

SESAR		Removed							LOC	
INF09		Digital Integrated Briefing								
REG	ASP	MIL	APO	USE	INT	IND	NM	MET	AIS	USP

Subject matter and scope

The AIS and MET information provided to pilots and dispatchers as pre-flight briefing products and services needs to become more user-friendly: easier to understand, better prioritised, with the aim to improve the pilot awareness and to reduce the workload. Traditionally, the pre-flight briefing takes the form of a "Pre-flight Information Bulletin (PIB), which may comprise up to 30-40 pages of NOTAM messages, all in upper case. Filtering and prioritisation are significantly limited by the free text nature of the NOTAM message. MET messages may be embedded in textual format as well, while weather maps are presented separately.

This implementation objective consists of an innovative approach to pilot briefing through the use of digital aeronautical data, in particular Digital NOTAM (encoded as "events" in AIXM format), and digital MET data (METAR, TAF, SIGMET in the ICAO iWXXM format). The AIS and MET information provided to pilots and dispatchers in the form of digital briefing products and services, will be merged (joint) with the geographical and planned flight trajectory information, and presented (visualised) in a graphical way.

The digital integrated briefing will introduce the following key changes:

- generation of the briefing products from digital aeronautical data (in particular from Digital NOTAM) instead of providing a list of NOTAM messages;
- extensive graphical presentation of the information that affects elements that are usually displayed on aeronautical maps (taxiway/runway/apron closures, nav aids unserviceable, temporary obstacles, airspace restrictions, etc.);
- use of normal sentence case for the textual/tabular part of the briefing;
- joint presentation of the aeronautical and MET events that may have a combined effect on the flight trajectory (such as airspace restrictions and significant weather);
- the possibility for interactive briefing, thus allowing the pilot/dispatcher to highlight/prioritise information that is more relevant for each individual flight.

The digital integrated briefing is currently targeted for ground use (FOC/WOC, pre-flight briefing rooms and ARO offices). Some enablers (Digital NOTAM and digital MET data) support the use in the cockpit, in all phases of flight, while enablers for transmission into the cockpit are not yet mature (see IS-0206 Digital Integrated Briefing during flight execution phase).

NOTE: The following implementations like 'Digital Aeronautical Data', 'Aeronautical Data Quality', 'Digital NOTAM' are seen as prerequisite to the successful implementation of this INF09 objective. Their maturity/availability should be analysed before making INF09 an Active objective.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.

Applicability Area(s) & Timescale(s)

Applicability area (Subject to local need)					
Timescales:		From:	By:	Applicable to:	
Subject to local needs		31/05/2019			

References

European ATM Master Plan

OI step -		<a href="#">[IS-0205]-Digital Integrated Briefing for pre-flight phase</a>							
	Enablers -	AIMS-06	AIMS-07a	AIMS-19a	METEO-04b	METEO-05b	REG-0301	SWIM-APS-01a	SWIM-APS-02a
		SWIM-INFR-05a	SWIM-NET-01a	SWIM-STD-01					
Legend:	WXYZ-001	Covered by SLoA(s) in this objective		WXYZ-002 zzz	Covered by SLoA(s) in another objective Objective covering the enabler			WXYZ-003	Not covered in the Implementation Plan

Applicable legislation

INF09	Digital Integrated Briefing
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The EC implementing Regulation No 73/2010 (Aeronautical Data Quality) is going to be repealed by the EASA RMT.0477 for which EASA issued Opinion No 02/2018 (Specific requirements for providers of meteorological services, aeronautical information services/aeronautical information management) and which covers Digital NOTAM. ICAO Annex 3 Meteorological Service for International Air Navigation (including Amendment 77-A). ICAO Annex 15 Aeronautical Information Services Procedures for Air Navigation Services - Aeronautical Information Management (PANS-AIM)

### Essential Operational Changes

Digital AIM and MET Services
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### SESAR Solution

#34 - Digital Integrated Briefing
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### ICAO GANP - ASBUs

AMET-B1/4	Dissemination of meteorological information
DAIM-B1/7	NOTAM improvements

