

MACP Phase 1 – Organizational Approvals

The Military Air System Certification Process (MACP)

1	Approvals				
2	Agree Initial TCB	Agree Final TCB			
3	Agree CP				
4	Demonstrate Compliance				
5	Report & Certification				
6	Post-Certification Activity				

Phase 1: Identify the Requirement for, and Obtain Organizational Approvals

This section will look at organizational competence and Suitably Qualified and Experienced (SQEP) staff.

- Assuring organizational competence
- Letters of Endorsement and Airworthiness Authority (LoE and LoAA)
- Roles and responsibilities of key stakeholders
 - The Delivery Team and the TAA
 - Design Organizations and Independent Assurance
 - MAA- in the context of approvals.
 - Aviation Duty Holder Chain and the RTSA – Release to service authority.



Organizational Approvals / Authorizations

Who?

- Organizations involved in the design, maintenance and operation of an Air System or change to an Air System.

Why do we do this?

- Ensure contracted organizations are competent and employ SQEP staff [RA 1005]

How?

- The MAA provides several **approval schemes** for contracted organizations.
- Formal **Authorization letters** to key SQEP individuals with Airworthiness responsibility.



Contracting with Competent Organizations – Approval Schemes

- Support can only be contracted with an organization holding the correct approval.
- Suitability of contractors is assessed by the MAA using the following approval schemes:
 - **Directly relevant to certification**
 - › **DAOS** - Design Approval Organization Scheme
 - **Indirectly relevant to certification**
 - › **MAOS** - Maintenance Approved Organization Scheme
 - › **CFAOS** - Contractor Flying Approved Organization Scheme



Contractors must engage early; as assessment time can vary.

Are there any exceptions / provisions?

[Regulatory Article \(RA\) 1005: contracting with competent organisations - GOV.UK](https://www.gov.uk/government/consultations/regulatory-article-1005)
(www.gov.uk)

[MAA Approved Organizations](#)

Letter of Endorsement (LoE)

A Type Airworthiness Authority (TAA) or a Type Airworthiness Manager (TAM) require a Letter of Endorsement from the MAA

Letters of Endorsement (LoEs) are:

- Awarded by the MAA
- Granted to competent individuals meeting established criteria to be a SQEP for a role. E.g. TAAs, TAMs
- A letter personal to the individual receiving it
- Should not be transferred between individuals



[MAA03: Military aviation authority \(MAA\) regulatory processes](#)

[Regulatory Article \(RA\) 1003: delegation of airworthiness authority and notification of air safety responsibility - GOV.UK \(www.gov.uk\)](#)

AET Tool Process 2: Organizational Design, Training and Competence

Letter of Airworthiness Authority (LoAA)

