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World Meteorological Organization
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**South African
Weather Service**

WORLD METEOROLOGICAL ORGANIZATION AFRICAN CONFERENCE ON METEOROLOGY FOR AVIATION (ACMA -2018)

28 to 30 November 2018

Dakar, Senegal



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**South African
Weather Service**

MET response to Global ATM concept and foreseen MET service changes

– Opportunities and priorities

Presented by South Africa

INTRODUCTION

- As a signatory to the ICAO convention on International Civil Aviation, SA complies with the requirements as specified by ICAO.
- Through the Civil Aviation Act, SA has adopted the recommendations of ICAO as a standard
- The need to comply is at the heart of SAWS service delivery, hence SAWS has established the QM Office and Compliance office.
- The need to support the Global Air Navigation Plan for MET Integration into ATM is established under Department of Transport , where ALL Aviation stakeholders are involved in the implementation



CRITICAL BUILDING BLOCK TO MEET FUTURE REQUIREMENTS FOR THE AIR TRAFFIC MANAGEMENT (ATM) SYSTEM

- Meet the existing **communication infrastructure** requirements for information exchange centres such as the regional OPMET databanks and inter-regional OPMET gateways.-
- Inclusion of aeronautical meteorological information in the future **SWIM-enabled environment** and addressing governance and technical issues for SWIM(System Wide Information Management) enabled environment
- Maintenance of **QMS** and the evolving **competency** of Aeronautical Meteorological Personnel
- **Compliance** with ICAO and WMO requirements
- Maintenance of **Business Continuity** to minimise service disruption to aviation
- **Funding – cost recovery** – this process need to be strongly supported by the government through appropriate legislative actions



AVIATION COMPETENCIES REQUIREMENTS

AERONAUTICAL METEOROLOGICAL PERSONNEL (AMF& AMO) COMPETENCY

- The AMP competency Standards endorsed by Cg-16 in Geneva in May 2011 and became a requirement in 1 November 2013.
- SA has a 3 year rolling cycle, and currently in the process of implementing a new competency assessment methodology
- The BIP-M national personnel qualification requirements became mandatory from 1 December 2016.
- Meteorologists in South Africa got a minimum of four year degree and SAWS personnel meet the BIP-M requirement.



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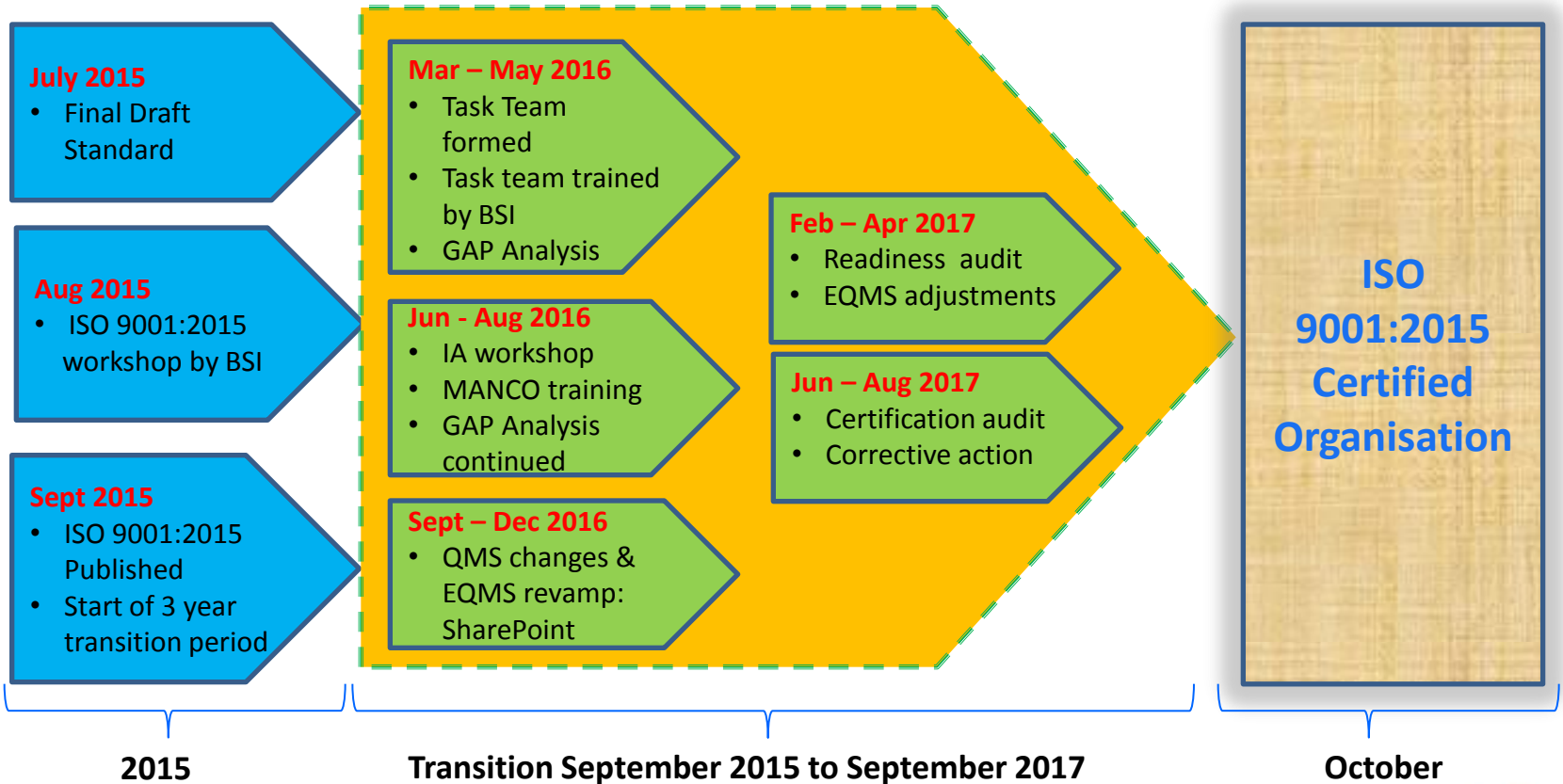
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QMS (IMPLEMENTATION & TRANSITION TO ISO 9001:2015)

