

STANDARDS EVOLUTION WORKSHOP

The role of standards in the
evolving European airspace

10 November 2020

Jorge PEREIRA

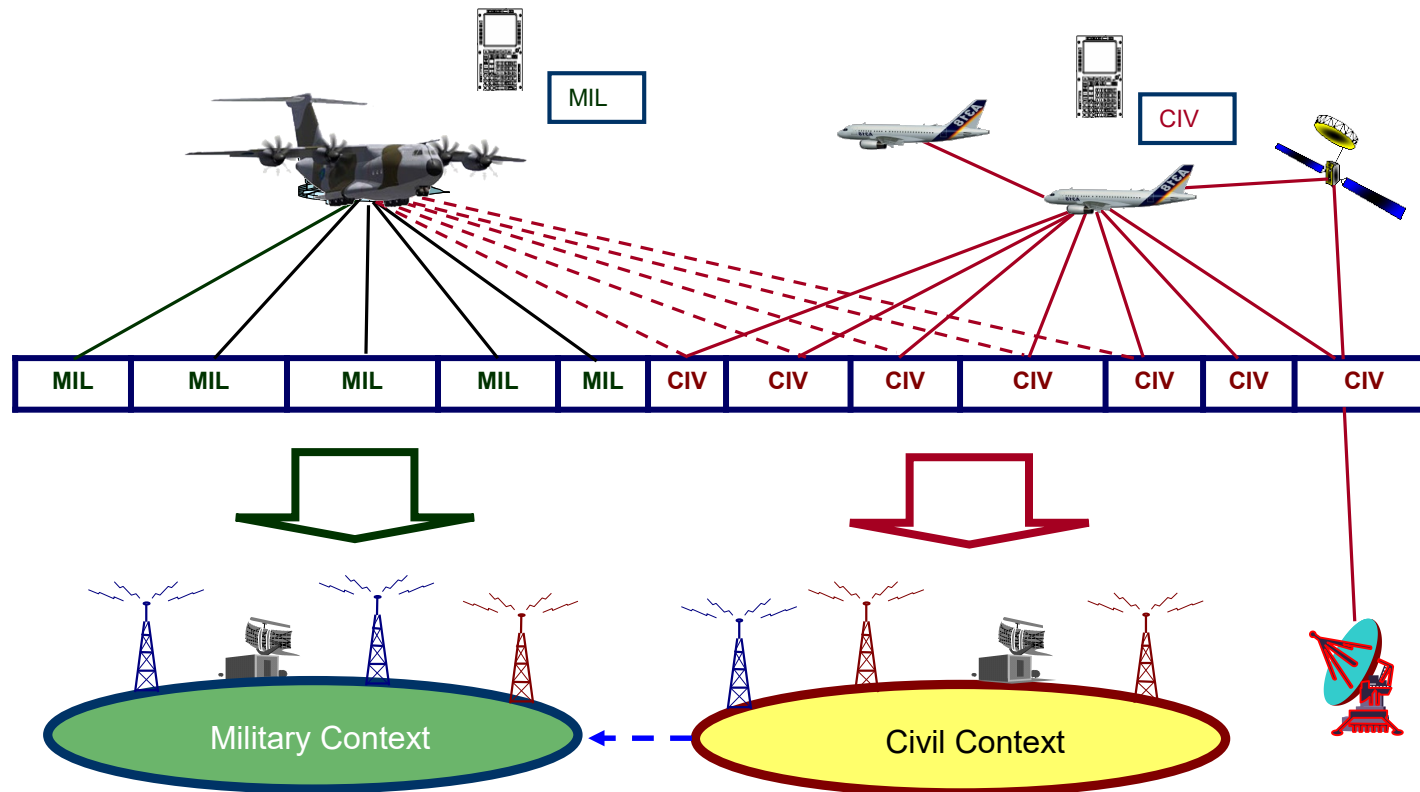