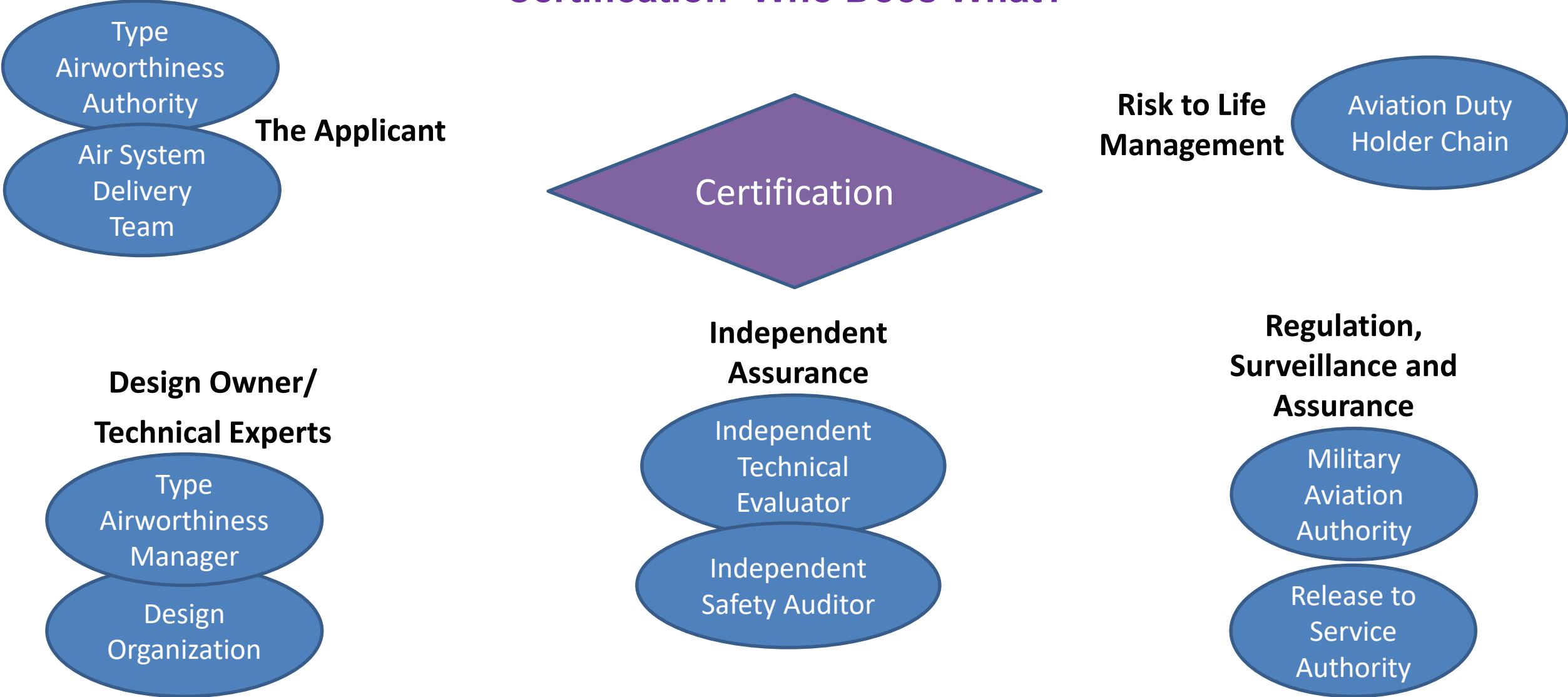
LoAA - Delegation of the Airworthiness Authority; gives the holder authority to make changes to the ADS

- All LoAA holders should be:
 - Suitably Qualified and Experienced Person (SQEP, DASCAT Tool)
 - Crown Servants, in nominated posts
 - reviewed by the issuer at least annually
- An LoAA should detail the specific Airworthiness roles and responsibilities of the holder
- A TAA receives their LoAA from the Operating Centre Director
- An appointed TAA can issue further LoAAs to appropriately SQEP individuals.

