 minutes (elapsed time between reception by the system and storage after manual processing);
- 99% of checklist received as TAM shall be analysed within 48 hours after reception (elapsed time between the completion of the checklist analysis and the reception time of the TAM by the system).

### 5.3.1.3 PAMS

This service includes the maintenance of a library of last available Aeronautical Information Publications in digital format (AIP, Amendments, Supplements, Circulars, and Charts), for ECAC+ States which are not yet managing their Publications directly in EAD.

Two different categories are considered for the measurement of this service:

- CAT I : AMDT (Amendments), i.e. posting the PDF file of an AIP Amendment in PAMS;
- CAT II: updating in PAMS of the AIP sections and charts.

The maximum time allowed for the processing of the above categories is as follows:

Type of amendment or update	To be processed
CAT I	within 3 working days of receipt
CAT II Publications received on time <sup>2</sup>	by the effective date
CAT II Publications received late	within 5 working days of receipt

### 5.3.2 Service Desk

The service desk manages tickets opened for any incidents and service requests. Ticket management includes the identification of the severity level, appropriate assignment according to the area of responsibility, traceability, follow up, recording of applicable solution or workaround, and an the estimated target date for the availability of the deployed solution.

Tickets are classified based on the following severity classes defined by EUROCONTROL:

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<sup>2</sup> Up to 5 days prior to the effective date.

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Severity	Definition
High (A)	Service failure or malfunctioning, which has major impact on business and/or has impact on client(s) safety operations.
Medium (B)	Business is proceeding but is impaired either at Service Provider or at client.
Low (C)	No significant business impact

The Initial Feedback Time is the period from when the Ticket has been opened until the first call back or change in status has been made in the Ticket. The Initial Feedback Time does not mean resolution time.

This initial feedback time shall be in accordance with the Table below:

Severity	Initial Feedback Time
High (A)	1 hour
Medium (B)	4 hours
Low (C)	24 hours

## 5.4 DOP Data Consistency

Data Consistency service ensures that data errors loaded by DOP contained in the EAD are identified and acted upon, thus enhancing the consistency of EAD data.

Data consistency review is performed according to procedures described in the EAD DOP quality system. It is performed on both, not yet published data (SDO, PAMS) and, committed/processed data (SDO, INO, PAMS).

Type of service	Monthly percentage of service errors severity A/B less than
INO	2.5% of the total number of NOTAM reviewed
SDO	2.5% of the total number of static data changes reviewed
PAMS	2.5% of the total number of pages reviewed



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## 6 Revenues and business perspective

Depending on the type of client, different charges will be applied for the use of EAD services. These charges are Service Charges applied by EUROCONTROL and Royalty Fees defined by the Member States when EAD data is made available by the Client to third party end-users.

As from 2017, the certification of EAD by the EASA will be a strong enabler for the development of the business and the resulting revenue.

The services provided in 2018, for a total amount billed of 400 k€, are renewed in 2019.

## 7 Information on the implementation of new infrastructure

The following major EAD enhancements will contribute to improving the performance of the air navigation service provider:

- SDD/WFM HMI and supporting changes to provide B2C functionality for SDD DP
- Subsystem improvements
- Basic software upgrades (Java, Windows, Adobe etc. versions)
- Phase out Java in the browser since support for embedded Java is being removed for security and other reasons

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## 8 Abbreviations

Term	Description
ADQ	Aeronautical Data Quality
AFTN	Aeronautical Fixed Telecommunication Network
AIC	Aeronautical Information Circular
AICM	Aeronautical Information Concept Model
AIM	Aeronautical Information Management
AIP	Aeronautical Information Publication
AIRAC	Aeronautical Information Regulation and Control
AIS	Aeronautical Information Services
AIXM	Aeronautical Information Exchange Model
ANSP	Air Navigation Service Provider
ASHTAM	NOTAM reporting ash hazard
ATC	Air Traffic Control
ATFM	Air Traffic Flow Management
ATM	Air Traffic Management
BF	Briefing Facility
DOP	Data Operations Provider
DP	Data Provider
DU	Data User
EAD	European AIS Database
EADAP	EAD Annual Plan
EC	European Commission
ECAC	European Civil Aviation Conference
ECAC+	States surrounding ECAC Area
EASA	European Aviation Safety Agency
ECIT	EAD Client Interface
EAIM	European Aeronautical Information Management
ESI	EAD System Interface
FTE	Full Time Equivalent
ICAO	International Civil Aviation Organization
IFPUV	IFPS Validation system
INO	International NOTAM Operations
IT	Information Technologies
ITP	IT Provider
KPI	Key Performance Indicator
MET	Meteorological data
NOTAM	Notification to Airmen
NSA	National Supervisory Authority
NMD	Network Management Directorate
NS	Network Services
PAMS	Published AIP Management System
OPADD	Operating Procedures for AIS Dynamic Data

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<b>Term</b>	<b>Description</b>
PERM NOTAM	Permanent NOTAM
PIB	Pre-flight Information Bulletin
SARPS	Standards and Recommended Practices
SDC	Static Data Completeness
SDD	Static and Dynamic Data
SDO	Static Data Operations
SDM	Static Data Management
SLS	Service Level Specifications
SNOWTAM	NOTAM reporting snow hazard
SP	Service Provider
SQSM	Safety & Quality Systems Management
SSG	Service Steering Group
SUP	Supplement
TAM	NOTAM, ASHTAM, SNOWTAM, BIRDTAM
TID	Test Item Discrepancy
TP	Training Provider
XML	Extensible Mark-up language

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