Air Safety Policy

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Introduction

- Overview of Civil and MOD Policy relating to Air Safety Management
- MAA & MAA Regulatory Publications (MRP)
- Project Oriented Safety Management System (POSMS)
- Air Engineering Standardisation, Process Improvement, Rollout & Ensurance (ASPIRE).

Civil Aviation Policy

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International Civil Air Safety Policy

International Civil Aviation Organization (ICAO)
- Created 1944 – Chicago Convention
- 191 Sovereign State Members

European Aviation Safety Agency (EASA)
- Created 2002
- Operational 2003

National Aviation Authority (for UK – Civil Aviation Authority (CAA))
- Formed 1972.

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Convention on International Civil Aviation
"The Statute"

Annex 1	Personnel Licensing
Annex 2	Rules of the Air
Annex 3	Metrological Services for International Air Navigation
Annex 4	Aeronautical Charts
Annex 5	Units of Measurement to be Used in Air and Ground Operations
Annex 6	Operation of Aircraft
Annex 7	Aircraft Nationality and Registration Marks
Annex 8	Airworthiness of Aircraft
Annex 9	Facilitation
Annex 10	Aeronautical Communication
Annex 11	Air Traffic Services
Annex 12	Search and Rescue
Annex 13	Aircraft Accident and Incident Investigation
Annex 14	Aerodromes
Annex 15	Aeronautical Information Services
Annex 16	Environmental Protection
Annex 17	Security: Safeguarding International Civil Aviation Against Acts of Unlawful Interference
Annex 18	The Safe Transport of Dangerous Goods by Air
Annex 19	Safety Management

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UK Safety Law & Airworthiness Regulation

UK Legislation

Health & Safety at Work Act etc (1974)

Air Navigation Order CAP 393

EASA / CAA
UK/EU 216/2008

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EASA Regulations

"The UK adopted EASA information in force on 31 Dec 2020" [UK CAA]

Basic Regulation
UK(EU) 2018/1139

- **Airworthiness**
  - [Initial] Airworthiness & Environmental Certification UK(EU) 748/2012
    - AMC and GM
      - Part 21
      - AMC-20
    - Certification Specifications
      - CS-23 Light Aeroplanes
      - CS-25 Large Aeroplanes
      - CS-27 Small Rotorcraft
      - CS-29 Large Rotorcraft
      - CS-E Engines (Etc...)
  - Continuing Airworthiness UK(EU) 1321/2014
    - AMC and GM
      - Part M
      - Part 145
      - Part 66
      - Part 147
      - Part T (AMC/GM)
- **Flight Standards**
  - Aircrew UK(EU) 1178/2011
  - Air Operations UK(EU) 965/2012
  - Balloons - Air Ops UK EU) 2018/395
  - Unmanned Ac Sys UK EU) 2019/947
- **ATM/ANS**
  - ATCO UK(EU) 2015/340
  - ATM/AMS Oversight UK (EU) 1034/2011
  - ANS Providers UK(EU) 1035/2011
  - Airspace Usage Reqs UK(EU) 2018/1048
  - SERA UK(EU) 923/2012

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Civil Aviation Authority (CAA)

Public corporation, est'd by Parliament in 1972: UK's **independent specialist aviation** and **air traffic** services **regulator**

From 1 Jan 2021 no longer part of EASA

Activities - The CAA regulates:

- Initial Airworthiness (Pt-21, Design, Production etc)
- Continuing Airworthiness (Pt-M, Pt-145, Pt-66 & Pt-147)
- Airlines
- Airports
- Airspace
- Aviation Security
- Drones
- Environment
- Pilot Medicals
- Travel Companies - ATOL

Civil Aviation Authority

Military Aviation Policy

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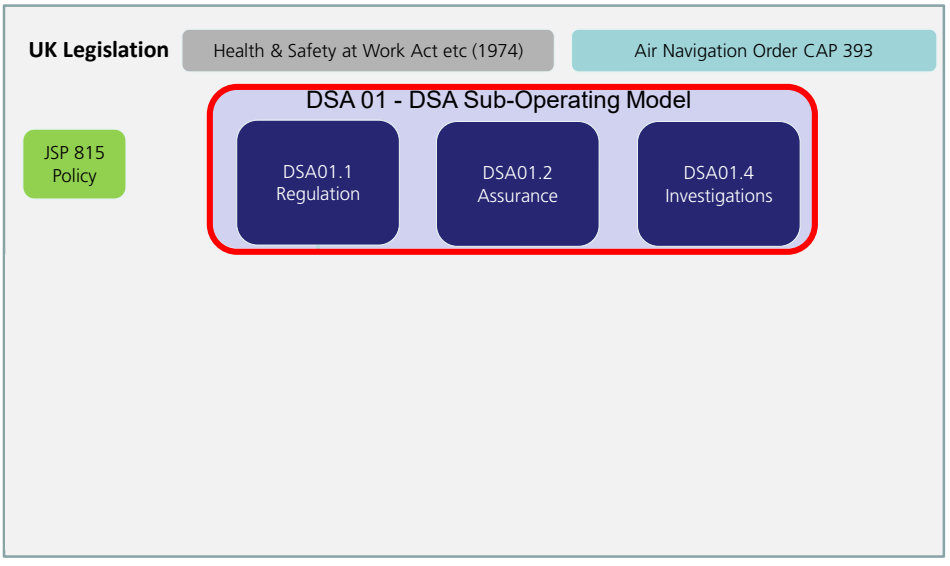
UK & MOD Equipment Safety Regulation & Policy Documents