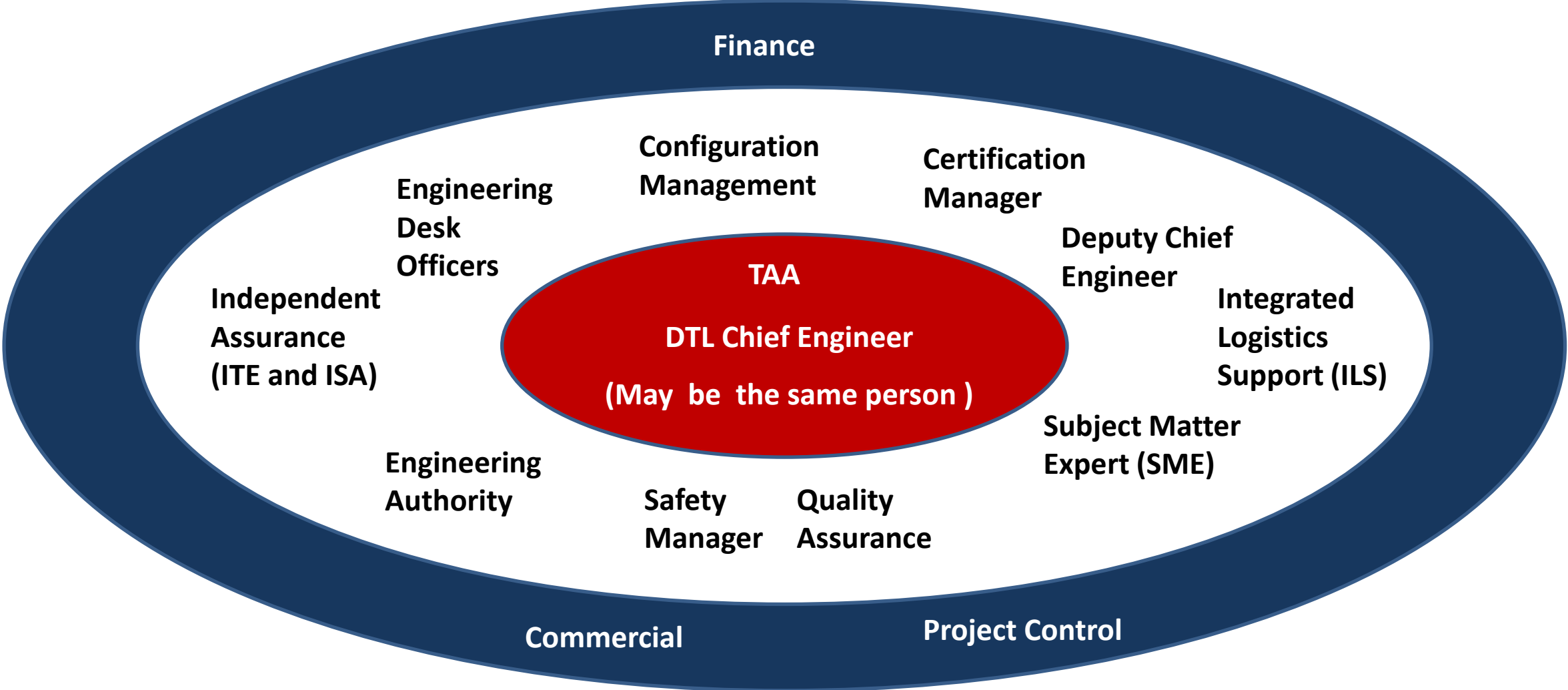


[Regulatory Article \(RA\) 1003: delegation of airworthiness authority and notification of air safety responsibility - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/regulatory-article-1003-delegation-of-airworthiness-authority-and-notification-of-air-safety-responsibility)

Certification- Who Does What?



Air System Delivery Team (DT)





Type Airworthiness Authority - TAA



- The Air System Delivery Team (DT) should have a TAA for each Air System type or group of Air System types
- The TAA is responsible for the Type Airworthiness of an Air System throughout its life from development to disposal
- Each TAA is appointed by the Operating Centre Director (OCD) and should:
 - Be a Senior Project Engineer
 - Hold a personal LoE from the MAA
 - Hold a LoAA from the OCD

[Regulatory Article \(RA\) 1015: type airworthiness management – roles and responsibilities - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/regulatory-article-1015-type-airworthiness-management-roles-and-responsibilities)

[Regulatory Article \(RA\) 1013: air systems operating centre director, provision of airworthy and safe systems - GOV.UK](https://www.gov.uk/government/consultations/regulatory-article-1013-air-systems-operating-centre-director-provision-of-airworthy-and-safe-systems)

[MAA03: Military aviation authority \(MAA\) regulatory processes - GOV.UK](https://www.gov.uk/government/consultations/maa03-military-aviation-authority-maa-regulatory-processes)



Type Airworthiness Authority (TAA)

TAA responsibilities:

- Safety, Strategy and Policy,
- Personnel
- Type design
- Configuration control
- Release to Service Recommendations
- Tasks contracted to Design Organizations
- Air System Document Set (ADS)
- Etc.....

