



# Session 2.3: Technology in support of Civil/Military Cooperation

## Civil/Military Workshop

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**Mohamed Smaoui**

*ICAO, Deputy Regional Director, Cairo*





## Technology in support of Civil/Military Cooperation

For both Civil and Military operations

- ✓ Enhanced safety
- ✓ Better efficiency
- ✓ Bigger capacity

Improving global efficiency & safety through collaborative  
System Wide Information Management (SWIM)



## Technology in support of Civil/Military Cooperation

- CDM and implementation of systems interconnection for information sharing & trajectory negotiation before departure to improve capacity & efficiency (FF-ICE/1)
- 4-D Trajectory Based Operations
- Civil/Military Interoperability (Regulations, standardization, data & Information sharing, Training, licensing, joint provision of services)



## Civil/Military Interoperability Challenges

**Evolutions in NAV, COM and tracking requirements**

**Different Systems**

**Aircraft equipage differences**

Some specific military aircraft are unable to equip with new technologies (Mode-S, ADS-B, ADS-C, CPDLC) due to operational or tactical limitations

**Security**

Agreements on the level of security required for the Military system and the interfaces to the Civil system

**Cyber**

Determination of the cyber requirements in the current and future system designs



# Civil/Military Interoperability Challenges

## Emerging standards and exchange Models

AIXM, IWXXM, FIXM

## Traffic Growth

Greater volume of civil traffic forecast in many regions.

## User demands (New ways of operating)

Free Routing, Closer spacing (PBN), Communications (Datalink, SAT COM)



# Civil/Military Interoperability Challenges

## Cybersecurity

- Threats continue to change so rapidly
- Civil/Military interoperable Cybersecurity solutions
- New Civil/Military Cooperation secure services



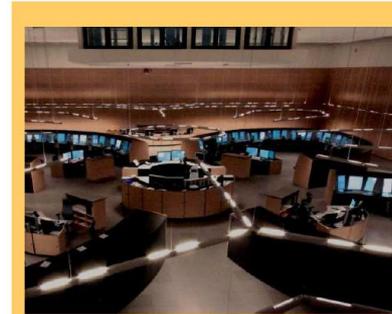
## Need for Cross-Domain Cyber-Security

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**Military Security Domain**

Unclassified/  
Classified



**Civil Security Domain**

Not classified

**Cross-Domain Cyber-Security**

SWIM

Communication Infrastructure



ICAO

North American  
Central American  
and Caribbean  
(NACC) Office  
Mexico City

South American  
(SAM) Office  
Lima

ICAO  
Headquarters  
Montréal

Western and  
Central African  
(WACAF) Office  
Dakar

European and  
North Atlantic  
(EUR/NAT) Office  
Paris

Middle East  
(MID) Office  
Cairo

Eastern and  
Southern African  
(ESAF) Office  
Nairobi

Asia and Pacific  
(APAC) Sub-office  
Beijing

Asia and Pacific  
(APAC) Office  
Bangkok



THANK YOU