

Aerospace, Security
and Defence Industries
Association of Europe

AN INDUSTRY VIEW ON THE BENEFITS OF COOPERATION AND RECOGNITION

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ASD - A BROAD EUROPEAN FOOTPRINT

~ 3,000 companies

National association members

AUSTRIA

Austrian Aeronautics Industries Group – AAI

Austrian Defence Industry Association – WKO

BELGIUM

Agoria

CZECH REPUBLIC

Association of the Czech AeroSpace Industry – ALV

Defence and Security Industry Association of the Czech Republic – AOBP

DENMARK

DI – Danish Defence and Security Association

FINLAND

Finnish Defence, Aerospace and Security Industries – AFDA

FRANCE

French Aeronautics and Space Industries Association – GIFAS

French Defence Industry Council – CIDEF

GERMANY

German Aerospace Industries Association – BDLI

Federal Association of the German Security and Defence Industry – BDSV

GREECE

Hellenic Aerospace Security and Defence Industries Group – HASDIG

SEKPY – Hellenic Manufacturers of Defence Materiel Association

ITALY

Italian Industries Federation for Aerospace, Defence and Security – AIAD

NETHERLANDS

Dutch Industries for Defence and Security – NIDV

NORWAY

Norwegian Defence and Security Industries Association – FSI

POLAND

Association of Polish Aviation Industry – SPPL

PORTUGAL

AED Cluster Portugal

ROMANIA

Defence Industry Shareholders Organization of Romania – O.P.I.A.

SPAIN

Spanish Association for Defence, Security, Aeronautics and Space – TEDAE

SWEDEN

Swedish Security and Defence Industry Association – SOFF

TURKEY

Turkish Defence and Aerospace Industry Manufacturers Association – SaSaD

UNITED KINGDOM

UK Aerospace, Defence, Security and Space Industries Group – ADS

Direct company members

AIRBUS



BAE SYSTEMS

DIEHL



FINCANTIERI

GEN AEROSPACE

HENSOLDT

indra



LEONARDO

LIEBHERR

MBDA

NAVAL GROUP

Navantia

Patria

RHEINMETALL

Rolls-Royce

SAAB

SAFRAN

sopra steria

THALES

ASD VISION FOR MILITARY AIRWORTHINESS IN EUROPE

The ASD Vision

A single European Military Airworthiness Organisation (JAA Model) owning a suite of European Military Airworthiness Requirements used by all participating Member States to govern peacetime European Military Airworthiness activities...

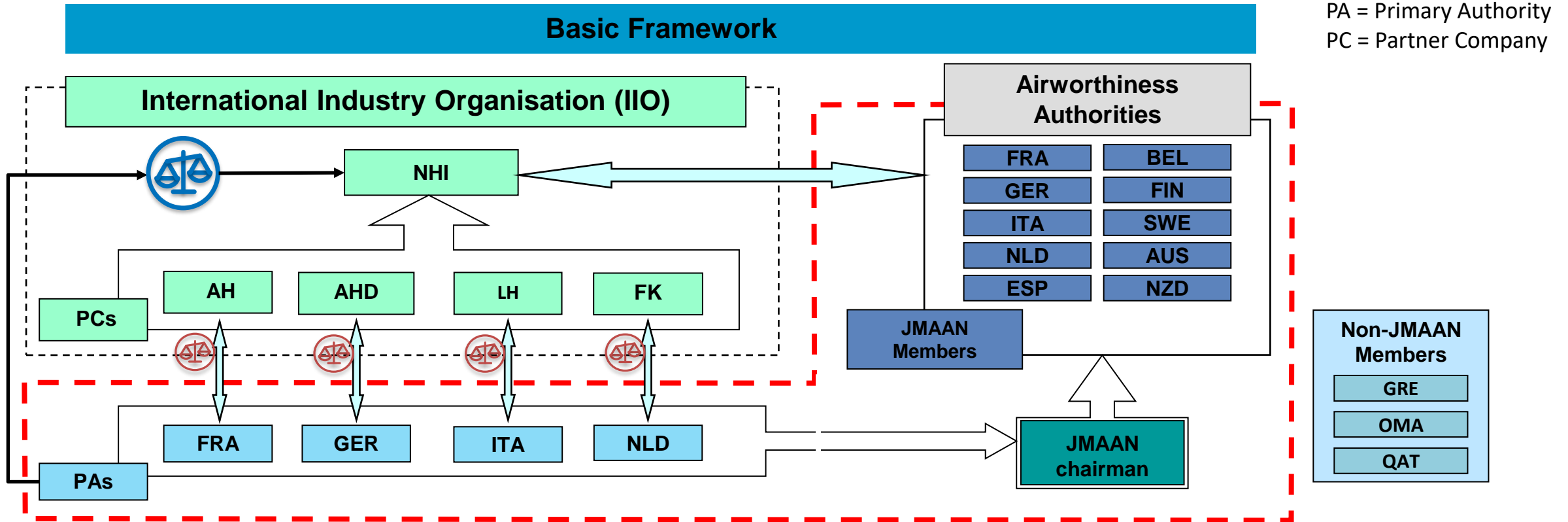
...facilitated by Mutual Recognition, consistent implementation and Standard Industry Arrangements including Obligations and Privileges

