

Adoption of EMAR 21 by the Australian Defence Force



During 2015/16, the Australian Defence Force (ADF) used our expertise to help them prepare for the transition to European Military Airworthiness Requirements (EMARs) which are being adopted into Defence Aviation Safety Regulations (DASRs) during 2016-2018. This engagement focused on both Initial and Continuing Airworthiness. After our initial training, the ADF used our materials to generate their own Continuing Airworthiness training programme, but used our services to assist further with Initial Airworthiness training – which is the focus of this case study.

Client Profile

Part of the Australian Defence Aviation Safety Authority, the Australian Directorate General Technical Airworthiness (DGTA) was formed in 1988, to manage the technical airworthiness of Defence aircraft. It is an integrated agency incorporating all three military services; Air Force, Army and Navy, as well as civilian personnel.

The Challenge

With our practical experience in the Initial Airworthiness domain, and due to our partnership with the EDA on setting and maintaining the Defence Standard for Continuing Airworthiness across Europe with the EMAR requirements, Baines Simmons was approached by the DGTA to help the Australian military and industry prepare for the transition to DASRs within a short timeframe, and specifically with:

- ▶ Aiding their understanding of the EASA framework from which EMAR 21 originates
- ▶ The militarisation of the regulation and preparation of supporting guidance material

The Solution

Baines Simmons approached this challenge with a 4-phase solution:

- ▶ **Phase 1:** October 2015, training of more than 50 DGTA and other Defence staff members to prepare them for the transition.
- ▶ **Phase 2:** April 2016, training of ADF personnel residing either within the authority or within regulated organisations, to help prepare them for forthcoming change.
- ▶ **Phase 3:** During this third phase, we will support the ADF and industry by providing additional training and assistance.
- ▶ **Phase 4:** During this final phase we will provide assistance to the regulator and to industry to exploit the technical, operational and financial benefits of moving beyond minimum compliance to performance.

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The Process

- ▶ **Phase 1:** Training was focused on a) understanding the intent behind the EDA and the EMAR 21 requirements, not just the technical requirements, and how they can be implemented in the real world; b) the differences between EASA Part 21 and EMAR 21 and c) areas where EMAR 21 will most probably be updated in the near future. This was repeated with two major defence sub-contractors to prepare them for the transition and also to enable them to comment constructively on the draft DASRs.
- ▶ **Phase 2:** Training material was adapted to cater for lessons learned since October 2015, with a mapping exercise against the current version of the DASR. In addition, we provided advice and expertise to help some key industry partners with the compilation and content of their Design Organisation Expositions (DOEs) along with the supporting Design Assurance System (DAS) requirements.
- ▶ **Phase 3:** During this third phase, we will support the ADF and industry by:
 - ▶ Providing additional training, as required, in support of any other DASR Subparts
 - ▶ Assisting the DGTA with the customisation of DASR 1, especially if detail from the existing Technical Airworthiness Manual (TAM) might be usefully incorporated as additional guidance material
 - ▶ Preparing the regulator for their surveillance duties and providing Q&A support during the DOA and POA award process
 - ▶ Assisting industry members with the compilation of their Expositions and supporting processes
- ▶ **Phase 4:** For this phase we will support the regulator and industry to reap value from the EMAR-based regulatory system. Based on a comprehensive understanding of regulatory content and intent and, as the approach to compliance and performance-based oversight matures, we will support both regulator and industry using our proprietary framework for management organisational safety performance, SMARRT MAP™.

The Results to date (Phases 1&2)

- ▶ DGTA have gained a better understanding of the principles of the implementation of EMAR 21, resulting in a slight revision to their approach, to cater for the unique challenges inherent in the adoption of what is essentially a civil approach to certification in the military domain.
- ▶ DGTA have gained a better understanding of how the Part 21 output integrates with the Continuing Airworthiness requirements already developed, to support through-life aircraft safety and airworthiness.
- ▶ DGTA have a clearer focus on the advantages of gaining organisation and design performance within the Part 21 sectors.

The services employed to deliver these results

Consulting support

CRO7: Regulators' Advisory Support

Training courses

TR81: EMAR 21 Subpart J – Successfully Applying the Requirement

TR80: EMAR 21 Subpart G – Military Production Organisation Approval (POA) Essentials