

# NATO Recognition of Airworthiness Authorities: Return of experience

Briefing to  
**EDA's MILITARY AIRWORTHINESS  
CONFERENCE**  
**Vilnius, 09-10 Oct 2019**

- **NATO Airworthiness Policy (NAWP)**
- **NAWP Implementation Plan**
  - **NATO Recognition Process (NRP)**
  - **AWAG Action Plan: Assessment of AAs**
- **Return of experience**
- **Conclusion**

## Main principles:

### ■ Applicability (para 7):

- all aeronautical products, parts and appliances
- owned, leased, rented or chartered

- by NATO



- by Member, non-Member, or Partner Nations and operated on behalf of NATO



👉 **Out of the scope:** all aspects of flight operations, such as operational procedures, flight standards, operator training, aircrew qualification and licensing, and aerospace control operations (para 8)

### ■ Aircraft certification is a sovereign responsibility (para 3)

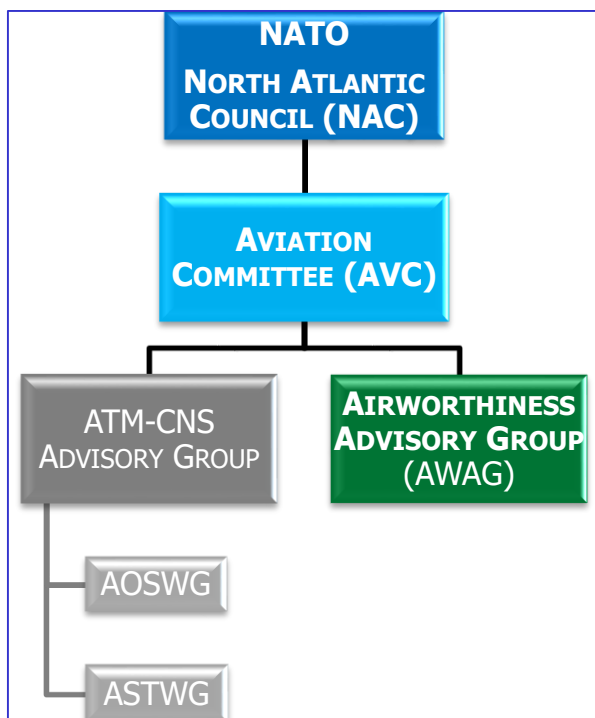
👉 **The NATO Airworthiness Executive (NAE) required by the NAWP is not an Airworthiness Authority**