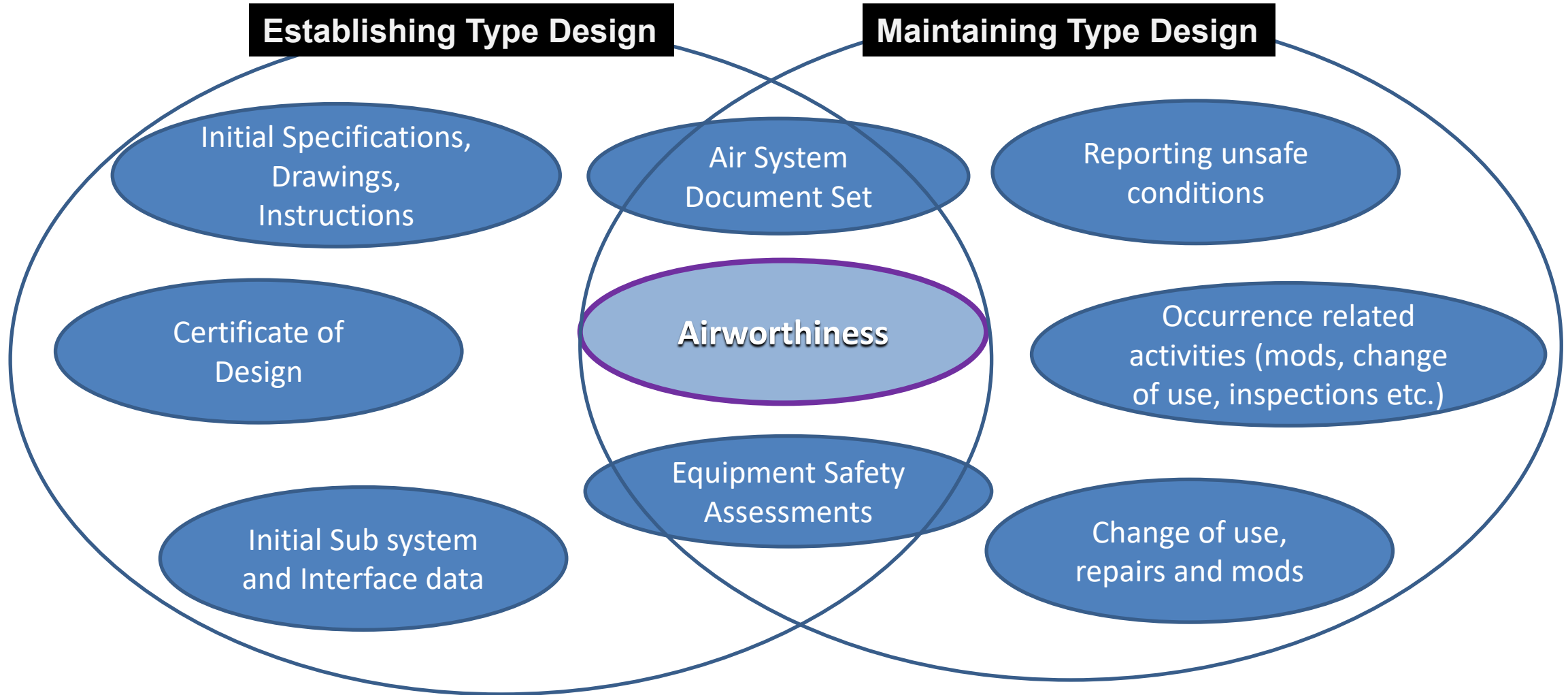


Design and Co-ordinating Design Organizations

- One overall DO or CDO manages the overall design or through-life configuration of a product, part or appliance
- Approved by the MAA (DAOS) and appointed by the TAA
- A CDO for a product is dependent on other DO(s) for some or all the design work
- Air System CDO
 - Responsible for the overall design or through-life configuration management of the design of the **Air System design**
 - Provide support to the TAA.



