Implementation of European Military Airworthiness Requirements (EMAR) in the German Armed Forces

2016 International Military Airworthiness Regulation Conference
• GMAA – Structure & Processes
• The way to EMAR
• EMAR Regulatory Environment
• Benefits
• EMAR Weapon Systems
• Impact on the „Operator“
• Conclusion
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

GMAA Structure & Processes

Expertise and Safety for Military Aviation
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

The German MAA

2015 ff.

German Military Aviation Authority

...under one umbrella

BAIUDbw  BAAINbw  WTD 61 ML  Kdo H  MarKdo  Kdo Lw  KdoEins VbdeLw  KdoUstg VbdeLw  GeoinfoDBw  AFSBw

Expertise and Safety for Military Aviation

IMARC 2016
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

International Network

NATO
EUROCONTROL
EASA
European Defence Agency
EU Kommission
Partner Nations

Expertise and Safety for Military Aviation
The way to EMAR
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

Manned Aviation

Unmanned Aviation

National Regulations!

Expertise and Safety for Military Aviation
But ...!
Roadmap on an EU-wide Military Airworthiness Authorities Forum (MAWA)

10th November 2008

BACKGROUND

Each MS operates an aviation safety system independently from each other and individually each is responsible for the regulation of its aircraft. As a result, all military airworthiness activities are conducted and regulated on a national basis and any harmonisation is only achieved at individual project level and repeated for each new project. It has become evident that in multinational programmes this generates many shortcomings and is a primary cause for delay and additional cost. In this area there is a unique opportunity to agree on an EU-wide harmonisation and unification strategy on military airworthiness. An EU-wide harmonisation on military airworthiness will also be of benefit for the European industry and thus strengthen the European Defence Technology and Industrial Base (EDTIB).

To achieve harmonisation of military airworthiness regulations, the following steps are required:

1. Military Airworthiness Authorities (MAWA) need to be unified in one platform to enable a proper exchange of information and views;
2. Charting of national military airworthiness rules and regulations within Europe is necessary to gather relevant national documents that need to be compared and assessed;
3. These national military airworthiness rules and regulations within Europe need to be harmonised to fight fragmentation and unify views and approaches;
4. Common, EU wide, military certification procedures and requirements need to be developed in parallel and from an early stage having due regard as far as practicable with existing civil and military rules and regulations to ensure compatibility and interoperability; and
5. An agreed set of goals for adoption by pMS MAWA.

The EDA Steering Board in NADs formation has tasked the Agency to work on the establishment of an EU-wide forum for Military Airworthiness Authorities, to enable initial discussions on harmonising military airworthiness. The Ad-Hoc Project Group on Military Airworthiness Harmonisation (AHPG MAWH) was set up and has prepared this draft.
Combined DEU-FRA Initiative

• Intensify drafting European Military Airworthiness Requirements (EMAR)

• Call for commitment to implement EMAR
EMAR Regulatory Environment
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

German Regulatory Framework

A1-1525
Traditional Approach

DEMAR
European Approach

Permanent Flight Clearance
Risk Based Approach

Expertise and Safety for Military Aviation
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

EASA  →  EMAR  →  DEMAR

Add military specialities
Remove choices

Part 145
Part M
Part 147
Part 66
EMAR 145
EMAR M
EMAR 147
EMAR 66
EMAR 21
DEMAR 145
DEMAR M
DEMAR 147
DEMAR 66
DEMAR 21

Expertise and Safety for Military Aviation
Recogizability LufABw

EMAD R
Recognition

MARQ
Recognition Question Set

Mutual Recognition

DEMAR 21
CERTIFICATION
DESIGN - PRODUCTION

DEMAR M
CONTINUING
AIRWORTHINESS

DEMAR 66
LICENSING MAINTENANCE
PERS.

DEMAR 145
MAINTENANCE
ORGANISATIONS

DEMAR 147
MAINTENANCE TRAINING
ORGANISATIONS

Expertise and Safety for Military Aviation
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

- Recognition
- Approval
- Licensing

New Standards

DEMAR 21
DEMAR M
DEMAR 145
DEMAR 66
DEMAR 147

Expertise and Safety for Military Aviation
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

Benefits
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

Benefits

Transparency & Trust
Conformity
Efficiency
Harmonization
Continuity
Quality Standards

Recognition LufABw = Business Card within the MAA-Community

Expertise and Safety for Military Aviation
...why all that?
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

Recognition

Nations

USA  NLD  ESP  ITA  GBR  FRA

21  66  145  147  M  ...

EF, A400M, NH90, TIGER, RPAS, TRITON

Weapon Systems

Fill the Void!

Expertise and Safety for Military Aviation
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

- Common Military Aviation Standards
- Synergies
- Mutual Trust
- System of Systems
EMAR
Weapon Systems
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

Effort, Profit

Regulations

Current Weapon Systems

Expertise and Safety for Military Aviation
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

DEMAR Application in the German Armed Forces

FMoD

Federal Ministry of Defence

GMAA
JSS HQ
Med S HQ
Army HQ
Air Force HQ
Navy HQ
Cyber HQ

Federal Office for Equipment, IT and In-Service Support of the Bundeswehr

Flying Services

Test Flights

Expertise and Safety for Military Aviation
Luftfahrtamt der Bundeswehr
German Military Aviation Authority

Next to come:

Certificate of Airworthiness

Preliminary Flight Release

Preliminary Flight Release

DEMAR
Impact on the Operator
Factors for the User / Operator

- Force Structure
- Training Organisation
- Regulations
- Licensing
Conclusions
You’re invited to Join the Club
Implementation of European Military Airworthiness Requirements (EMAR) in the German Armed Forces

2016 International Military Airworthiness Regulation Conference