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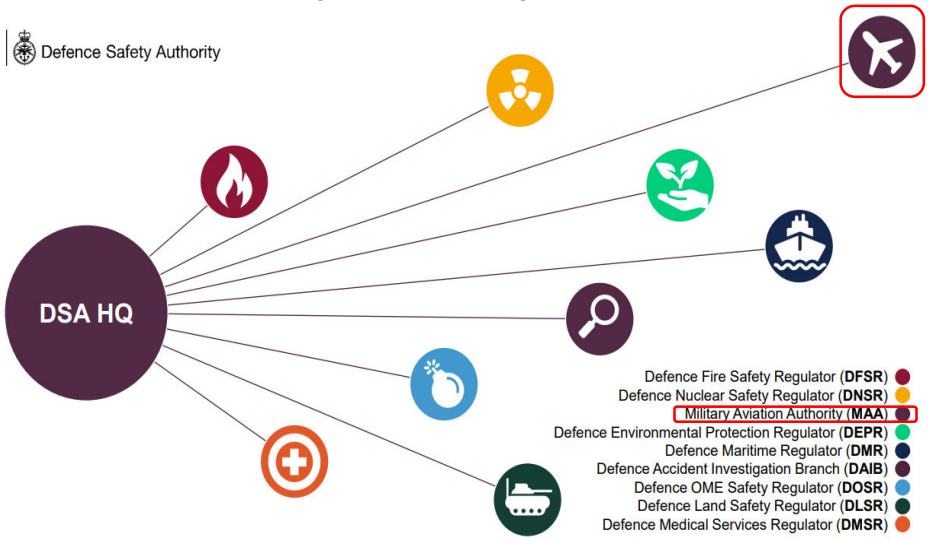
Defence Safety Authority - DSA



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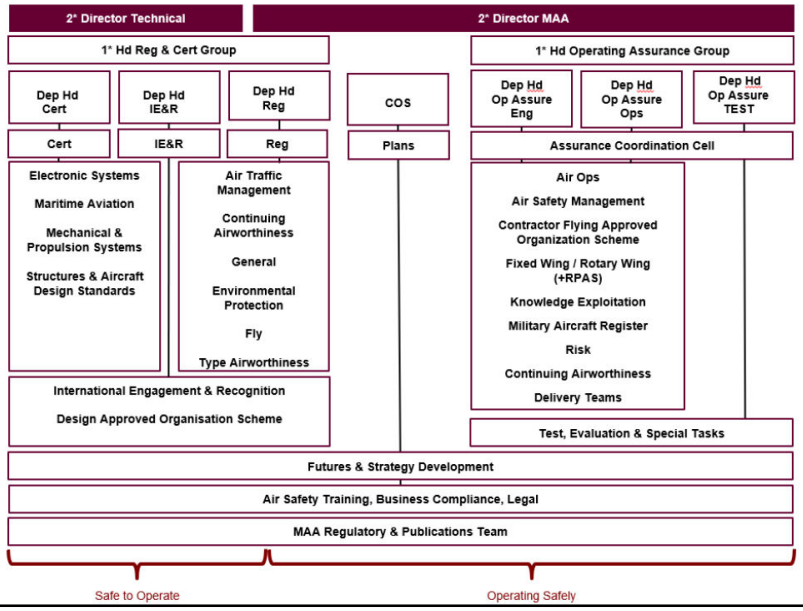
MAA – Air Safety Functions

The MAA has 3 Air Safety Functions:

- **Regulation -** MAA develops Regulations in response to applicable UK law, MOD needs, legal challenges, and recommendations resulting from the Assurance or investigation functions
- **Operation -** The MOD operates Air Systems iaw the MRP
- **Assurance -** MAA assurance activity examines compliance with the MRP & effectiveness of organization's SEMS, including the organization's 1st PA arrangements. Assurance activities are undertaken in a manner proportionate to the risk and include but may not be limited to:
  - **Product Certification** (Military Type Certificate (MTC) or Approved Design Change Certificate (ADCC))
  - **Organization Approvals** (MAOS, DAOS, CAMO, CFAOS etc..)
  - **Endorse Individuals** (LoE for TAA/TAM, ADH, AM(MF), etc..)
  - **Audits** (systematic, independent and documented process & risk based).

