



World Meteorological Organization

Weather • Climate • Water

# Overview of WMO activities supporting MET/ATM

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# New Challenges

- Anticipated changes in the business and service delivery modalities, including **regionalization** of service delivery and increased **competition** for provision of services to aviation
- Such changes could have **serious impacts** on the financial and organizational viability of many NMHSs
- Appropriate **regulatory, governance and cost recovery frameworks and underpinning infrastructures** will need to be developed to support the future provision of local, sub-regional, regional and global Aeronautical Meteorological Service Delivery



# MET DIV 2014 - Outcomes

- Overarching outcome: future development of MET service fully aligned and integrated into the future ATM system as part of the **Global Air Navigation Plan (GANP)**
- MET developments part of the **Aviation System Block Upgrades (ASBU)** methodology and timeline

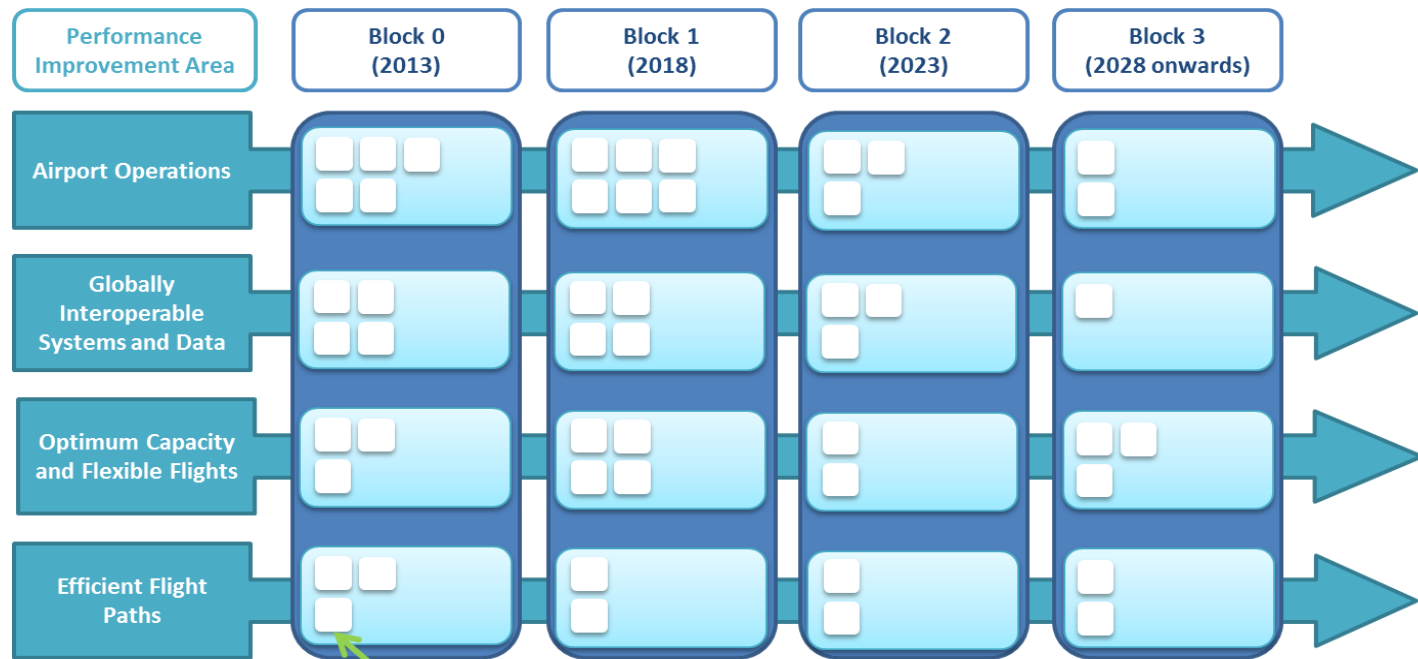


# MET DIV 2014 - Outcomes

- ASBUs provide a systems engineering modernization strategy for international air navigation, comprising a series of modules across four performance improvement areas and four time blocks.

## National Projects:

- *SESAR – Europe*
- *NextGen – USA*
- *CARATS – Japan*
- *SIRIUS – Brazil*
- *China*
- *Canada*
- *Etc.*



Modules (actual number of modules per Block/Performance Area may vary)