Head of CNS Coordination Unit

Civil-Military ATM Coordination Division

EUROCONTROL

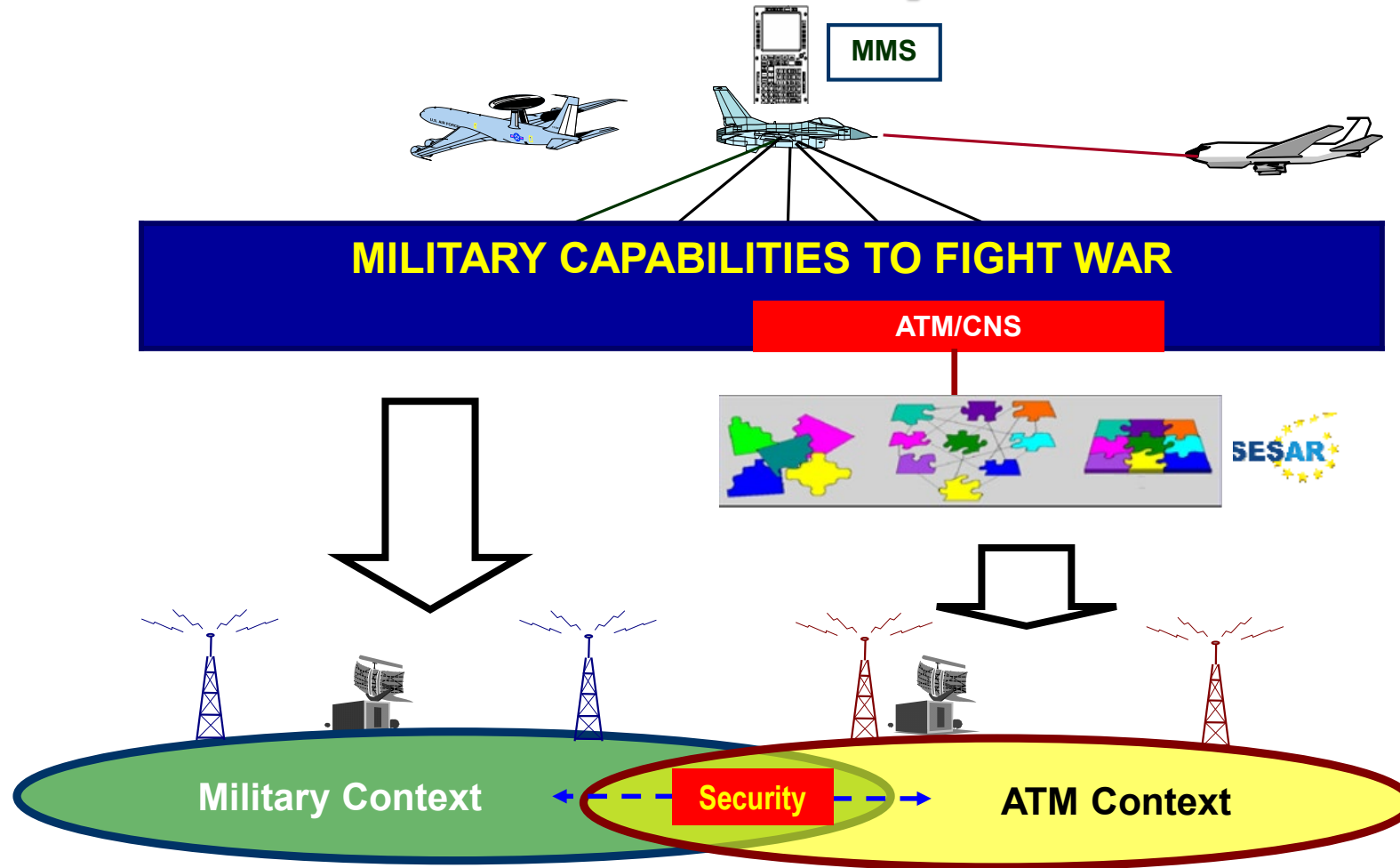


One Sky and Two Systems ?