MAA Structure

[MAA 01]



MAA 4 Key Principles (LIPS)

- **Leadership.** There must be strong leadership from the very top, demanding and demonstrating by example active and constant commitment to Air Safety and aviation related Environmental Protection as overriding priorities
- **Independence.** There must be thorough independence throughout the regulatory regime, in particular in the setting of Air Safety and aviation related Environmental Protection Regulation, auditing and Enforcement
- **People.** There must be greater focus on people, than on process and paper, in the delivery of high standards of Air Safety and aviation related Environmental Protection
- **Simplicity.** Regulatory structures, processes and rules must be as simple and straightforward as possible so that everyone can understand them. [MAA-01]

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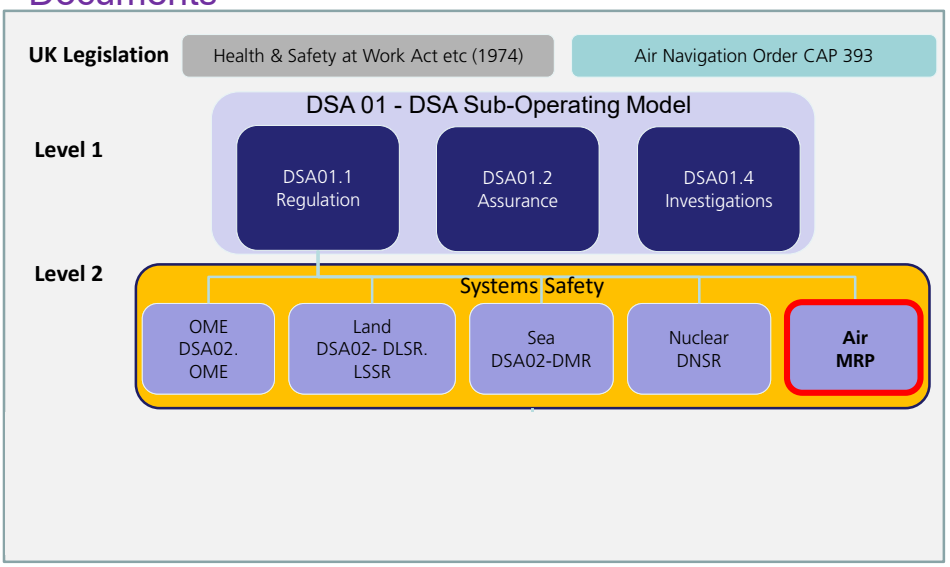
UK & MOD Equipment Safety Regulation & Policy Documents



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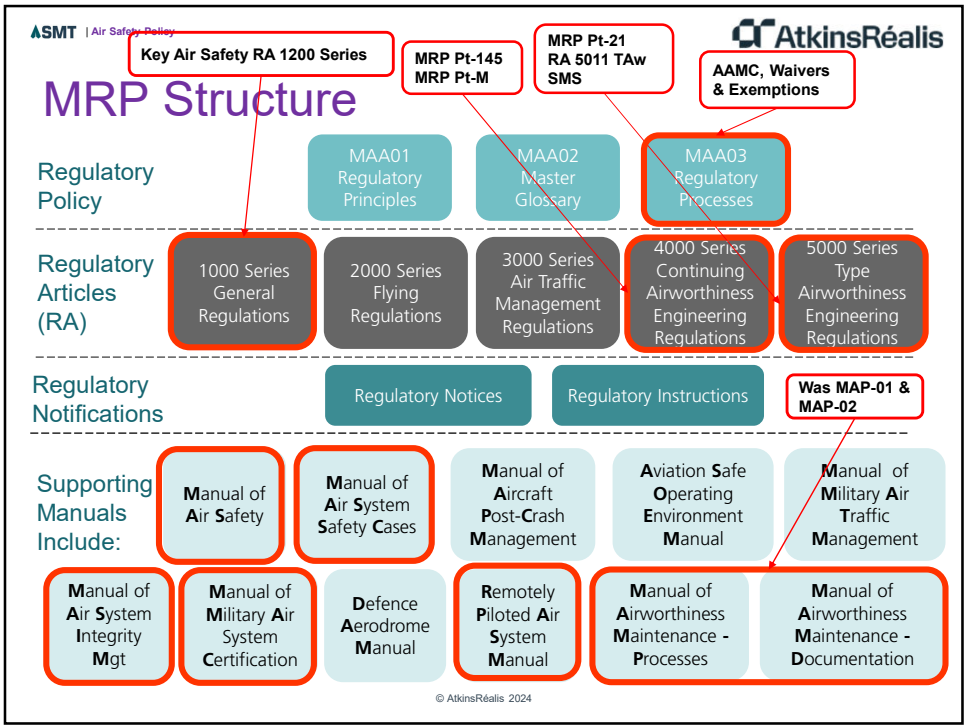
MRP Structure



