Military AIRWORTHINESS requirements, PROCESSES and PROCEDURES for OCCAR PROGRAMMES

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OCCAR is an international organisation for the management of collaborative defence equipment programmes

235 Staff, 4 Sites
Budget 2012: 3.2 Billion EUR

Our mission
To facilitate and manage collaborative European armament Programmes through their life cycle and Technology Demonstrator Programmes to the satisfaction of our customers.

Current Member States are:

Participating States:
OCCAR Principles

- **Cost-effectiveness**
- **Harmonisation** (requirements, methods, technology)
- **Competitive industrial base**
- Renunciation of "Juste Retour" -> **Global Balance**
- **Open to other European countries**

- **Improved efficiency and reduced costs** for armament cooperation
- **New programme management methods**
- **More effective procedures for granting contracts**
EDA-Occar Interface defined by EDA-Occar AA signed on 27th July 2012

No duplication
No exclusivity

Occar-Namso MoU signed

National or common logistic organisations
Industry
Other agencies

Capability development process

Identify & harmonise capability needs
Identify gaps
Assess current capabilities/systems
Set priorities
Facilitate co-operation
Investigate/demonstrate technologies
Establish collaborative programme
Manage collaborative programme
Operate systems

Occap
Cooperation with EDA

OCCAR / EDA Administrative Arrangement and Security Agreement signed 27 Jul 2012

- **Intensification of OCCAR-EDA cooperation**
  - > Coherent, Complementary and Effective

- **Smooth transfer of programmes from EDA to OCCAR**
  - > Maximum efficiency for the Nations
Contracting AIRWORTHINESS for OCCAR aeronautical Programmes
OCCAR Air Programmes

**Tiger**
- 3 Participating Nations
- 184 a/c
- Certification Qualification (CQ) part of production contract executed by national experts/Authorities

**A400M**
- 6 Participating States
- 170 a/c
- Certification Qualification (CQ) part of production contract executed by dedicated CQ organisation

01/10/2012
(Potential) Programmes OPPORTUNITIES

- Ait-to-Air Refuelling
- European MALE UAV
- Heavy Lift Transport H/C
Airworthiness Management – REQUIREMENTS

Today:

✈️ Definition of AW management process on a programme by programme basis (e.g. A400M)

OCCAR’s Vision:

✈️ Harmonised generic C&Q Organisation (CQO) based on agreed fundamental airworthiness principles
✈️ Unique AW Management process defined for OCCAR Programmes
✈️ Reference to EMAR process
In order to minimise the time, cost and any associated delay, it is essential that Programme Participating States (PS) reach agreement on the fundamental airworthiness principles:

- Respect of Essential AW requirements
- Safety is paramount
- Rely on civil certification organisation (e.g. EASA) if possible
- Mutual recognition of the results from certification activities without further need for investigation
- Exchange of relevant information amongst the PS
Certification and Qualification (C&Q)

- Integrated process
- Synergies from development, qualification, certification

A C&Q Organisation (CQO)

- Necessary certification & qualification activities are satisfactorily carried to allow declaration of Type Certification by the NMCAs and the Type Acceptance by OCCAR-EA
  - CQ Committee (CQC)
  - CQ Team
  - Military Design (Production) Organisation Approval Team (MD(P)OA Team)
Should be defined by OCCAR, the NMCAs, the CQO and the Contractor prior to engaging in a contact

NMCA are entirely responsible for the Military Certification following a recommendation of the CQC (w/o impacting the rights and legal responsibility of NMCA)

Process should be agreed between the CQO the civil certification organisation e.g. EASA and the contractor

CQC manages the qualification compliance process of a Programme and provides recommendation to OCCAR-EA to accept the qualification
EASA Type Certification

CQC recognition of EASA Type certificate and Military Certification Process

Qualification Process

Same body of evidences (analysis, ground and flight tests).
Coordination of complementary demonstrations to avoid duplication and to minimize effort
Civil Certification

Military Certification

Civil Certification Basis
EASA CS 25, CS AWO, CS-E CS-P ... + CRIs

Military Airworthiness Basis
Civil Basis + MCRIs

Aircraft Technical Specifications
Contract Exhibits A and P

EASA Certification Teams

EASA civil TC

“Aircraft Certificate of Design” (CoD) recognised by Military CQ Organisation (CQC)
Airworthiness Mgt Procedure - OMP AW

Ensure that for OCCAR aeronautical programmes AW is contracted in an appropriate manner

- Effective and efficient conduct of certification activities
- Consideration of interfaces with qualification process
- Definition of fundamental AW principles
- Definition of Roles & Responsibilities
- Identification of AW rqmts to be incorporated into the contract
- Description of management processes and procedures

Execution completed by NMCA supported by the OCCAR-EA

OMP applicable to new OCCAR programmes

Aspects of “Continued AW” to be developed
OMP AW – Structure

Main document:
- Definitions, Purpose, Scope
- AW Principles and Mgt Processes
- Roles & Responsibilities
- Inputs to Aeronautical Contracts (DDP, Prod, Maint, ISS)

Annexes:
- A: Essential AW rqmts (based on Annex I of EC 216/2008 taking into account specific aspects of military design and operations)
- B: min. safety rqmts to be addressed within OCCAR contracts
- C: Military Flight Test Permit (MFTP)
- D: Certification and Qualification activities -> Type Acceptance
- E: Involvement of Airworthiness Authorities
- F: Certification and Qualification Organisation
Joint Military Airworthiness Group (JMAG) established by Military Airworthiness Directors of OCCAR Member States and supported by OCCAR-EA produced a draft OMP.

Final review foreseen before end 2012 prior to submitting OMP to OCCAR Board of Supervisors (BoS) for approval.

OMP contains reference to EMAR harmonisation process.

Required aspects related to “Continued AW” to be incorporated.

OMP and EMARs must stay aligned in order to avoid duplication.