MULTINATIONAL COLLABORATION FOR NH90

Co-operative Set-up:

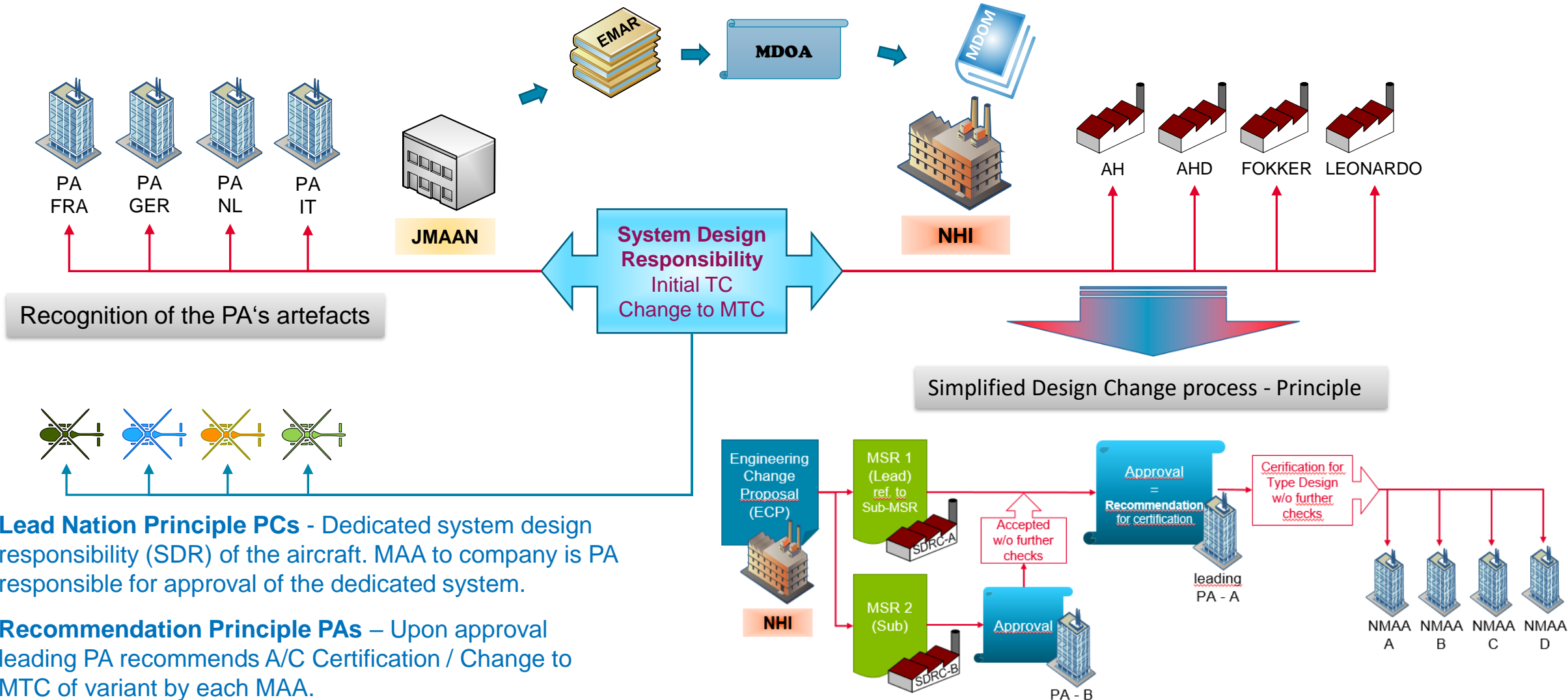
Governmental: JMAAN – Joint Military Airworthiness Authority for NATO Helicopter
Led by 4 PAs supported by Nations operating NH90

Industrial: NHI – NATO Helicopter Industries
coordinating company of the International Industrial Organisation IIO = NHI + 4 PCs



NH90 PRODUCT CERTIFICATION APPROVAL

Basic Framework



Lead Nation Principle PCs - Dedicated system design responsibility (SDR) of the aircraft. MAA to company is PA responsible for approval of the dedicated system.