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MRP Format

- Each RA split into:
- Rationale
- Contents
- Regulation (shall)
- AMC (should)
- Guidance Material (GM)

RA 5011 - Type Airworthiness Safety Management System

Rationale

A comprehensive Air Safety Management System (ASMS)[1] is necessary to deliver a systematic, pro-active and auditable approach to Air Safety and enable the delivery of effective operational capability. Type Airworthiness (TAw) organizations have specific Safety Management System (SMS) requirements which must interface effectively with other adjoining ASMS. An ineffective TAw SMS is likely to compromise TAw. This RA sets out the specific requirements for a TAw SMS to include all activity and decision-making key to managing TAw and Hazards in support of the Air System Safety Case (ASSC)[2].

Contents — **5011(1): Type Airworthiness Safety Management System**

Regulation 5011(1)

Type Airworthiness Safety Management System

5011(1) The TAw Authority (TAA) and / or TAw Manager (TAM)[3] **shall** be responsible for the Safety Management of TAw activity.

Acceptable Means of Compliance 5011(1)

Type Airworthiness Safety Management System

1. The TAA and / or TAM **should** develop, own and manage an SMS[1], which is described in a Safety Management Plan (SMP) detailing how the TAw Strategy[4] is enacted.

2. During the generation and management of the SMP, the TAA and / or TAM **should** consult with all relevant stakeholders[5].

3. The SMP, articulating the requirements of RA 1200[1], **should** be integrated and coordinated with relevant Safety Management documentation generated by the Design Organization (DO)[6] to cover their activities[7]. The SMP **should** also articulate interaction with relevant Commodity Delivery Team SMS[8].

Guidance Material 5011(1)

Type Airworthiness Safety Management System

13. RA 1200 requires all ADH-Facing organizations to have an ASMS[1]. This RA supports and complements the standing ASMS requirements by highlighting aspects which require specific TAw focus.

Hazard Management Process

14. The TAA and / or TAM is expected to manage a variety of Hazards to ensure that the Air System can be operated without significant Hazard. A subset of this Hazard management activity is the management of Hazards associated with RtL, which require management at ADH / AM(MF) level. In these cases, the TAA / TAM will propose an As Low As Reasonably Practicable position and communicate this to the ADH / AM(MF), for formal acknowledgement and a decision on tolerability.

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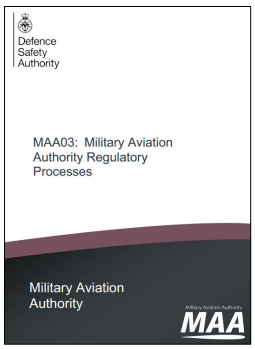
Alternative AMC (AAMC)

- If unable to comply with AMC propose AAMC iaw MAA03
- Any regulated entity can apply for AAMC.



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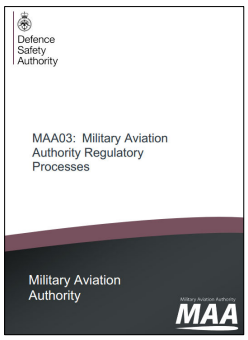
Waivers & Exemptions

- Waiver - Short term
- Exemption - Long term (permanent)
- If unable to comply with MRP & Waiver or Exemption inappropriate. Entity to seek SofS approval for alternative action
- Risks of non-compliance considered fully by ADH/AM(MF) & TAA.