### Deployment Programme

- none -
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### European Plan for Aviation Safety

- none -
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### Operating Environments

Airport
Network

## Stakeholder Lines of Action (SLOAs)

SloA ref.	Title	From	By
INF09-ASP01	Update the systems to receive and distribute AIS and MET information electronically		
INF09-ASP02	Provide airspace users with pre-flight digital integrated briefing		
INF09-ASP03	Develop a local safety assessment		
INF09-INT01	Develop the standards for the use of digital NOTAM		
INF09-INT02	Develop regulatory material for the use of digital NOTAM		
INF09-NM01	Generate and provide pre-flight briefings based on digital data		
Description of finalised and deleted SLOAs is available on the eATM Portal @ <a href="https://www.eatmportal.eu/working/depl/essip_objectives">https://www.eatmportal.eu/working/depl/essip_objectives</a>			

## Expected Performance Benefits

<b>Safety:</b>	The issue of very large PIB (20-30 pages for a cross-European flight) is frequently mentioned by pilots as a difficulty when trying to comply with the legal obligation for reading and understanding all the NOTAM that can affect their flight, while they are also under time pressure to fulfil other pre-departure tasks. The graphical presentation of digital NOTAM data should facilitate the task of finding the relevant information (geospatial and temporal filtering) and understanding the aeronautical and meteorological information relevant for a specific flight. For example, a visual "work in progress" symbol on the airport map is much easier to spot as compared with the same information presented in the PIB text. This leads to a reduction in the number of incidents that are sometimes due to the lack of informational awareness, such as airspace infringements, attempts to use a closed runway or runway excursions, attempts to use a closed airport surface, temporary changes in operational procedures, etc.
<b>Capacity:</b>	No
<b>Operational Efficiency:</b>	In terms of benefits, the graphical presentation of digital information, a better filtering and a more logical organisation of the pre-flight information bulletins improve pilot and dispatcher awareness, improve briefing efficiency and reduces the risk of information being misunderstood or missed.
<b>Cost Efficiency:</b>	no
<b>Environment:</b>	No
<b>Security:</b>	No