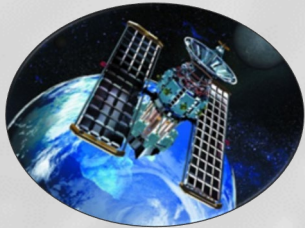
Result: Senseless equipage, exemptions, special handling, segregation, ATC workload, cost

A common civil-military infrastructure !



Optimized equipage, rationalized infrastructure, seamless accommodation, limited technical impact and cost

Aviation infrastructure modernization calls for civil-military interoperability



Satellite Technologies



Advanced NAV and SUR
(e.g. PBN, ADS-B)



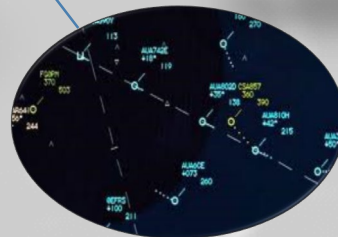
Air-Ground Data Link



Aircraft Centric



Automation and Connectivity



Performance-Based
Remote/Virtual Services

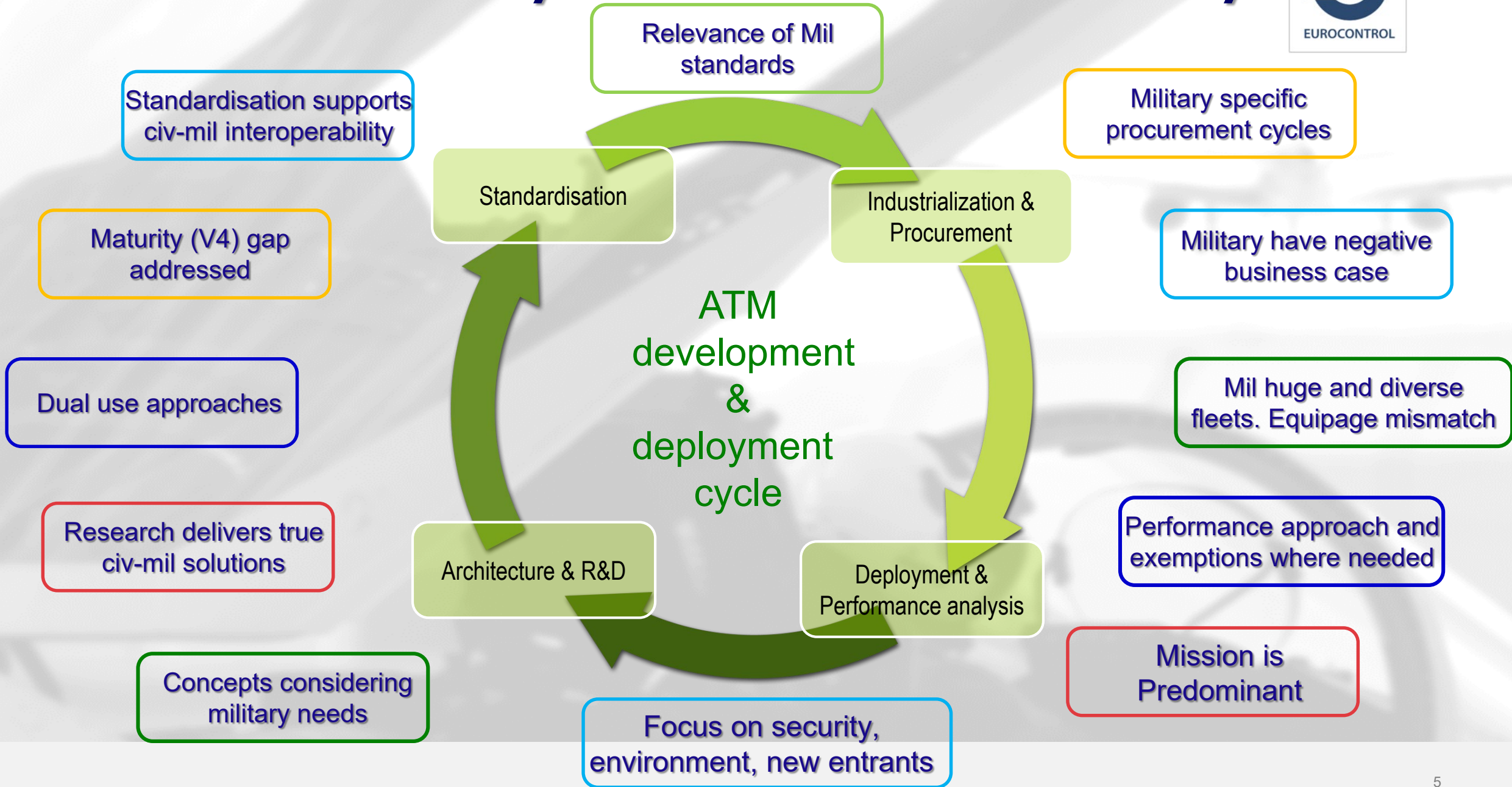


Accommodate, integrate, facilitate military ops at lower cost and with reduced technical impact !



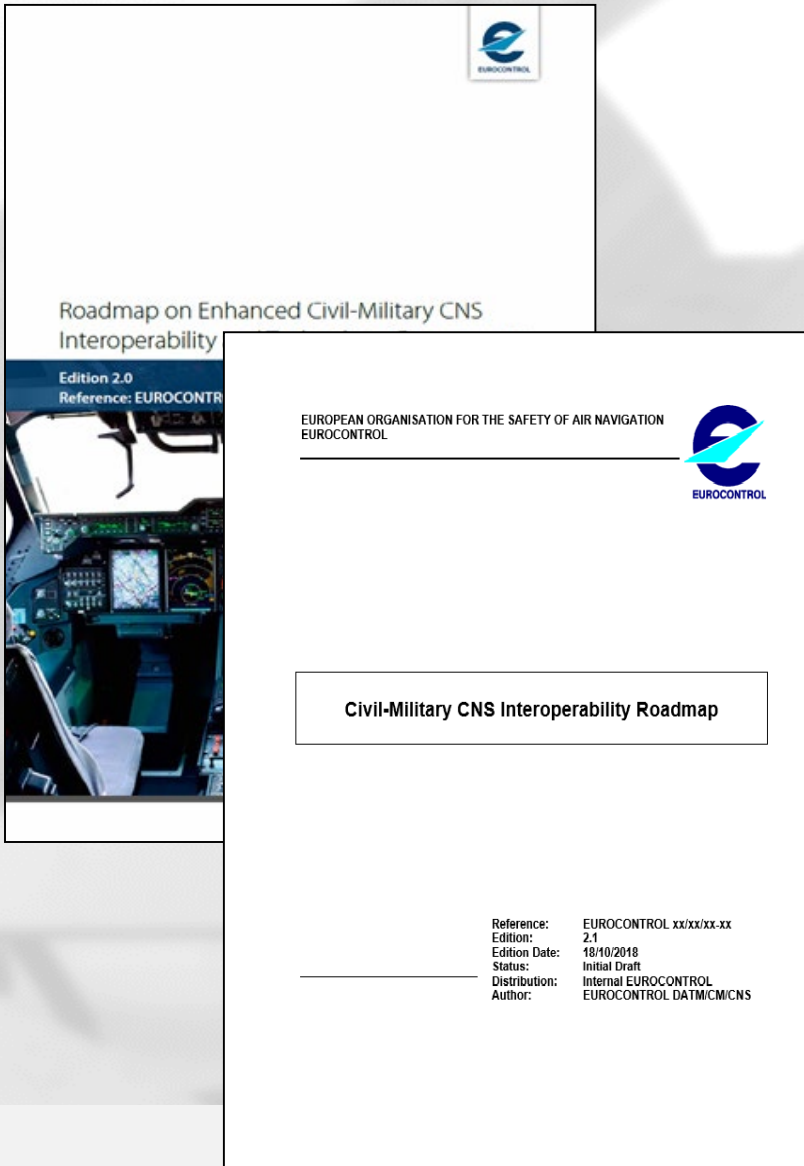
Specific military requirements considered during the entire ATM lifecycle !