## Main principles:

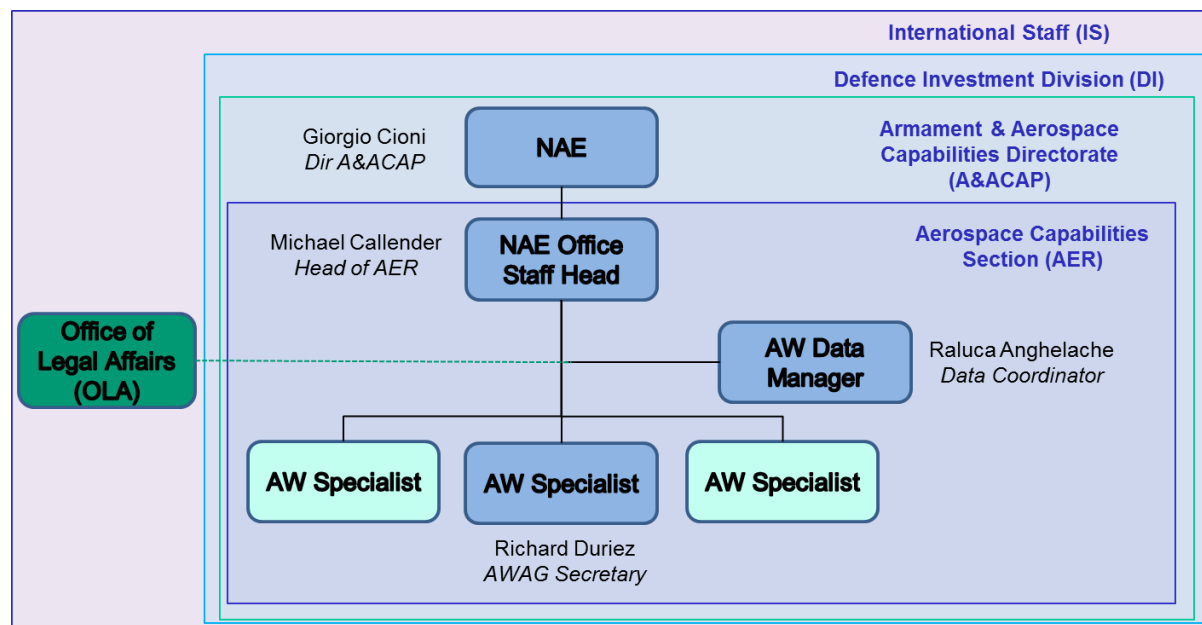
- All aeronautical products, parts and appliances provided on behalf of NATO shall be (para 9):
  - **certified as airworthy** by a [NATO Recognized Airworthiness Authority](#);
  - properly **controlled** in accordance with **approved continued airworthiness provisions**;
  - **operated** and **maintained** in accordance with **approved continuing airworthiness provisions**.
- ✎ Ensure airworthiness related materiel **risk process** exists (para 12)
- All work associated with the airworthiness process shall be performed by **authorized individuals** employing **approved processes** within **organizations accredited/approved** by a [NATO Recognized Airworthiness Authority](#) (para 10)

- NAWP: approved by the NAC on 18 JUL 2013
  - ↳ The NAE shall provide an Implementation Plan (IP) to be approved by the NAC before the policy takes effect
- NAWP IP: approved by the NAC on 01 JUL 2016

NAWP IP ⇒ **AVC, AWAG**



NAWP IP ⇒ **NAE Staff**

































NAWP IP ⇒ develop and implement a NATO Recognition Process (**NRP**)

- **Draft NRP** approved by AVC on 12 APR 2017
  - experimental phase: validation against a Pilot Project
- **NRP** approved by AVC on 20 DEC 2017
  - Purpose: launch NRP with MAAs
- **Refined NRP** approved by AVC on 25 OCT 2018
  - Together with **NRP Manual** approved by the AWAG on 10 Oct 2018 comprising:
    - Guidance for the NRP
    - Templates
      - NATO Assessment Team (NAT) nomination package + Guidance
      - NATO Recognition Plan (**RP**)
      - NATO Assessment Report (**NAR**)
      - NATO Recognition Certificate (**NRC**)