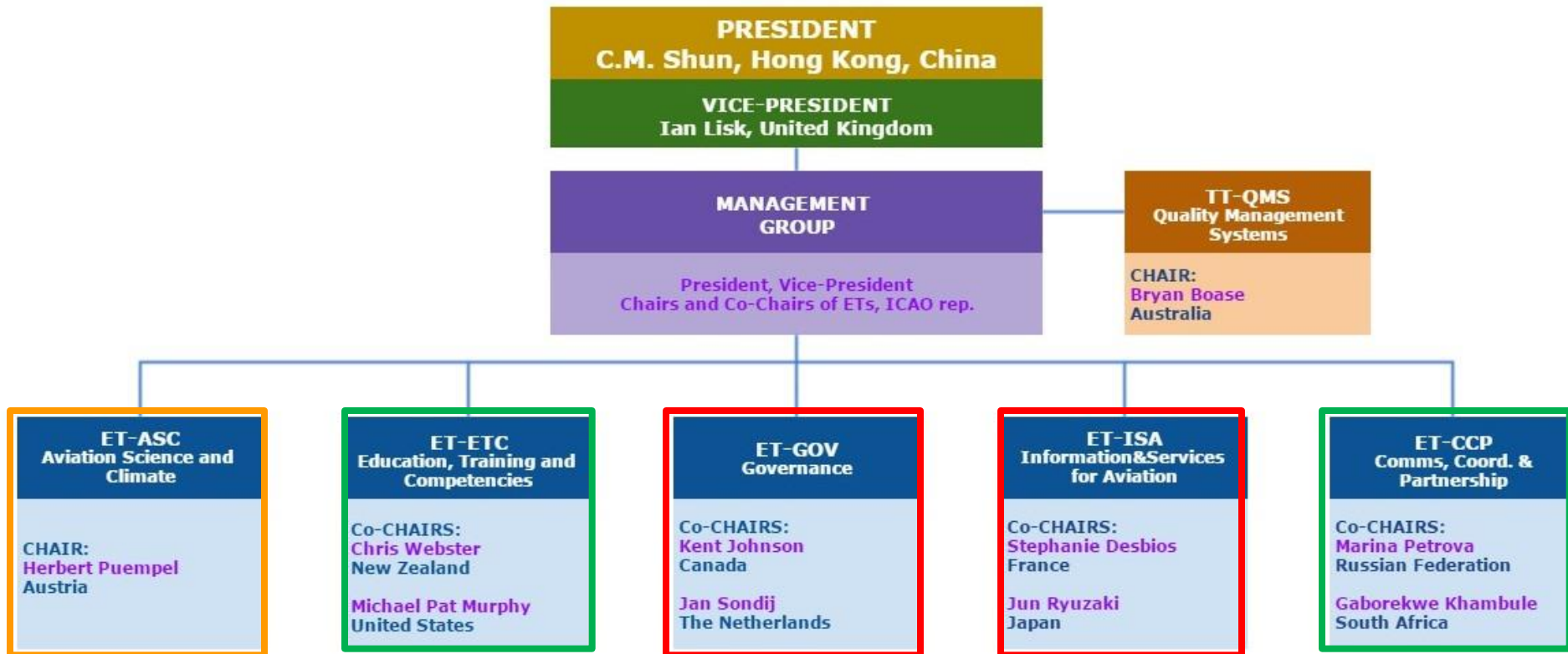
# MET DIV 2014 – Some observations

- User's representation – **more active participation of ATM community**, e.g., Eurocontrol, CANSO relative to IATA
- Recognition of future role of private sector providers, a push towards **“liberalization”** and **“commercialization”** of services
- Push towards increased **regional or multinational service delivery models** (e.g., for SIGMET); adequate **regulatory** and **cost-recovery mechanisms** need to be developed
- MET DIV 2014: “what” questions (what should be done in the future); “how” questions being answered by action plans of **ICAO MET Panel** and **WMO CAeM ETs**



# WMO CAeM-15 response

- CAeM MG structure – aligned with MET DIV 2014 outcomes; further alignment with MET Panel by CAeM MG



# CAeM Priorities (established by CAeM MG)

Priority	Key Outcome
<b>1. Support integration of MET information in SWIM</b>  (ET-ISA)	Contribute to the development of SWIM MET data standards and policies; and to promote implementation of MET information exchange under SWIM by Members
<b>2. MET information and service enhancements to support GANP and ASBU and related performance metrics</b>  (ET-ISA)	Inform the development of GANP and ASBU MET requirements, based on best practice, science and methodologies  Assist Members in delivering services to meet the GANP and ASBU requirements



# CAeM Priorities (established by MG)

Priority	Key Outcome
<b>3. QMS and AMP competency requirements, guidance and advice</b> <b>(ET-ETC)</b>	Update guidance material addressing Members' needs
<b>4. Communication to Members of GANP implementation challenges and opportunities</b> <b>(ET-CCP)</b>	Promote Members' awareness of GANP requirements, challenges and opportunities
<b>5. Address institutional issues for Aeronautical MET</b> <b>(ET/GOV)</b>	Contribute to development of policies, guidance material on governance, business models and regional cost recovery





# Technology development – MSTA & TBO

- Development of MET service for the terminal area (R 2.10) (ET-ISA, ET-ASC)
  - ❑ Expect major development in Block 1
  - ❑ Need to develop ATM-tailored services
  - ❑ Demonstration projects (CAS/CAeM AvRDP)
- Aeronautical meteorological information for trajectory-based operations (R 3.1) – need to develop a concept and establish user requirements (ET-ISA)



# Technology development – SWIM

- **System-Wide Information Management (SWIM)** (R 3.2 and R 3.3) – develop a roadmap to guide all future developments related to information generation and exchange fully aligned with the SWIM principles and architecture – **data policy (ET-ISA, ET-GOV)**  
*(Note: The need to integrate all types of MET information into the future SWIM environment to ensure the future globally interoperable ATM system is emphasized in a number of recommendations.)*



# Thank You