ATM Life Cycle must be civil-military



Civil-Military CNS Interoperability Roadmap

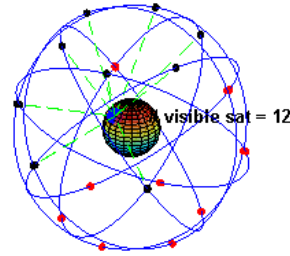
Edition 3.0 endorsed by Military ATM Board on 07/10/2020



- Non Binding
- Aligned with ICAO GANP, ATM Master Plan and Military Aviation strategy
- Improve interoperability, exemptions where needed
- Lower cost with capability reutilisation (dual use)
- Performance based approach is key
- Cope with civil infrastructure evolution
- Spectrum, certification, security covered
- Standardisation in Chapter 11
- NATO positions referenced
- Military Authorities decide on deployment

Civil-Military CNS Interoperability Roadmap (updated Edition 3.0)

Outline of key technical recommendations

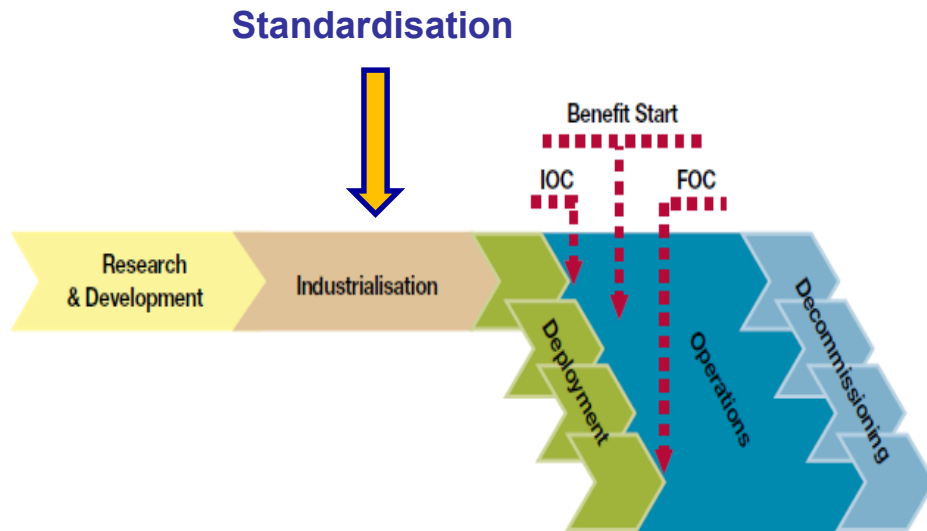


- Move towards IP
- Consider SWIM
- Information Exchange Gateway
- Security
- Equip for 8.33 (keep UHF)
- Data link for CPDLC and i4D
- Cope with DLS multifrequency
- FCI and SATCOM synergies

- GNSS restricted signals (e.g. GPS/PPS)
- Cope with PBN with benefit of performance based approach
- Ensure transition for low capability a/c
- Influence A-PNT (TACAN)
- Key trajectory functions based on military avionics

- Retain Independent Non Cooperative. consider MSPSR
- Equip for Mode S and ADS-B but consider synergies with IFF
- Build upon available equipage for ADS-B. Security
- Consider 1030/1090 RF
- Enhance surveillance data sharing

Standardisation is a fundamental civil-military “glue”



- Standardisation challenges for military:
 - to be able to contribute to civil standardisation
 - to publicise civil standards within military
 - gather appropriate military expertise
 - adequate balance between Transatlantic and European interoperability
- Civil and military standards must converge where infrastructure is shared
- Resources are limited but there is a need to influence civil standardisation* for the integration of military needs
- In some cases, tailored standards are needed to benefit from performance based approaches
- Military standardisation is to be considered

* EASCG, EUROCAE, RTCA, CEN, CENELEC, ETSI, EASA, EUROCONTROL, ARINC, SAE, etc.



"As civil as possible, as military as needed!"

Thank You!

jorge.pereira@eurocontrol.int
www.eurocontrol.int/mil