## AWAG Action Plan (APR 2017, updated annually on MAY 2018 and MAY 2019)

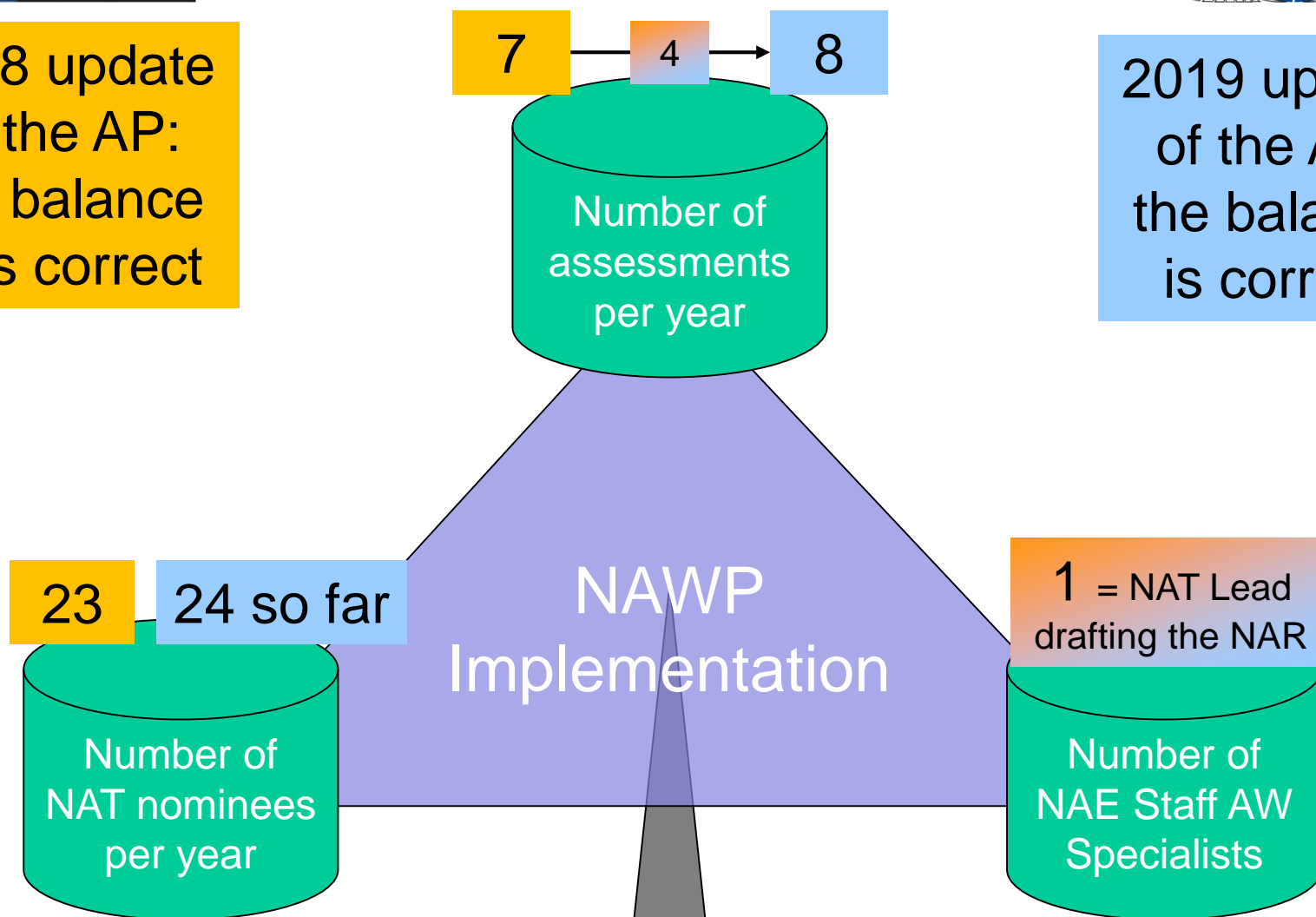
AA	Status
  MAA-NLD	<ul style="list-style-type: none"> <li>NATO Recognition on 10 JAN 2018 (NRC-0001)</li> </ul>
  DAAA	<ul style="list-style-type: none"> <li>NATO Recognition on 31 OCT 2018 (NRC-0002)</li> </ul> 
  DSAÉ +  DGA	<ul style="list-style-type: none"> <li>NATO Recognition on 31 OCT 2018 (NRC-0003)</li> </ul>
  CA MAA	<ul style="list-style-type: none"> <li>NATO Recognition on 01 MAR 2019 (NRC-0004)</li> </ul>
  NMAA	<ul style="list-style-type: none"> <li>NATO Recognition on 03 MAY 2019 (NRC-0005)</li> </ul>
  HUN MoD SAD	<ul style="list-style-type: none"> <li>NATO Recognition on 18 JUL 2019 (NRC-0006)</li> </ul> 
  DGAM	<ul style="list-style-type: none"> <li>NATO Recognition on 24 SEP 2019 (NRC-0008)</li> </ul>
  BMAA	<ul style="list-style-type: none"> <li>NATO Recognition on 23 AUG 2019 (NRC-0007)</li> </ul>
 3 TAAs (USN  , USA  and USAF  )	<ul style="list-style-type: none"> <li>Face-to-face visit on 05-08 AUG 2019</li> </ul>
  SN VLO	<ul style="list-style-type: none"> <li>Face-to-face visit in 2020/Q1 (if deemed necessary)</li> </ul>
  UK MAA	<ul style="list-style-type: none"> <li>Face-to-face visit in 2020/Q1 (if deemed necessary)</li> </ul>
 FAA,  Transport Canada  EASA (+ CAAs of EASA MS which are NATO Allies)	<ul style="list-style-type: none"> <li>NRP provisions for NATO Recognition without further assessment</li> <li>Allows to cover Third Country Operators operated into, within or out one of these States</li> <li>NATO Recognition expected before late 2019</li> </ul>