Recommendation Principle PAs – Upon approval leading PA recommends A/C Certification / Change to MTC of variant by each MAA.

NH90 - SUMMARY

- Successful cooperation in NH90 for more than 15 years based on formal Industry and Authority commitment, Mutual recognition between Primary Authorities paramount.
- If all Primary Authorities provide Privileges, there is no additional effort for any one of the NHI Partner Companies.
- Complexity of both product certification and organizational approval reduced through application of one common regulatory baseline of EMAR, common processes and joint EMAR 21 oversight arrangements.
- Cooperation Set-up purely NH90 project-based – scope of NHI MDOA cannot be extended to other projects outside of established NH90 International Industrial Organisation.
- Arrangements in NH90, notably finding a robust cooperation framework for PAs resolved some of the issues the MAWA Forum faces in a similar manner.

A330 MRTT - A COMPLEX SUCCESSFUL STORY



77 orders
14 international operators

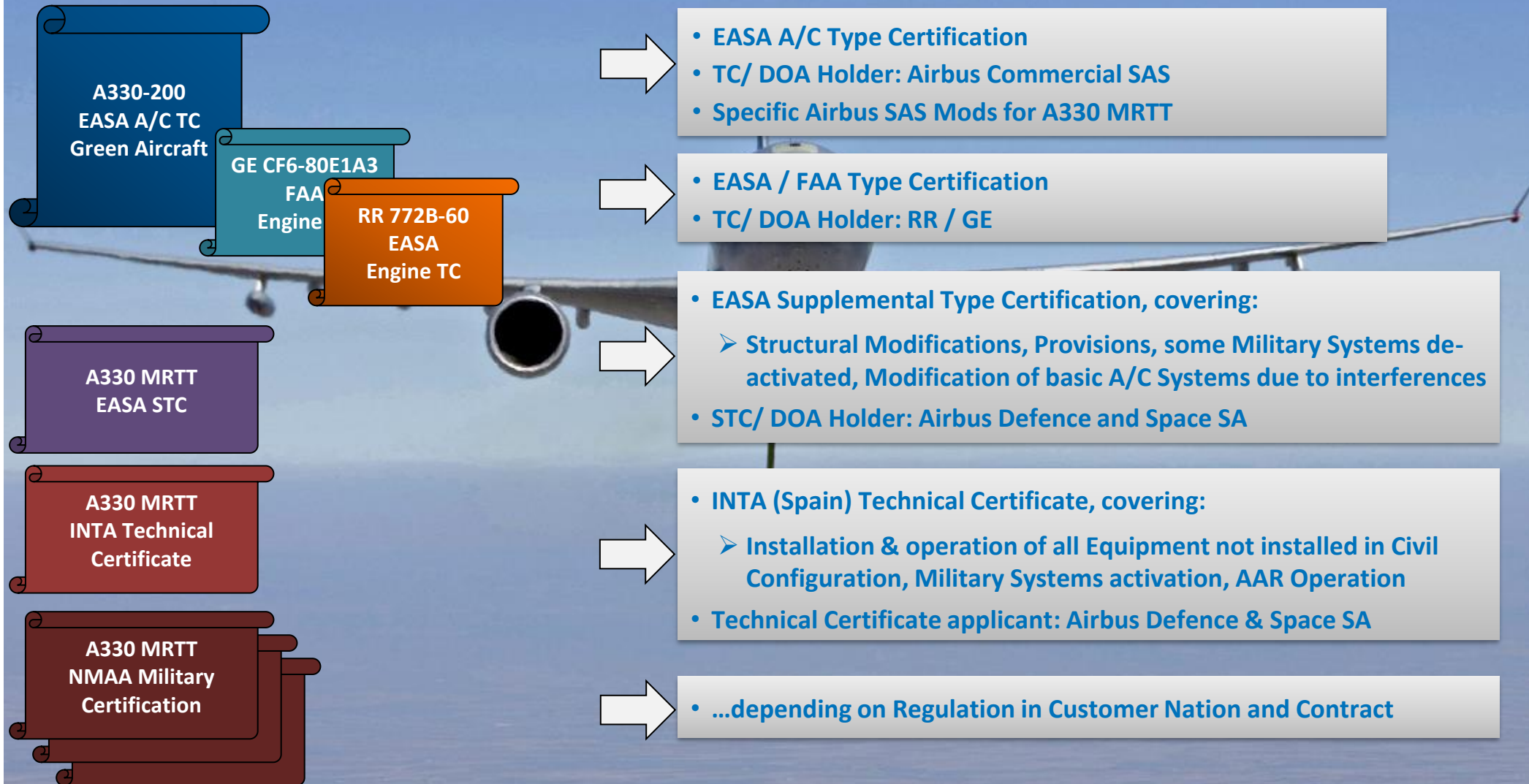
A330 MRTT
A Wide Customer Base.