Design and Co-ordinating Design Organization Roles

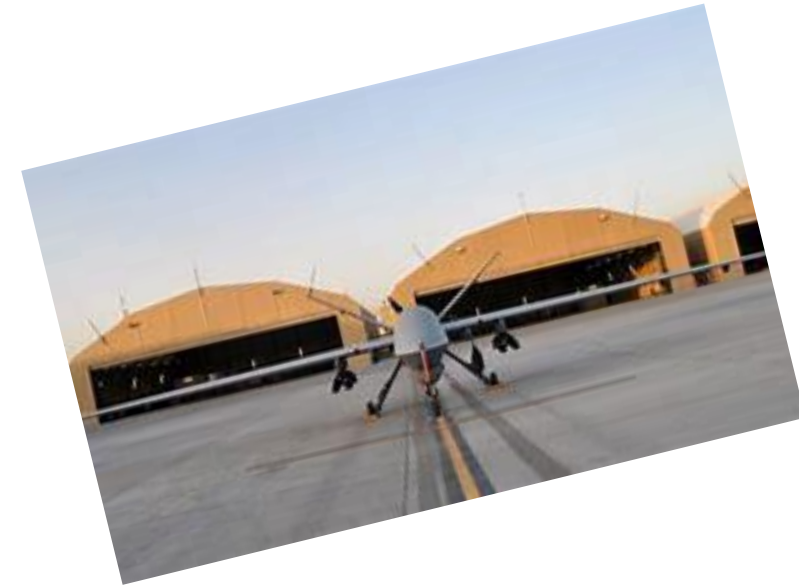


Independent Audit and Evaluation

- The TAA / Delivery Team must arrange independent evaluation and audit.
- Independent Technical Evaluator (ITE) and the Independent Safety Auditor (ISA) must be:
 - SQEP individuals or teams.
 - Independent of the organization that generated the evidence.
 - Independent of the outcome or processes they are reviewing.

NOTE: ITE or ISA can be an internal MOD organization.

ITE / ISA may issue recommendations to be actioned by the TAA



RA 5011: type airworthiness (TAW) safety management system - GOV.UK (www.gov.uk)

RA 5012: type airworthiness (TAW) safety assessment - GOV.UK

RA 5013: air safety management of equipment and commodity items - GOV.UK (www.gov.uk)

The Independent Technical Evaluator (ITE)

- Conducts independent analysis of evidence supporting the:
 - Type Airworthiness Safety Assessments (TASA)
 - Equipment Safety Assessments (ESA)
- An ITE should be recognized as a Subject Matter Expert (SME) but can be from internal DT resource.
- Different ITEs may be employed to cover different aspects of a programme. For example:
 - IAA- Independent Airworthiness Advisor
 - ISAA- Independent Structural Airworthiness Advisor
- Where a contractor is employed as ITE by the DT, it must be directly on their behalf and not via the prime contractor or DO.



[RA 5726 – Integrity Management](#)

Independent Safety Auditor (ISA)



- Conducts independent audit against Project or Safety Management System (SMS) iaw Def Stan 00-056.
- Appointment of ISA is at sole discretion of the TAA and DT, as early in the project as possible.
- ISA can provide generic safety advice to DT, DO etc.
- ISA can be involved in the joint working environment between DT and DO.



Military Aviation Authority (MAA)



MAA Phase 1 Key Accountabilities:

- **Organizational Approvals:** Assessment of contractors wrt design, maintenance and flying activities
- **Issuance of LOE's**
- **Recognition** of foreign MAA Airworthiness outputs and organisational approvals
 - Comparative review of another National MAA's processes

[RA 1005 - Contracting with Competent Organisations](#)

[MAA03: Military aviation authority \(MAA\) regulatory processes - GOV.UK \(www.gov.uk\)](#)

The Aviation Duty Holder (ADH) Chain

Aviation Duty Holder Chain, ADH, accepts or rejects residual risk associated with equipment.

- SDH – Senior Duty Holder: Aggregates risk across the Service.
- ODH – Operating Duty Holder: Aggregates risk across their area of responsibility.
- DDH – Delivery Duty Holder : Focuses on risk associated with one platform.