## Balance for NAWP Implementation

2018 update  
of the AP:  
the balance  
was correct

2019 update  
of the AP:  
the balance  
is correct



A proper balance is needed to achieve NAWP Implementation

## ■ Airworthiness System Overview

- Official exposition document (e.g. NL: Organisation Manual)
- Overview document specifically developed for the NRS (e.g. IT)
- Some regulations published in several languages, incl. English (e.g. CA, BE)
- Official or courtesy translation when regulation not published in English









## ■ MARQ


- The lighter the responses, the more requests for clarification
  - BE developed a MARQ companion book for more comprehensive responses with organisation charts and process charts

## ■ Additional information

- 👉 Recognition Certificates without Recognition Reports are useless
- 👉 MAA-to-MAA Recognitions are project driven and often EMAR based

## ■ One MAA or several MAAs?

- One MAA per service (e.g. US   ), each with its own regulation
- Two complementary MAAs (e.g. FR  ) under a single regulation
- MAA duties spread over different branches with close coordination and decisions taken by a joint Executive Board (e.g. BE )
- MAA decisions taken by an Airworthiness Board with members from the organic regulated community (e.g. ES )
- MAA under a Steering Board with the organic regulated community taking decisions on regulation and work plan (e.g. FR  )

 **There is no single universal solution:  
the NRP is able to assess any airworthiness system, globally**

- **Assess the level of independence of the MAA within the MoD**
  - Independence from operator influence
  - Independence from programme management and procurement
- **Question: is there sufficient independence?**
  - Some MAAs are directly under the Minister of Defence or report directly to the Minister of Defence
  - There is a decision making process ensuring the independence
  - The appointed authority is aware of the legal implications of duty of care

# Return of experience NRS

On-desk assessment with the information provided with the NRS (airworthiness system overview, MARQ, additional information):

👍 from the outside, it looks quite standard

👉 But sometimes inside the regulation, it is like...

Specific  
operating regulations

Code for  
airworthiness regulation

Basic aviation law/framework



feeling like Champollion:



## ■ EMAR or not EMAR: is that a question?

- No EMAR implemented (e.g. CA, US)
- EMAR implementation is still in planning phase
- EMAR anticipated implementation pending official regulation (e.g. BE)
- EMAR implementation in force,  
but limited to future and recent aircraft types
  - ❖ Living in parallel with a legacy regulation  
more (e.g. FR) or less (e.g. HU) EMAR compliant
  - ❖ A transition period for EMAR implementation has been defined
  - ❖ Progressive publication: EMAR by EMAR
- Legacy regulation only, but more (e.g. NL) or less EMAR compliant
- EMAR fully implemented as sole regulation



