**COORDINATION NEEDS**

 *(Submitted by the WMO Secretariat)*

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| **Summary and Purpose of Document**This document addresses:* coordination with ICAO METP, its working groups and other relevant ICAO bodies (global and/or regional);

 * coordination with other WMO expert teams/bodies; and
* other related coordination needs,

with a view to assisting ET-ASC and ET-ISA establish and maintain appropriate work plans and priorities. |

**ACTION PROPOSED**

The meeting is invited to:

1. note the information contained in this paper;
2. consider the implications of existing and emerging coordination needs on the ET-ASC and/or ET-ISA work plans and priorities.

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1. **EXECUTIVE SUMMARY** (to be included in the final report)

1.1 The meeting was informed about the ongoing coordination needs across various ICAO and WMO technical bodies involved in the operation and development of aeronautical meteorological services as well as in aviation environmental protection, including but not limited to working groups of the ICAO Meteorology Panel such as WG-MIE and expert teams of WMO such as TT-AvXML. It was appreciated that there was much coordination of the various work streams taking place – both within and outside of WMO – and that the work should progress as efficiently and effectively as possible (given available resources) with duplication best avoided.

1.2 The meeting also acknowledged and appreciated the involvement of several of the ET-ASC and ET-ISA experts in the advancement of the discussion on future IWXXM schema and MET in SWIM as well as assistance to a rolling review of (aeronautical meteorology) requirements in a WIGOS context.

1.3 *<Additional text to be developed based on the discussions>*

1. **DISCUSSION**

**2.1 Coordination with ICAO METP, its working groups and other relevant ICAO bodies**

2.1.1 Many of activities of ET-ASC and ET-ISA have links with several technical bodies of ICAO at the global level, including the Committee on Aviation Environmental Protection (CAEP), the Meteorology Panel (METP) and its working groups on meteorological requirements and integration (WG-MRI), meteorological information and service development (WG-MISD), meteorological information exchange (WG-MIE) and meteorological operational groups (WG-MOG). There are synergies also with, in particular, the work of the Information Management Panel (IMP) and Air Traffic Management Requirements and Performance Panel (ATMRPP).

2.1.2 Experts involved in ET-ASC and ET-ISA continue to directly or indirectly contribute to the work of these ICAO bodies, including through the development of working documentation and supporting materials, attendance at meetings and involvement on teleconferences.

2.1.3 In July 2017, there will be a series of METP working group meetings held back-to-back in Montreal, Canada. WG-MIE, WG-MRI and WG-MISD will all convene consecutively from 10 to 19 July 2017 to address the matters within their respective work programmes. Meetings of the METP AG-MCRGG and Management Group will also be held on 20 July 2017 at the same location.

2.1.4 As alluded to in Doc. 3, one of the ET-ISA co-chairs is involved in an ICAO ASBU Panel Project Team (ASBU PPT). This team is in charge of reviewing the Aviation System Block Upgrade (ASBU) framework, within the global technical level of the GANP, to make it a useful framework for all aviation stakeholders to enhance their air navigation capabilities based on their specific requirements and operational scenarios. This involvement includes attendance at meetings – both virtual (web-conference) and face-to-face – and the development of working documentation.

**2.2 Coordination with other WMO expert teams/bodies**

2.2.1 Similar with the foregoing, many of activities of ET-ASC and ET-ISA also have links with several other technical bodies of WMO at the global level, including the Task Team on Aviation XML (TT-AvXML) and the Inter-Commission Task Team on the WMO Information System (ICTT-WIS).

2.2.2 It is worthwhile to note also that work of TT-AvXML has synergies with the work of WG-MIE in the context of the development of the IWXXM schema and that the work of ICTT-WIS has or will have synergies with the work of the IMP in the context of the development of and interoperability between the WIS and SWIM environments.

**2.3 Other related coordination needs**

***IWXXM developments and MET in SWIM***

2.3.1 At present, several corresponding activities are being undertaken by ICAO and WMO to foster the transition to the new ‘digital era’. For example, the ICAO EUR/NAT Office is convening an IWXXM implementation workshop in Paris, France from 17 to 18 May 2017 while WMO is similarly convening a workshop on the implementation of IWXXM for the exchange of OPMET data in Hong Kong, China from 10 to 12 October 2017. Predominantly these implementation support efforts focus on the translation of pre-existing OPMET information from TAC into IWXXM-compliant XML/GML – in other words, mimicking traditional OPMET data exchange practices and a product-centric approach – rather than anything more radical or forward-leaning such as the data- or information-centric approach to support global ATM through, for example, the utilization of TCP/IP in OPMET data exchanges via OGC web services (WCS, WFS, WMS).

2.3.2 With a focus on the translation of pre-existing product-types, the continued development and implementation of IWXXM could become increasingly expensive, inefficient and ultimately unsustainable – particularly but not exclusively as the meteorological ‘product set’ expands and where traditional cost recovery/business models continue to be applied. Further, the current approach may never realize the true potential of meteorological service for international air navigation in the future SWIM-enabled environment of global ATM. The need, therefore, for a clearer strategy on future digital data/information exchange is considered essential and will become urgent given ICAO’s continuing intentions to upgrade existing requirements and introduce new requirements for the exchange of meteorological information in digital form in the 2018 to 2020 timeframe.

2.3.3 In this connection, several IWXXM experts are leading the development of a study note (or similar) for the upcoming ICAO METP WG-MIE meeting in Montreal (see 2.1.3) which seeks to highlight these and other related issues as seen from the experts perspective.

***Rolling review of requirements***

2.3.4 In support of the continuous evolution of the WMO Integrated Global Observing System (WIGOS) and its components, a Statement of Guidance for Aeronautical Meteorology ([available here](https://www.wmo.int/pages/prog/www/OSY/SOG/SoG-Aero.pdf)) is undergoing review. The SOG was prepared by
Dr Jitze van der Meulen (the Netherlands) on behalf of CAeM for the CBS IPET-OSDE (Inter-Programme Expert Team on Observing System Design and Evolution).

2.3.5 The Statement of Guidance presently covers aspects including local observations at aerodromes, in-situ observations by aircraft, and the further development of requirements for observations and forecasts. Several experts from ET-ASC and ET-ISA are assisting
Dr van der Meulen review and update the Statement of Guidance. The Statement of Guidance will be a living document, available online (via [here](http://www.wmo.int/pages/prog/www/OSY/GOS-RRR.html)), serving to inform all concerned of the state-of-the-art observing system capabilities, both current and future.

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