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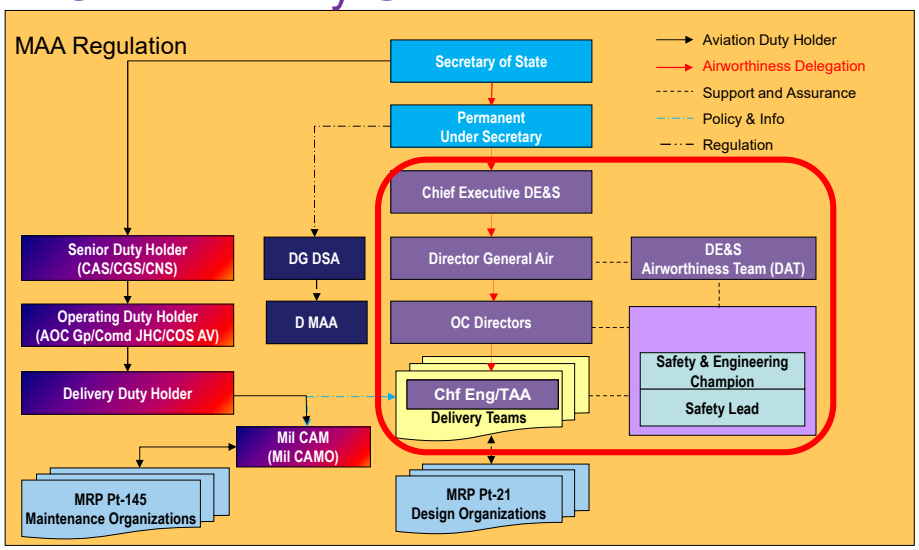
MOD Air Safety Governance Structure



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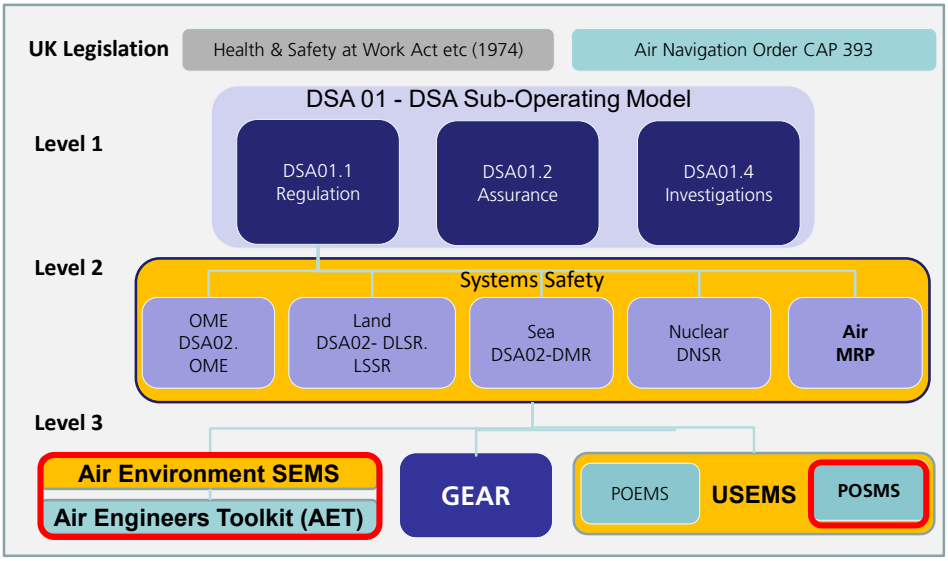
UK & MOD Equipment Safety Regulation & Policy Documents



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DE&S - POSMS

- Project Oriented Safety Management System
- Part of the Unified Safety and Environmental Management System (USEMS)
- Produced by DE&S Safety and Environmental Protection (S&EP)
- Guidance Manual for setting up a SMS, supported by 13 core processes, plus support and audit & assurance procedures, template forms, etc

SMP01 Safety Initiation
SMP02 Safety Committee
SMP03 Safety Planning
SMP04 Preliminary Hazard Identification and Analysis
SMP05 Hazard Identification and Analysis
SMP06 Risk Estimation
SMP07 Risk and ALARP Evaluation
SMP08 Risk Reduction
SMP09 Risk Acceptance
SMP10 Safety Requirements and Contracts
SMP11 Hazard Log
SMP12 Safety Case & Safety Case Report
SMP13 In-Service SMS.

DAT Policy - ASPIRE

Air Engineering Standardisation, Process Improvement, Rollout & Ensurance

Plan Design Enable

ASPIRE - Background

- Airworthiness activities are completed in accordance with the MRP
- There is no standard way for Delivery Teams to meet the requirements of the MRP which leads to:
  - **Inefficiency** (as many of the local procedures have developed organically over time rather than by design),
  - Poor **communication** between DTs, with OCs and with Customers (ADHs, MilCAMs),
  - Extended **time** to achieve SQEP when moving between teams (due to the need to learn new processes)
  - **Ineffective training** due to the lack of a single way of managing the business
  - Potential **confusion** over terminology, processes and products relating to safety decisions.

