International Military Airworthiness Regulation Conference

Australian Adoption of EMAR and benefits

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Purpose

- Australian adoption of EMAR and benefits
  - History of Australian Defence aviation safety regulation
  - Why pursue EMAR?
  - How did Australia adopt and implement?
  - Benefits of adoption to Australia
History

Replaced by Defence Aviation Safety Regulations (DASR) with effect 30 Sep 16
Key issues with historical airworthiness regulations
- Generally not outcome / hazard based – inefficient$
- Complex / not particularly useable
- Unique nature did not readily support recognition
- Did not reflect contemporary practice

Recognised deficiencies in safety assurance
- continuing airworthiness
- ongoing type certification management
- production assurance
- recognition of prior certification
- risk characterisation and escalation
- reporting and management of unsafe / unairworthy condition
Why pursue EMAR?

Civil International

AUS Civil Aviation Safety Regulations

Military International

Common AUS Military Regulations/Policies For Air, Land and Sea Materiel
Australian adoption of EMAR - DASR
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- EMAR are requirements only, and need to be implemented within a host country’s regulatory framework to take effect – so nil sovereignty issues

- Adoption of EMAR – *minimal change* from requirements (EMAR) to regulations (DASR)
  - Only essential regulation changes to provide required flexibility for extant global military environment
  - Most changes focused on Acceptable Means of Compliance (AMC) / Guidance Material (GM)

- AUS unique changes readily identifiable - traceability to EMAR / EASA
  - Associated alignment with the FAA
Australian adoption of EMAR - DASR

• Smart user interface
  • Regulations developed and published using Off The Shelf software
  • Integrated regulations, AMC and GM
  • Internet hosted, S1000D compliant, downloadable

• Progressive rollout of full EMAR based DASR (66 and 147)

• DASR updates – maintain alignment with EMAR cognisant of EASA
  • Eg EMAR 145 Ed 1.2 dated 4 Oct 16
  • Eg EMAR 21 Ed 1.2 dated 4 Oct 16
Australian implementation of DASR

• Lessons learned
  – EMAR implementation guidance, other regulation change case studies
  – Lever off strong AUS airworthiness culture from historical organisational approvals and unique regulations

• AUS Defence Industry engagement – early and continuous

• Applicable to all Defence registered aircraft
  – Recognised need to apply elements of 21, M and 145 concurrently

• Take advantage of DASR flexibility, including derogation clauses

• Sought executive support – engineer, aircrew and logistics * ranks
Australian implementation of DASR

- Phased implementation for regulated entities (from 30 Sep 16)
  - *Phase 1: Low risk, low benefit* – minimal change, lock in current level of safety
  - *Phase 2: Low risk, high benefit* – address DASR shortfalls, exploit flexibilities and efficiencies

- The scope of change needed to be clearly understood, neither overstated nor understated
Australian implementation DASR

- Defence and some Industry regulated entities transitioned 30 Sep 16 (Phase 1 only)
- Establishment of transition arrangements for entities still operating under historical organisational approvals
- Significant investment in DASR promotion, education and training
- Additional capacity within the Defence Aviation Safety Authority
  - Reduced surveillance during implementation
Benefits of EMAR adoption to Australia

• Common global airworthiness language / lexicon
• Increased and defensible safety assurance, commensurate with global practice
• Simpler recognition (airworthiness instruments and organisational approvals)
  – Aligned / harmonized implementing regulations
  – Aligned / harmonized codes (EMACC – MIL HDBK 516)
Benefits of EMAR adoption to Australia

- Commanders freedom of action with outcome based regulation
- Increased interoperability with coalition and regional partner states
- Opportunity to exploit multi-customer support arrangements, such as global supply chains (spanning military and civil operations)
- Blended civil/military sustainment arrangements and lateral recruitment arrangements with civil aviation
Benefits of EMAR adoption to Australia

• Reduced constraints and increased competition amongst Defence Industry
• Leverage off exemplar aviation safety authorities
  – Evolution of benchmark implementing regulations and airworthiness codes
  – Understand ‘authority best practice’ from other safety authorities (civil and military) / ICAO
• Strengthened ties with Australian Civil Aviation Safety Authority
Concluding remarks

- Australia pursued adoption of EMAR to replace regulations that had fundamental structural issues and safety assurance deficiencies
- Australia recognises EMAR as the emerging global military airworthiness regulation convention
- Adoption of EMAR in DASR addresses safety assurance deficiencies
- DASR provide the opportunity for reduced cost through:
  - ICAO based, outcomes based regulation
  - Implementing a globally recognised system enabling improved recognition, interoperability prospects and reduced barriers to Industry
Questions

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