- Amendment 74 to **Annex 3 to the Convention on International Air Navigation**, applicable on the 7th November 2007.
- recommends that “states **establish and implement organized quality system** comprising of procedures, processes and resources necessary to provide for quality management”.
- SAWS began preparations for **QMS implementation** in 2008 and achieved certification in 2012 (ISO 2001:2008 certificate).
- **Amendment 75** to the Annex 3, upgraded the recommended practice into a standard in 2013 (applicable November 2013)
- September 2015 SAWS developed a roadmap for transition from ISO 2001:2008 to **ISO 9001:2015** and achieved certification in Oct 2017.



Transition Road Map



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IWXXM Implementation

(Meteorological Information exchange in Digital Format)

- In support of ATMOC, Amendment 77 to ICAO Annex 3 recommends dissemination of regular data and non-regular data in ICAO Meteorological Information Exchange Model (IWXXM) format
- SAWS implemented IWXXM 2.0 XML/GML schema, for digital OPMET exchange and have decommissioned AFTN and implemented the ATS Message Handling System (AMHS) between SAWS and ATNS.
- This marked the beginning of migration towards a digital environment in support of the System wide Information Management (SWIM) concept.
- Upgrade of the capability of handling OPMET data in digital format using IWXXM has been completed, and SA as the host of the Pretoria OPMET data Bank is ready to exchange OPMET data in the eXtensible Mark-up Language/Geographic Mark-up Language (XML/GML).



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FUTURE MET INFORMATION REQUIREMENTS

IN SUPPORT OF THE ATM SYSTEM

- Data centric & service centric - information available when & where required
- Computer interpretable
- Integration into ATM systems – decision support
- Interoperable
- Regional & local extensions to global set of information
- Use of open source data formats & web services
- MET expert focus on providing added-value advice & participation in CDM process



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Cost recovery Model (Funding)

South Africa

- **Fully implemented** the cost recovery model for the provision of Met service to the Aviation Industry
- Cost recovery model is **supported by SAWS Act**
- Our cost recovery model is **fair, equitable and transparent** to users
- Tariffs are **reviewed annually** with the regulator and the industry representatives.

Challenges(with some members)

- Lack of adequate cost-recovery mechanism for the provision of meteorological service to aviation
- Negative impact on the ability of members especially within the RA-I region to provide such services at the required level of quality, efficiency and sustainability
- This process needs to be strongly **supported by the government** through appropriate legislative provisions

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Opportunities and Risks

Risks

- Met service could be sourced somewhere (if QMS is not implemented) this could render NMHS irrelevant
- Lack of resources to achieve the provision of high quality, sustainable and competitive service (due to lack of adequate funding)
- Failure to meet annex 3 requirements. i.e. on the exchange of Met information in digital format
- Members readiness for further regionalisation of some Met Service, due to complicated political considerations and administration arrangements .
- Private service providers(could be an opportunity for service improvement)

Opportunities

- Better service performance (where there is QMS)
- Members can enter into **bi-lateral agreement** with those who implemented IWXXM (XML/GML).
- **Improve the national dialogue** between the NMHSs, Civil Aviation Administrations, aviation stakeholders – to build inclusive and equitable partnership
- **Twinning** of member states to deal with issues related to QMS, Competency, communication, infrastructure and cost recovery
- **Climate change**
- **Regional Hazardous Advisory centres**



Thank you Merci



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