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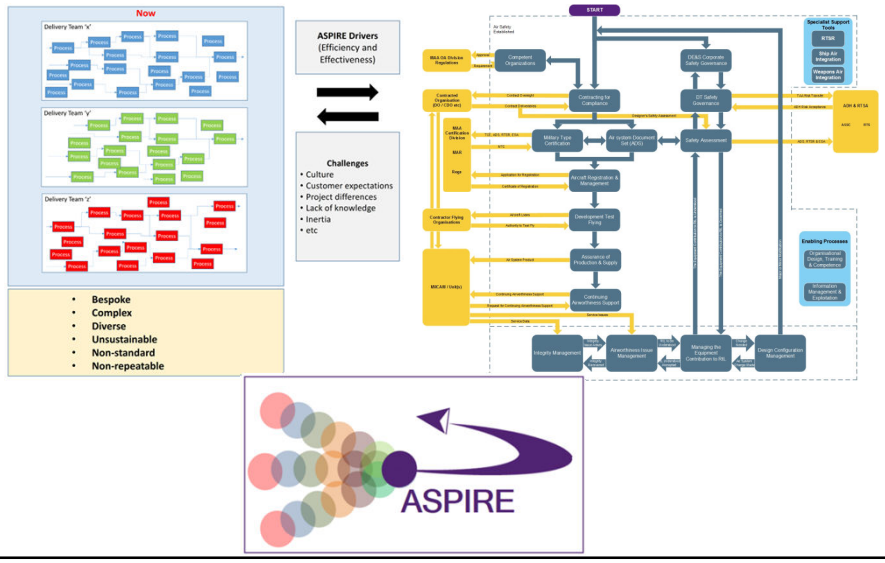
ASPIRE - Background



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Mandated through DESPI (Air) 03

Release Date ►28 Oct 2025◄	OFFICIAL	►DESPI (Air) 03◄

►DE&S Head of Engineering Authority (Air)◄

►DIRECTOR ENGINEERING & SAFETY POLICY INSTRUCTION◄

►DESPI (Air) 03 (previously DGAPI 22)◄ – Use of Air Engineers Toolkit►◄

Rationale

►◄*The intent of the ►Air Engineers Toolkit (AET)◄ is to enhance the DE&S contribution to the Aviation Duty Holder (ADH) management of Risk to Life, facilitate compliance with regulation and legislation, improve standardisation, efficiency and deployment of engineering and safety management staff within the DE&S Air Environment ►(AE)◄.*

Contents ►03◄(1) Use of AET Products.

Governance Requirement ►03◄(1)

Use of AET Products

►DESPI (Air) *03◄(1)* All Type Airworthiness Authorities (TAA) and Commodity Delivery Team (DT) Chief Engineers (CCE) in ►AE◄ Teams[1] **shall** employ AET Products[2] in accordance with the Tool Type associated with each Tool.

Acceptable Means of Compliance ►03◄(1)

Use of AET Products

1. ►AE◄ DTs **should** use the following AET Products during the conduct of their duties, unless an exception has been approved:
   a. AET Processes.
   b. Template Tools.
   c. Instruction Tools.
2. ►AE◄ DTs **should** indicate their intended use of AET Products in Tool 0E[3]; this intent (and any exceptions) should be approved by the TAA or the CCE, by reference to Tool 0E within the relevant Type Airworthiness Strategy (TAwS) or Engineering Management Plan (EMP), and endorsed►4◄ by the ►responsible AE Director[5]◄.

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ASPIRE Framework

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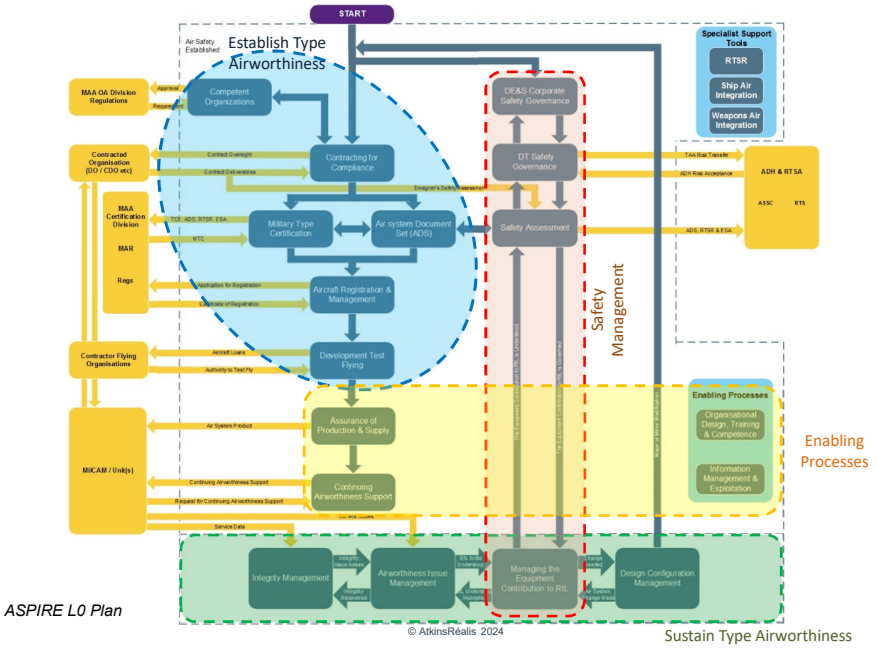