[Regulatory Article \(RA\) 1020: aviation duty holder - roles and responsibilities - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/regulatory-article-1020-aviation-duty-holder-roles-and-responsibilities)

Risk to Life (RtL)

- **Risk to Life:** A risk of fatality or injury. Excludes damage to assets or the environment where no harm results.
- **ADH:** Personally, legally responsible for all Air Safety risks arising from the operations that they conduct and control.
- **Certification and RtL:**
 - Good and complete certification reduces the equipment contribution of RtL
 - Safety is managed to ensure RtL is **ALARP and tolerable.**

*“Aviation Duty Holders are responsible for Air Safety and ensuring that associated **Risk to Life (RtL)** for the Air Systems within their Area of Responsibility (AoR) is As Low As Reasonably Practicable (ALARP) and Tolerable” RA 1020*

[RA 1020: aviation duty holder - roles and responsibilities - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/aviation-duty-holder-roles-and-responsibilities)

[RA 1032: aviation duty holder-facing organizations and accountable manager \(military flying\)-facing organizations - roles and responsibilities - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/aviation-duty-holder-facing-organizations-and-accountable-manager-(military-flying)-facing-organizations-roles-and-responsibilities)

Release to Service Authority (RTSA)

“The RTSA shall authorize, issue, and maintain the integrity through-life of the RTS in order to provide the Aviation Duty Holder (ADH) chain with independent Air Safety assurance of the Air Systems for which the SDH is responsible.” RA 1021

RTSA Roles and Responsibilities:

- Maintaining the integrity of the Air System Release to Service (RTS)
- Authorisation of the Release to service recommendation (RTSR)
- Ensuring the evidence that underpins the RTS it has been properly assessed
- Air Safety assurance role on behalf of Senior Duty Holders (SDH)
- Appropriately communicate all identified Risks to Life RtL
- RTSA are subject to audit by the MAA and their peers
- There is no approval scheme for the RTSA, post holders are assessed for suitability and SQEP prior to appointment.



[Regulatory Article \(RA\) 1021: release to service authorities - roles and responsibilities - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/regulatory-article-ra-1021-release-to-service-authorities-roles-and-responsibilities)

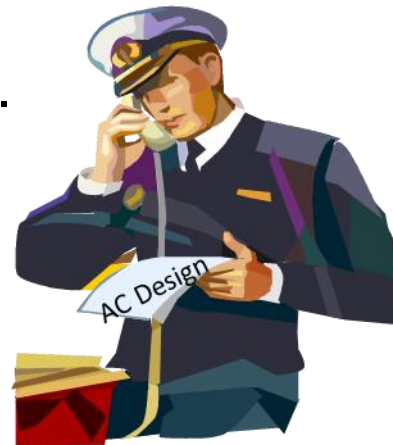


Phase 1: Inputs and Outputs

Phase 1 Inputs:

Information regarding:

- Approved Organization Schemes and delegations.
- Independent Evaluation and Audit.
- Recipients of LoEs and LoAAs.

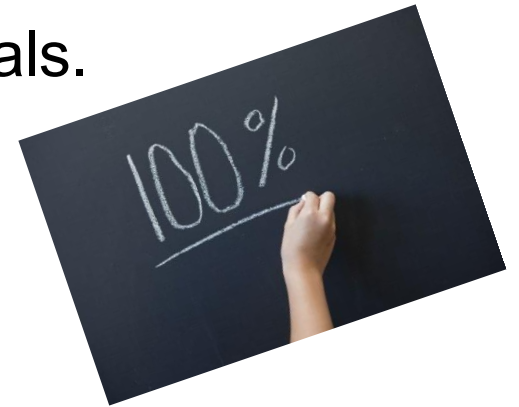


Phase 1 Output:

- LoEs checked and issued by the MAA
- Issuance of LoAAs by the chain of command
- Organizational Approvals checked and issued by the MAA: DAOS, MAOS and CFAOS.

Phase 1 Organisational Approvals

- Organizational Approvals / authorizations- Who, Why and How.
- Contracting with Competent Organizations.
- Letters of Endorsement (LoE) and Airworthiness Authority (LoAA).
- Key Stake holder responsibilities wrt Organisational Approvals.



Break