 **It does not matter: the NRP is EMAR agnostic**



# Return of experience NRS

Except a few,



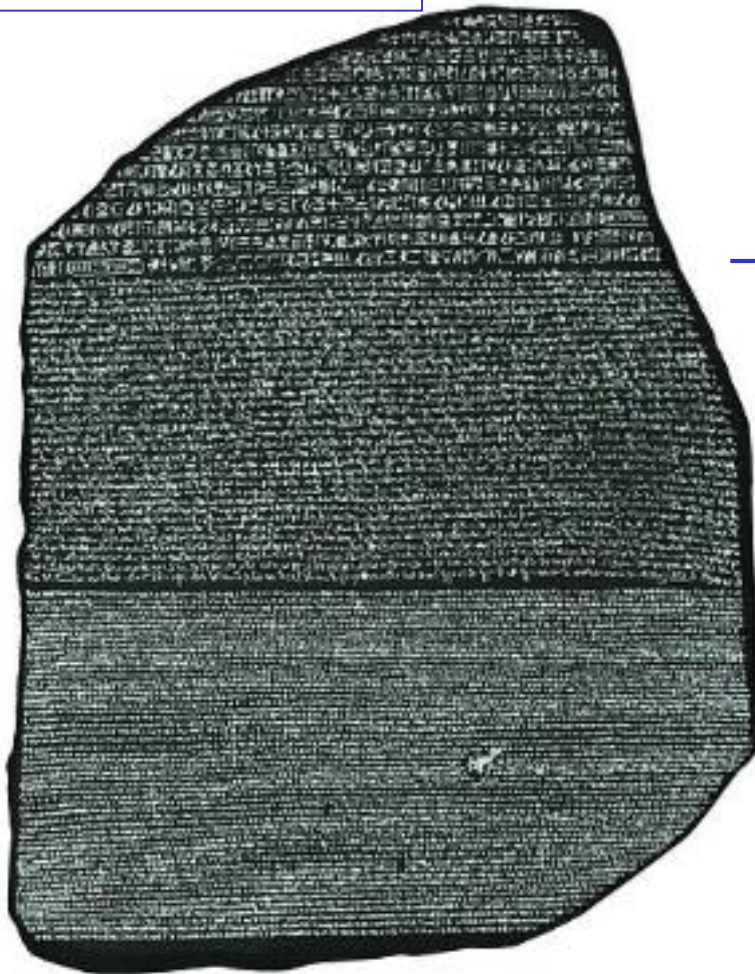
most of us speak  
a lingua franca  
called Globish:



**But it does not mean that we understand each other**

# Return of experience NRS

Champollion had  
the Rosetta stone



We have:

- National Military Airworthiness Requirements
- ICAO Document 9760 ed.3 Airworthiness Manual (basis of MARQ Safety Goals)
- European Military Airworthiness Requirements (EMAR)



## Is staff manning commensurate?

- MAAs of nations procuring foreign aircraft types only may need less staff by relying on the MAA of the country/countries of origin
  - A formal recognition of the MAA of the country/countries of origin will help secure the use of substantiation documents and artefacts without further verification
- Civil type certified aircraft benefitting from CAA artefacts
  - Civil type derivatives also, if provisions in the regulation
- MAA manning permanent or temporary shortfalls can be mitigated by:
  - Organic outsourcing: GQAR, entitled personnel, AR Personnel
  - Contracted outsourcing: qualified consultants


## Continuing Airworthiness Management functions

- The MARQ contains Safety Goals about CAMOs
  - But some regulations do not contain requirements to set up CAMOs
- In fact, ICAO Doc 9760 AW Manual speaks of Continuing Airworthiness
  - The NRP has to make sure that essential Continuing Airworthiness Management functions are carried out i.a.w. ICAO Doc 9760
  - But sometimes they are scattered under the responsibility of several entities within the same service

## Airworthiness approval of products in Production and release certificate in Maintenance

- EMAR or EASA Form 1 and Form 52 or equivalent
- Sometimes, Certificates of Conformity (CoC) without any airworthiness statement from an authorized individual are the sole documents

- **In the frame of the implementation of the NATO Airworthiness Policy, the NATO Recognition Process (NRP):**
  - **is applicable to any national airworthiness system,**
  - **is EMAR agnostic,**
  - **allows NATO to have good insight of national airworthiness systems**
    - ❖ **through a standardized NATO Assessment Report (NAR), providing a detailed synthesis of the NRS**
- **One challenge lies in the recommendation:**  
**“NATO Recognition” or “Conditional NATO Recognition”**
  - **It is based on the experience and the common sense of the each NAT;**  
**and**
  - **controlled by AWAG concurrence**



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