ASPIRE L0 Plan

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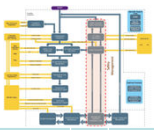
AET Processes



0	Developing and Managing Strategy	12	Not Used
1	Assuring MRP Compliance in Contracting	13	Continuing Airworthiness Support
2	Organizational Design, Training, Competence	14	Airworthiness Issues Management
3	Assuring the Competence of Contracted Organizations	15	DT Safety Governance
4	Assurance of Military Registered Civil Owned Aircraft	16	Safety Assessment
5	DE&S Corporate and DT Air Safety Governance	17	Equipment Contribution to Risk to Life
6	Military Permit to Fly Management	18	Integrity Management
7	Design Configuration Management	19	Airworthiness Information Management and Exploitation
8	Military Type Certification	SP1	Release to Service Recommendations (RTSR)
9	Assurance of Production and Supply	SP2	Ship Air Integration
10	Military Air System Registration Management	SP3	Weapons Air Integration
11	Air System Document Set (ADS)	SP4	Air System Software, Complex Hardware and Cyber Security

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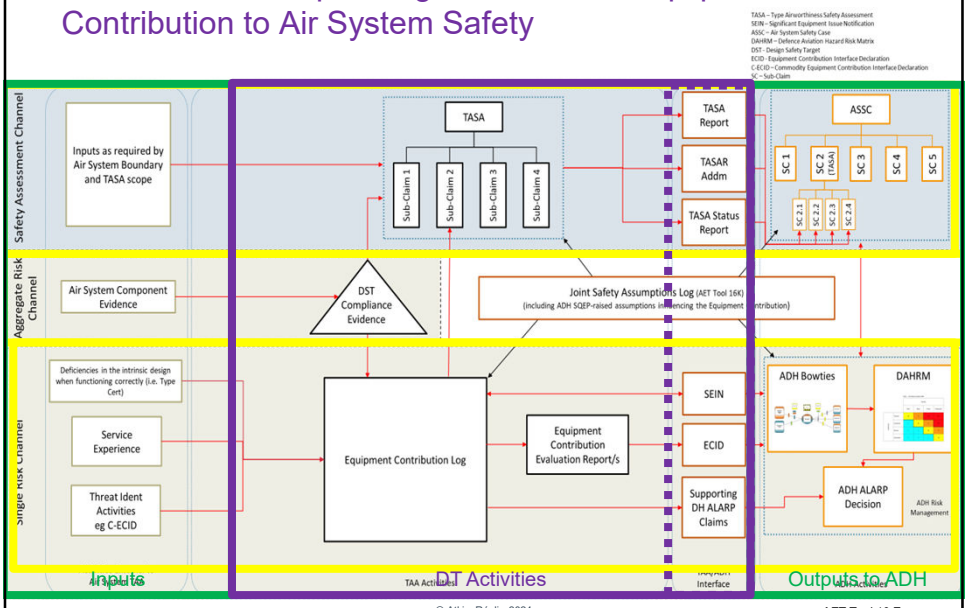
ASPIRE – Joint Operating Model for the Equipment Contribution to Air System Safety



AET Tool 16.E

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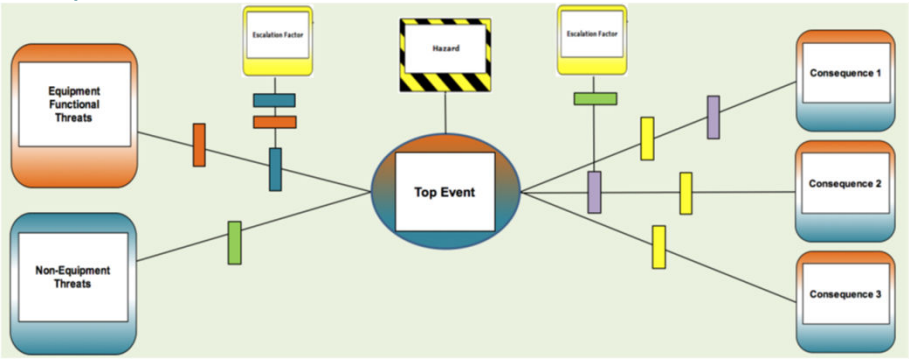
ASPIRE Hazard Management

