



CHECKLIST FOR IWXXM IMPLEMENTATION

1. ATS MESSAGE HANDLING SYSTEM (AMHS) CHECKLIST

☐	Preparation - Ensure all stakeholders (e.g. COMMS and MET experts) are informed and involved.
☐	Preparation - Review ICAO guidelines for IWXXM exchange implementation (i.e. Guidelines for the Implementation of OPMET Data Exchange using IWXXM, Fifth Edition – October 2023 (IWXXM Guidelines))
☐	System Requirements - Verify that your AMHS supports File Transfer Body Part (FTBP) feature. A total size of AMHS message (including FTBP) up to 4MB is required. The support by User Agents (UAs) of Interpersonal Messaging (IPM) Heading Extensions (IHE) is required.
☐	System Requirements - Verify that the IPM body shall contain exactly one body-part which is an FTBP (<i>IWXXM Guidelines, Appendix A, Section 2.3 refers</i>).
☐	System Requirements – Verify there is sufficient bandwidth to support the new addition of IWXXM traffic.
☐	System Requirements - Ensure components in the processing and exchanging chains are able to handle payloads in IWXXM and their compressed counterparts in gzip formats.
☐	Network Configuration – Configure network settings to support IWXXM data exchange (e.g. configure firewalls to allow IWXXM data traffic).
☐	Network Configuration – Ensure secure and reliable network connections. The available bandwidth for each ‘hop’ in the network should be considered by COM Centres when switching to AMHS FTBP operations.
☐	Network Configuration – Ensure P1 AMHS connection(s) (direct and alternate paths) with neighbouring COM Centres.
☐	Network Configuration – Ensure the support of IWXXM exchange for P3 connection(s).
☐	Testing – Conduct initial tests with internal stakeholders (e.g. local meteorological service provider) to ensure successful data exchange.
☐	Testing – Conduct initial tests with external stakeholders (e.g. connecting COM Centres) to ensure successful data exchange.
☐	Testing – Verify data integrity and accuracy with internal and external stakeholders.
☐	Documentation – Maintain detailed records of the implementation process.
☐	Documentation – Document any issues and resolutions for future reference.
☐	Distribution – Only distribute operational IWXXM AMHS messages to APAC ROCs and IROGs who have indicated to be ready for receipt in the "IWXXM - Online Register of APAC IWXXM Exchange Status".
☐	Operation – Ensure all stakeholders are informed with commencement, taking into consideration Aeronautical Information Regulation and Control (AIRAC) and the use of METNO.

2. IWXXM DATA GENERATION CHECKLIST

- ☐ Data Collection - Gather meteorological data (observations, forecasts).
- ☐ Data Collection - Ensure data is sourced from reliable meteorological services.

- ☐ Data Collection - Confirm the completeness of required elements (temperature, wind, visibility, etc.).
- ☐ Data Encoding - Encode data in IWXXM format as per IWXXM schema. Compress the IWXXM message with gzip, a globally agreed compression technique for meteorological data. Give the output file a name in accordance to the file name conventions mentioned on Page 138 of WMO No.386¹.
- ☐ Data Encoding - Validate the IWXXM message against the IWXXM schema (XML Schema Definition (XSD) and schematron (SCH) files with a suitable XML validator.
- ☐ Data Encoding - Ensure compliance with IWXXM TAC-to-XML-Guidance.
- ☐ IWXXM Elements - Include required IWXXM elements: ****Metadata****: Identifier, issue time, etc. ****Observation****: Current weather conditions. ****Forecast****: Forecast data, including start and end times. ****Significant Weather****: Any notable weather phenomena.
- ☐ IWXXM Elements - Ensure proper units of measurement (e.g., meters, degrees Celsius).
- ☐ Quality Control - Perform quality checks on the data for accuracy.
- ☐ Quality Control - Review for consistency and coherence in message content.
- ☐ Quality Control - Verify that timestamps and time zones are correctly formatted.
- ☐ Testing - Test the IWXXM message with parsing tools.
- ☐ Testing - Simulate real-world scenarios to ensure robustness.
- ☐ Testing - Conduct interoperability tests with recipient systems, including internal and external stakeholders (refer to AMHS Checklist).
- ☐ Final Review - Have a second party review the IWXXM message.
- ☐ Final Review - Confirm compliance with relevant regulations and standards.
- ☐ Distribution - Prepare for distribution through appropriate channels (e.g. AMHS).
- ☐ Distribution - Ensure proper encoding and transmission protocols are followed.
- ☐ Monitoring and Feedback - Monitor reception and processing of IWXXM messages.
- ☐ Monitoring and Feedback - Collect feedback from users and stakeholders for continuous improvement.

3. ADDITIONAL CONSIDERATION

- ☐ Stay updated on changes to ICAO IWXXM specifications. Also refer to the [IWXXM FAQs](#) under ICAO Asia Pacific Document portal if needed.
- ☐ When planning the implementation of IWXXM, consider the [IWXXM package compatibility table](#) to determine the appropriate version of IWXXM messages. Also, plan a regular review to ensure compliance with this table.
- ☐ Document any anomalies or issues encountered during generation and testing with internal and external stakeholders.
- ☐ Update the [IWXXM – Online Register of APAC IWXXM Exchange Status](#) for your state when ready.
- ☐ Those States using IWXXM extensions to provide optional information for national use should make available relevant schemas and documentations for all intended consumers.

¹ https://library.wmo.int/viewer/35800/download?file=386_2023-edition_en.pdf&type=pdf&navigator=1