Combat Proven - 58 A330 MRTTs in front line operations.

At the same time complexity to manage with different Airworthiness Regulations and multiple Competent Authorities involved.

A330 MRTT – COMPLEXITY IN AIRWORTHINESS DOMAIN

...with different Certificates and TC/STC Holders involved.



....AND A COMPLEX DOA ENVIRONMENT



- **Complex DOA environment:** DOA with EASA for the STC, MDOAs with several other NMAAs.
- **Different DOA privileges** depending on the applicable regulations and MDOA.
- **Complex design assurance system processes**, in particular for Continued Airworthiness.
 - Availability and Management of Airworthiness Artefacts different depending on applicable regulations and DOA / MDOA.
 - Different DAS procedures for same CAW artefact.
- **Complex Design - Production - Maintenance Interface set-up:** Interfaces of Design Organisation with Production (including spares) and Maintenance Organisations adapted depending on Programme.
- **Complex and duplicated management of changes to the Design Assurance / Management System and multiple / duplicated oversights of the same business for different purposes.**

...STARTING TO MAKE IT SIMPLER

2018: Approval of Airbus DS as EMAR21 J MDOA by French DGA for A330 MRTT.

Airbus DS hold PERAM21 J (adaption of EMAR21) MDOA by Spanish Military Airworthiness Authority DGAM for A330 MRTT, with similar privileges than French MDOA.

2021: Airbus DS - Holder of Spanish A330 MRTT TC issued by DGAM, covering all MRTT versions for the different customers.

- (1) A330 – 200 EASA TC Green Aircraft
- (2) ENGINE RR T772B/ GE CF6-80E1A3 EASA/ FAA TCs
- (3) A330 MRTT EASA STC
- (4) A330 MRTT INTA Technical Certificate



A330 MRTT Military Type Certificate by Spanish DGAM

A330 MRTT – BENEFITS FROM COOPERATION AND RECOGNITION

- Common reference based on EMAR / PERAM established as regulatory baseline, recognitions in place, standardised procedures.
- Simplified MDOA management and oversight approach. Common process and shared surveillance activities. Taking benefit from EASA expertise.
- Defined roles and responsibilities among different Competent Authorities participating in A330 MRTT.
- Direct consumption of in-service airworthiness artefacts (including Repairs and Technical Adaptations) with no further approval, based on Spanish MDOA and Spanish MTC (DGAM Acting as “Primary” Authority).
- Taking benefit of EASA activities, including regulatory rulemaking and potential surveillance activities, Cooperation between civil and military.
- One single Continued Airworthiness process, common to all the Nations.
- Make use of EMAR frame for retrofits in Spain environment.
- One single and consistent Design Assurance System, integrating all activities needed to ensure A330 MRTT airworthiness.
- Saving of time and resources for NMAA and Industry.

SUMMARY

- MRTT and NH90 are successful European multinational programs with developed maturity in cooperative frameworks.
- In MRTT and NH90 EMARs are accepted as a common reference for regulation of military Airworthiness, uniform implementation baseline adopted.
- Mutual acceptance of artefacts without further assessment in multinational programs facilitated by operating a common audit baseline for Organisation Approvals of Industry, Product Certification and recognition between involved NMAAs.
- Combining efforts in the area of Oversight Arrangements and Organisation Approvals enables sharing of resources with benefits and less effort for both NMAAs and Industry involved.
- Experiences and best practices drawn from multinational programs such as MRTT or NH90, for example agreeing a suitable framework for cooperation of involved NMAAs, could serve as a model to overcome some of the current MAWA Forum identified weaknesses.
- Industry aspiration for MAWA Forum to continue evolution towards a harmonised European Military Airworthiness System with a Permanent Central Cooperation Framework between NMAAs.



Thank you.



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