## Detailed SLOA Descriptions

INF09-ASP01	Update the systems to receive and distribute AIS and MET	From:	By:
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INF09	Digital Integrated Briefing		
	information electronically	-	-
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Update the systems to: a) exchange AIS information using the AIXM format for digital data and electronic form for AIP and NOTAM. b) exchange MET information METAR, TAF, SIGMET in the ICAO iWXXM format.		
<b>ATM Master Plan relationship:</b>	<a href="#">[AIMS-19a]-Aeronautical Information system is interfaced to receive and distribute aeronautical information electronically to/from ANSPS systems.</a>		
<b>Finalisation criteria:</b>	1 - The systems are capable of exchanging information using the AIXM format for digital data and electronic form for AIP and NOTAM 2 - The systems are capable of exchanging MET information METAR, TAF, SIGMET in the ICAO iWXXM format		
<b>INF09-ASP02</b>	<b>Provide airspace users with pre-flight digital integrated briefing</b>	<b>From:</b>	<b>By:</b>
		-	-
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Generate pre-flight briefing information/data, based on digital AIS and digital NOTAM data, and provide it to airspace users. The digital integrated briefing introduces the following key requirements : <ul style="list-style-type: none"> <li>• Generation of the pilot and dispatcher briefing based on digital aeronautical and meteorological data (including the Digital NOTAM) provided by SWIM services.</li> <li>• Extensive and interactive graphical visualisation, filtering, searching and alerting by using the geospatial and temporal aspects of the aeronautical and meteorological information.</li> <li>• Use of normal sentence case for the textual/tabular part of the briefing, instead of the full upper case presentation of the current Pre-flight Information Bulletins.</li> <li>• Joint presentation of the aeronautical and MET events that may have a combined effect on the flight trajectory (such as airspace restrictions and significant weather).</li> </ul> All the relevant information exchanges, including the generation and provision of digital NOTAM, shall be compliant with the applicable SWIM specifications.		
	<a href="#">Note :INF08.1-ASP02 and INF08.1-ASP03 are a pre-requisite for the implementation this SLoA.</a>		
<b>Supporting material(s):</b>	<Publisher> - Specification for the provision of Digital NOTAM (INT01) / EUROCONTROL Specification for Digital NOTAM SJU - SESAR Solution 34: Data Pack Digital integrated briefing Url : <a href="https://www.sesarju.eu/sesar-solutions/digital-integrated-briefing">https://www.sesarju.eu/sesar-solutions/digital-integrated-briefing</a>		
<b>ATM Master Plan relationship:</b>	<a href="#">[AIMS-07a]-Generation of Enhanced Pre-flight Briefing based on digital data</a> <a href="#">[METEO-04b]-Generate and provide MET information services relevant for Airport and final approach related operations (PCP)</a> <a href="#">[METEO-05b]-Generate and provide MET information relevant for TMA and En-route related operations (PCP)</a>		
<b>Finalisation criteria:</b>	1 - Airspace users are provided with a pre-flight digital integrated briefing		
<b>INF09-ASP03</b>	<b>Develop a local safety assessment</b>	<b>From:</b>	<b>By:</b>
		-	-
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	The tasks to be done are as follows: <ul style="list-style-type: none"> <li>• Conduct hazard identification, risk assessment in order to define safety objectives and safety requirements mitigating the risks;</li> <li>• Develop safety assessment;</li> <li>• Deliver a safety assessment report to the NSA, if new standards are applicable or if the severity class of identified risks is 1 or 2.</li> </ul> This safety assessment shall be based on fully validated/recognised method.		
<b>Finalisation criteria:</b>	1 - The safety assessment report for the changes has been developed and delivered to the Regulator/NSA/Competent Authority, as necessary.		
<b>INF09-INT01</b>	<b>Develop the standards for the use of digital NOTAM</b>	<b>From:</b>	<b>By:</b>
		-	-
<b>Action by:</b>	<b>ICAO</b>		
<b>Description &amp; purpose:</b>	Develop a Global Specification for the provision of Digital NOTAM including harmonised coding rules, in accordance to the ISO/IEC process and in accordance with existing SWIM specifications (see item * below). This global specification will refine and replace initial Eurocontrol Specifications "For the provision of Digital NOTAM including harmonised coding rules". * EUROCONTROL Specifications for: - SWIM Service Description - SWIM Information Definition - SWIM Technical Infrastructure Yellow Profile.		
<b>Finalisation criteria:</b>	1 - The Global Specification for the provision of Digital NOTAM including harmonised coding rules has been published		
<b>INF09-INT02</b>	<b>Develop regulatory material for the use of digital NOTAM</b>	<b>From:</b>	<b>By:</b>
		-	-

INF09	Digital Integrated Briefing		
Action by:	EASA		
Description & purpose:	Develop and publish Technical requirements and operational procedures for aeronautical information services and aeronautical information management.		
Finalisation criteria:	1 - Regulatory material for the use of Digital NOTAM has been published		
INF09-NM01	Generate and provide pre-flight briefings based on digital data	From:	By:
		-	-
Action by:	NM		
Description & purpose:	Generate and provide pre-flight briefing information/data, based on digital AIS and digital NOTAM data in accordance with the applicable SWIM specifications.		
Supporting material(s):	<Publisher> - Specification for the provision of Digital NOTAM (INT01) / EUROCONTROL Specification for Digital NOTAM SJU - SESAR Solution 34: Data Pack Digital integrated briefing Url : <a href="https://www.sesarju.eu/sesar-solutions/digital-integrated-briefing">https://www.sesarju.eu/sesar-solutions/digital-integrated-briefing</a>		
ATM Master Plan relationship:	<a href="#">[AIMS-07a]-Generation of Enhanced Pre-flight Briefing based on digital data</a>		
Finalisation criteria:	1 - The generation and provision of pre-flight briefings, including the Digital NOTAM, are compliant with the applicable SWIM specification		