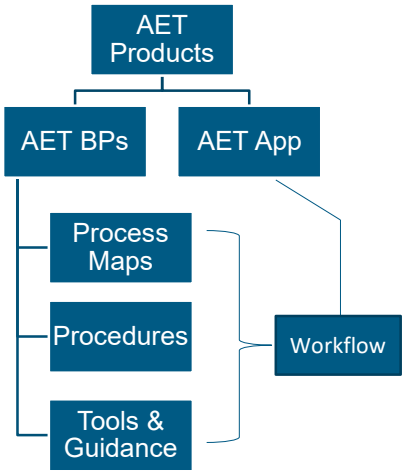
- Common language
- More efficient use of DE&S resources
- Improved communication between DE&S DTs and ADH



AET Tool 17.A

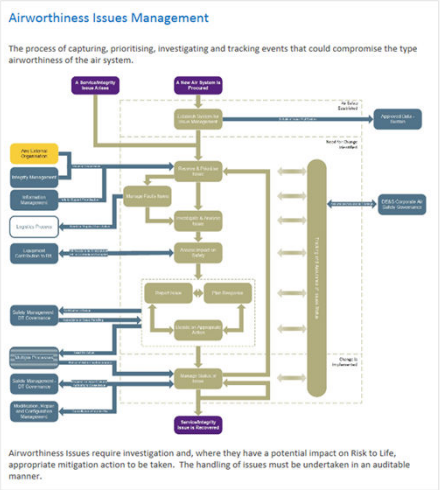
ASPIRE - Background

- The Air Engineers' Toolkit (AET) will deliver 2 main Product Groups:
  - The AET Business Processes (BPs)
  - The AET Application
- All AET Products are:
  - Regulatory compliant
  - An evolution of existing custom and best practice
  - Emphasise the DH facing aspects of Type Airworthiness responsibilities



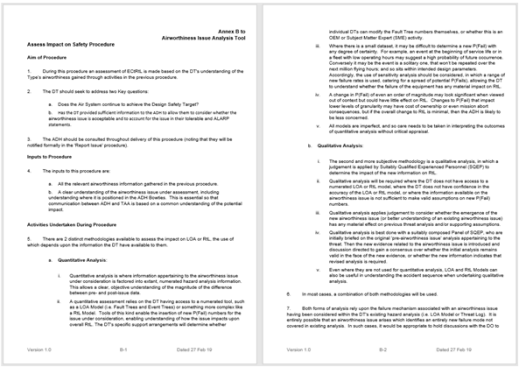
What are the AET Processes

- The AET BPs contain the following:
  - **Process maps**
  - Procedures
  - Tools



What are the AET Procedures

- The AET BPs contain the following:
  - Process maps
  - **Procedures**
  - Tools



What are the AET Tools?

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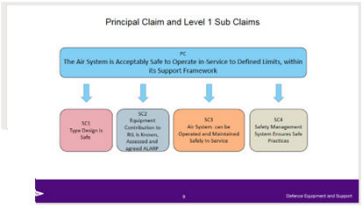
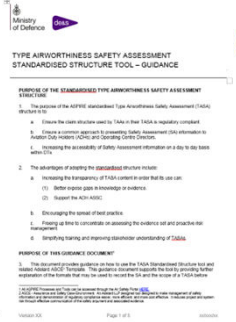
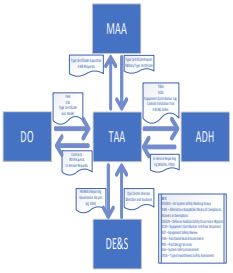
  - Process maps
  - Procedures
  - **Tools**







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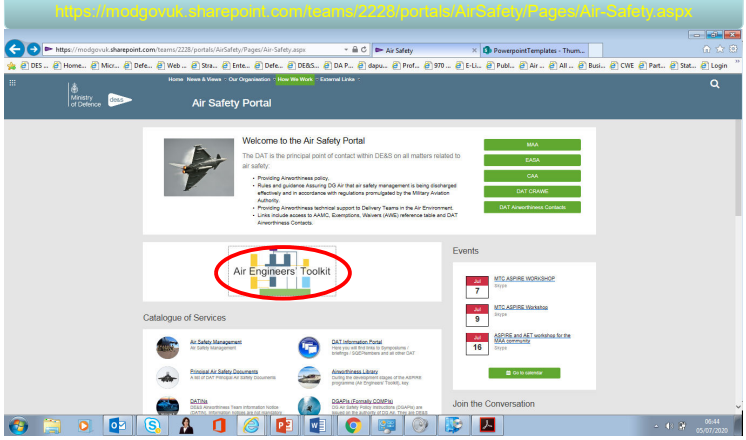
Air Safety Portal

https://modgovuk.sharepoint.com/teams/2228/portals/AirSafety/Pages/Air-Safety.aspx



Questions